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SPECIAL MEETING OF THE
GENERAL MEDICAL COUNCIL.

HELD AT THEIR HOUSE, OXFORD-STREET, W.

FIRST DAY—FRIDAY, JUNE 28.

A SPECIAL session of the General Medical Council was opened on Friday last, at two o'clock, for the consideration of the Medical Act (1858) Amendment Bill, as ordered by the House of Commons to be printed on June 13, 1878.

The PRESIDENT read the following address: — It has been my duty to summon the Medical Council, as I had to inform you might be the case when we met in April, for a second time during the present session of Parliament. We have yet further to consider the amendments desirable in the Medical Acts. We might well be tempted to lament the long-continued attention which deferred legislation requires, had we not the fullest hope that questions which have been kept in suspense for eight years, since Lord Ripon's Bill was withdrawn, may with our increased knowledge be settled before the prorogation of Parliament. It were rash indeed to say this will be so. It were cowardly to say it cannot. I purpose in a very few remarks to state the present position of the Bill or Bills that are now before Parliament, and, so far as I know them, the points on which serious difficulties may arise. These Bills are five in number. 1st. The Government Bill, which was discussed by us in April, after its first reading in the House of Lords, and which passed that House on June 3. 2nd. A Bill brought in by Mr. Mills, Mr. Childers, and Mr. Goldney, nearly the same as that of Mr. Headlam of 1873, and running in some respects parallel with the Government Bill, but omitting all relation to dentists and midwives, and proposing to enlarge the Medical Council by adding six members chosen by voting papers from every member of the medical profession resident in the kingdom. 3rd. A Bill of five clauses brought in by Dr. Lush, Sir Trevor Lawrence, Mr. Samuda, and Mr. Ritchie, relating to penalties and additional titles. 4th. A Bill by Mr. Errington, Mr. John Maitland, and Mr. Blennerhassett, of nine clauses, concerning double qualifications, examinations for Civil Service, keeping the registers, and other matters. 5th. One by Sir John Lubbock, to regulate the education and registration of dentists in the United Kingdom, and to place them under the Medical Council. The Government Bill was undertaken at the urgent request of the Council. It professed, as far as data were attainable, to aim at amending the Medical Acts in all points needed by the profession and the public. One subject only was omitted which some held to be of great importance. The Government Bill did not reconstruct the executive which has to carry on the work directed to be done by the Medical Acts. On this rock it was that Lord Ripon's Bill was wrecked. A section of the medical profession in 1870 preferred no legislation at all to legislation without changing the constitution of the Medical Council. The present Government, like its predecessor, has hitherto declined to mix the question of an alteration in the Council with the new work which it assigns to it. A mode of appointment which secured during the last twenty years the services of nearly every leader of the profession, of Sir Benjamin Brodie, Joseph Henry Green, William Lawrence, Sir Charles Hastings, Stokes, Parkes, Rumsey, Embleton, Allen Thomson, Sir Robert Christison, Sir Thomas Watson, Begbie, Lister, Sir George Burrows, George Paget, Cæsar Hawkins, Arnott, Sharpey, Quain, Teale, and Syme—I do not speak of present members of the Council, the colleagues and successors of those great names—could not, it was thought, need instant change. At all events, the reasons alleged for change must be thoroughly sifted, and the change to be made, if any, must be adopted after careful consideration of the modifications from which a choice would be made. I do not at present, therefore, touch in detail on this vexed topic, though it is raised in the Bill brought in by Mr. Mills and Mr. Childers. If the Government Bill pass in anything like its present form, much more work will devolve on the Council and its office. When this work is entered upon and understood, it may be highly desirable to ask if a Council can be produced which is better adapted to the wants of the future. Opinions on this matter are much divded. The Government, the Universities, the Corporations, those responsible for the Army, Navy, Public Health, and Poor-Law Medical Services, the medical profession as a whole, will have each their word whenever the simple constitution of Mr. Walpole's Council is to be discussed. The question of numbers, of cost, and of administrative convenience, as well as of the mode of appointment, will have to be seriously entertained. It would be premature to settle this before, for instance, it is decided whether hereafter only three examining boards for the kingdom are to be supervised and inspected, or whether, as heretofore, nineteen; whether the Council is to frame, or to supervise, or only to approve schemes for dentists and midwives for the whole kingdom. The more the subject is looked into, the more it will appear that the work, old and new, to be done must be first fixed, then we may ask by what agency it can best be done. I do not presume to express any positive opinion on a matter on which the Council may perhaps pass a resolution. But I hope the Government may first succeed in passing a Bill; and when this is done, for my own part I shall be glad if they will yield to the long expressed wishes of many members of the medical profession, and settle, as soon as possible, what is the best constitution for the Medical Council of the future. All who have at heart the real interests of British medicine, the steady progress of education, both scientific and practical, and the well-being and good conduct of our medical institutions, cannot but deplore the suspense and agitation which check all endeavours to come to satisfactory decisions on these important points. I have said this because I have too much reason to fear that some members of the House of Commons may be urged to impede any legislation which does not propose one particular mode of changing the Council. I have given very briefly some of the reasons which influence others to think such course of action unfortunate. It is calculated only to distract attention from the important consideration, how to settle without delay the disturbed system of medical education and examination, as far as that system is affected by legislation. The Government Bill as it now stands has, since the Council met, undergone many smaller changes, and two of great importance. 1st. When the Bill was before the Council in April the diminution of the numbers of examining boards by the formation of combined boards was more than hinted at. This was not made compulsory. Though the majority of the Council had pronounced once and again in favour of the principle, the compulsory application of the principle did not find favour with the Government. The division list of the Council showed that there was a strong minority against it, the majority being composed of English representatives, with all the Crown nominees save one. The Government at a later period gave notice of amendments to be moved in committee of the house of Lords. Of these one was to admit a certain modification of the kind of combination, viz., that a union of the Corporations without the Universities was to be henceforward compulsory. The step from thence to compulsory union with the Universities did not seem to be a long one; and the proposal to make the union in each branch of the kingdom complete between Universities and Corporations, as it was already to be in England, was at length agreed to. With this arrangement the Bill passed the House of Lords. But this was not all; for secondly, on recommittal the certificate of the combined, or, as it is called, Joint Board, was made the sole requirement for registration. The words which compelled the production of a medical and surgical diploma were omitted from Clause 4. This would, it seems to many, be followed by a disastrous result. I will not speculate on how far the real difficulty of adjusting the claims and meeting the wishes of female practitioners has led to this and other changes in the Bill. But this change may entail the loss of funds by which the colleges, together with their museums, libraries, and lectureships, have been heretofore maintained. If such change be necessary for the progress of medical education and the promotion of medical science in Great Britain, those who have both at heart will not be found to object. Many, however, who are entitled to be heard assert that in this country, where self-government has been a chief condition of growth, the consequences of so entire a change might be most injurious to the general character of British medecine. In this council-chamber it would be improper, not to say impertinent, for the President to dilate on this subject. It has been said, on the one hand, that our self-governed institutions have been the just pride

as they have been the cradles of our national force; on the other it may be urged that they have been held up to contempt and made the object of attack. The contention may be sharp between those who hold these two opinions. But as regards practical medicine and surgery in Great Britain, it is certain that prior to 1858 the high place they held in the world was due to individual effort and not to State aid—to self-government and not to legal enactment; and even in 1858 the State gave force, powers, duties, responsibilities, rules, rights. It gave no funds, no edifices, no endowments. Montalembert, speaking of our hospitals, which are in England our national schools of medicine, says: "C'est toujours le même principe: l'effort, le sacrifice personnel et permanent, puis le droit et le pouvoir naissant du sacrifice et de l'effort. Tant que ce principe sera en force et en honneur, l'Angleterre n'aura rien à craindre." Doubtless, good and evil formerly, as ever, were mixed. Defective general education, empiricism from lack of scientific training, imperfect examination tending to encourage low preparation, struggle for existence among too many institutions, had called for legislation in 1848, and brought it about in 1858. Have the last two decennial periods reasonably answered the expectations of Mr. W. Cowper and Mr. Walpole, who in 1858 had charge of the Medical Bill? We have ourselves now called on the Government to amend their Act. Great questions of education still call for solution. Few of them will be solved in a period of strife. It is certain that for medical education what is most needed is the application of the best minds to the steady development of a sound literary, scientific, and practical examination scheme, which shall admit diversity of learning and teaching without allowing unreasonable stringency or dangerous leniency in testing results. Who will best arrange this scheme? A Government office, or the combined efforts of the profession? Is not this the question now really at issue? Must not the Council face the question, and endeavour to agree on a united action? If the amendment introduced by Lord Ripon into the Government Bill, which is expected to remove the registration of the mass of practitioners from connexion with the medical and surgical institutions, be retained in such form as to work this result, the Bill will provoke continued opposition; and the consequence may ere long be that the pass examination will become, as in Germany, an affair of the State. Many desire that the Bill should be brought back practically to its original intention before Lord Ripon's last amendment was accepted. The regulation of the pass scheme will then remain in the hands of all the licensing bodies—*i.e.*, of the most eminent members of the profession at large. It is well known that such is the love of freedom of action in England, that some members of the licensing bodies would prefer a State Licensing Board, setting the bodies themselves free to regulate their honours, to a Board composed by themselves, without the power to retain as their licentiates or members those whom they have guided through the days of their pupilage. There are other points in the Bill, not of equal magnitude, which have caused some discussion. I will only name one, as on that I have received many communications. Two years ago the Medical Register was so erroneous that it contained more than 2000 wrong addresses. This fact made those persons who were so entered liable to lose their place in the Register, or, in other words, to lose their civil rights under the Act. It seemed requisite to endeavour to make the office arrangements more complete. The mode by which it is endeavoured to obtain this result is, as I understand, not acceptable to the local officers of Scotland and Ireland. On hearing this, it was my duty to point it out without delay to the Government, in order that the case may be submitted to your consideration. It would seem that a small alteration will meet the existing complaint to which I allude, while it will still enforce the correctness of a document so important to the public as that which purports to give the record of all practitioners qualified to exercise the profession of medicine in this country. I might enlarge on many other topics, but the above are the chief that require your attention. If the several medical institutions should agree to construct a National Board in each branch of the kingdom, the ground for further change will be cut away for years to come, and the several questions affecting a higher organisation of teaching will gradually be unfolded and discovered. Into these I forbear now to enter: they recur perpetually. They are not, in their details, the same n England, in Scotland, or in Ireland. We all desire freedom of teaching with perfection of testing. We all desire perfection in training medical students who shall possess sincere aspirations, that shall be fruitful of intellectual, moral, and social good. In their broad principles they are everywhere the same. The Council will, I trust, excuse the tediousness of the details which have been now submitted to them, and will, I would fain hope, accept my endeavours to prepare for them the opportunity for a calm consideration of the conflicting opinions which they so well know to exist, and which perhaps this Council alone can harmonise. The advice which is tendered to members of Parliament on subjects of medical legislation is not seldom so contradictory as to be perplexing. It is apt to throw into the regions of mere chance, questions that should be more fixed and determinate. The Council may now assist to remove much uncertainty, and by clear statements make true men feel that commissions and committees can elicit nothing that is not already known, and will import, while the sand is fast running out, yet new perplexity and yet more delay.

Dr. Apjohn then, in pursuance of notice, moved the following resolution:—"(*a*) That there be instituted a single Examining Board for the entire of the United Kingdom, and that all persons who shall have passed the examinations of this Board, and can also produce a medical degree from a University, or a licence from a medical Corporation, shall be entitled to registration, but no others. (*β*) That lists of the persons who have fulfilled these conditions shall be forwarded by the Medical Examining Board to the three branch councils, and when the registration fees are paid to the local registrars, these registrars shall furnish the General Medical Registrar with the names and addresses of the said several persons, and the General Medical Registrar shall insert these in the Medical Register."

At the suggestion of Sir William Gull the first branch of this motion was taken separately; and after some observations by Dr. Apjohn, which were inaudible,

Sir William Gull said that after all the discussion that had taken place upon this matter, the truth was that the amendments to the Medical Act now introduced by the Duke of Richmond were such as the entire country called for and meant to have, and if there were one great reason stronger than another why this Council should be altered in its constitution, it would be found in the doubts which had been expressed by some of the members as to the advisability of having a central examining board. He felt as reasonably sure as any man could be, that if the members who took this view could be freed from their corporate interests, or from what they believed to be their corporate interests, and could discuss this great question upon its merits, they would at once agree by a large majority that there should be a single examining board in each division of the kingdom.

Dr. Andrew Wood: That is not the point; the proposal is to have one for the whole country.

Sir William Gull: Oh, I did not so understand it. (Loud laughter, and a voice, "Sold.") No, I am not in the least sold. So far as it goes, I should be charmed to have it; but there are things which are practical, and things which are impracticable. A single examining board was most desirable, but was utterly impracticable; but the proposition of a single examining board in each division of the kingdom was both desirable and practicable. Therefore it was that he was speaking in favour of the motion, because the main question was whether there should be one examining board for each division of the kingdom.

Sir Dominic Corrigan rose to order. Sir William Gull was supposed to be seconding the motion of Dr. Apjohn, who recommended the institution of a single examining board for the entire United Kingdom, and Sir William Gull had that moment stated that such a scheme was utterly impracticable!

Sir William Gull: Then I sit down. (Laughter.)

Sir Dominic Corrigan: That is your only course.

Sir William Gull: I did not quite understand the motion.

The President asked if Dr. Apjohn's motion was seconded?

Dr. Aquilla Smith would do so for the purpose of having it discussed.

Sir Dominic Corrigan then moved the following amendment upon the resolution of Dr. Apjohn:—"That, seeing that the Bill of the Government, as it at present stands, involves fundamental changes in the organisation of the profession, some of the most important of which were at the

last moment, with scarcely any discussion, introduced into the House of Lords; seeing that there is so much diversity of opinion in the profession as to the proper requirements of any Bill to amend the Medical Act (1858); seeing that strong opposition has arisen in various quarters to the Bill of the Government, and that four other Medical Bills have been introduced into the House of Commons—it seems expedient to defer legislation for the present, with the view of having all those Bills and the whole question referred to a Select Committee of the House of Commons, with power to take evidence." He said the Council would agree with him that the haste with which some of the amendments were introduced by the Duke of Richmond and the Marquis of Ripon and sent down to the House of Commons was not creditable to the Government. It was said that there was a necessity for immediate legislation, but he denied the force of that statement. Why did this great pressure arise in the present year? Why, at the end of the twenty years during which the Medical Council had been in existence, should they be told that a sudden crisis had arisen in this particular year? He did not admit the fact; and he contended that there was no more hurry for passing such a Bill now than there was in 1859. There was nothing to compare with the fundamental changes now proposed in the Medical Act in the whole history of modern legislation. It was practically an abolition of the privileges of the Universities, Colleges, and Corporations connected with the education of the profession; and he could not conceive anything to equal the violence of this measure, by which it was proposed, "in one fell swoop," and without a moment's consideration, to sweep away all those privileges by determining that any man who can get the certificate of the new Examining Board should be able to come in and hold these public positions without a University or Corporation licence. Private institutions, no doubt, should be perfectly at liberty to make their own rules with regard to the practitioners whom they employed; but for public institutions supported by the State, the licence of the old educational bodies was the proper qualification. As regards Universities, some of them had been established 600 or 700 years, some Corporations 300—for example, the College of Physicians of London, established by Henry VIII., —and the College of Physicians in Dublin, by Charles II. and in all previous legislation the privileges of those time-honoured establishments had been respected by the Government. It was said that the evils now complained of were attributable to the deficiency in education and examination. But what was the reason for any such deficiency, if it existed? The Medical Council, with full powers, had shrunk from exereising its authority. It had visited the examinations of the educational bodies, but it had not reported one single College or body as deficient; on the contrary, it praised them all. It was not unnatural that members of the House of Commons might say, "Show us that you have exercised your powers of visiting"; but it would be found that they had not had the courage to bring a single one of those bodies before the Privy Council. The chaotic state into which this question had got would be seen by the fact that there were five Bills actually now before the House; and he considered that that was a sufficient reason for there being no haste in legislation this session, because it showed the immense diversity of opinion to which reference was made in the resolution. The President in his address had made rather a false point by suggesting that a system which could produce such men as Green and Brodie could not be so very faulty, and that therefore the representation of the Medical Council should be continued on its present footing. But that was the sort of argument used against a reform of the old House of Commons. It was said, the old unreformed House of Commons has produced such men as Pitt and Burke and Fox, and therefore you should "let well alone." The truth was, there was no force in an argument of that kind, because it could be used to defend every abuse that ever existed. Great men, in spite of all difficulties, would always rise above the ordinary level. But among the greatest abuses that ever existed was the fact that for twenty years the Medical Council, with full powers by Act of Parliament to inspect the system of education and examination pursued at the different Corporations, had never made a single report against one of them. What was the good of conferring further powers upon the Council, when they had not used those which they undoubtedly possessed? In the face of such a fact as that he did not see what *locus standi* the Council had in supporting the Bill. The President also stated that "a deplorable agitation" had arisen for this direct representation. Now, he (Sir Dominic Corrigan) did not oppose—on the contrary, he supported that agitation, because he believed that the profession ought to be represented at the Council, and that direct representation ought to be encouraged in the interests of the profession; and he could not conceive any subject more intimately connected with the question of medical legislation than the constitution of this Council. He believed that one of the very first things to be considered by the House of Lords by that oration would be the question of direct representation. He must say that Lord Ripon had been guilty of indecent haste in bringing up this important element of the abolition of the privileges of the Universities at the last moment in the House of Lords when there was no possibility of discussion upon it. There were real abuses in connexion with the practice of medicine in England to which he might have alluded—for instanee, the employment of unqualified assistants. Such a thing was unknown in Ireland; but one eould not take up a *Lancet* without it staring one in the face, and he (Sir Dominic Corrigan) had seen in one single number no less than fourteen applications from unqualified assistants whose recommendation generally was, not that they had learned their profession, not that they had attended so many lectures, but that they eould "ride and drive well." (Loud laughter.) And the lives and the limbs of the poor were entrusted to those persons, whose only recommendation was that they could ride and drive well. That gross abuse had existed during the whole of the twenty years of the existence of the Medical Council, and yet nothing had been done to abate it. He was not surprised that Englishmen were dissatisfied with such a state of things. He was now ealling attention to it beeause it was important that the Medical Council should be able to go before the House of Commons with elean hands, and that they should be able to show that they had endeavoured to deal with the abuses which existed at their own doors. But he feared at present that they could not take up any such position. Referring to the second proposition in the amendment, that there was great diversity of opinion upon the subject, he maintained that this was sufficiently shown by the narrow divisions at the last session of the Council. He would ask whether any Government would press on a measure in which, with a majority of only three, there were five Crown Ministers. Yet that was the position of things in regard to this question. It was the Crown nominees who had made up the majority; and it could not be denied that there was a natural tendency when a man holds an appointment under the Crown to lean to the side of the Government. Deducting those Crown nominees, it would be found that there was really a majority against the Bill, because the numbers would stand at eight for the Bill and ten against it. In those circumstances the reasonable course would be to refer the whole question to a committee of the House of Commons, and let them have the whole of the five Bills now in Parliament before them, with power to take evidence from the different bodies; and let that committee make its report after a full investigation of all the circumstances connected with the question, not omitting the fact that the Medical Council had for twenty years had powers in relation to enforcing a higher status of education, and yet had never made use of them by making a report against a single governing body. It would not be forgotten that some years ago there was an attempt to bring the Queen's University before the Privy Council, on the ground that it did not give full education. How did he (Sir Dominic Corrigan), as the representative of that University, meet the charge? He challenged them to bring forward the questions before the Privy Council, when he would be prepared to meet them—not attempting to abate one jot of what the Queen's University had done. But they shrank from that challenge, and they never dared to follow up the resolution which they had passed and which remained on the book, and laughed in the face of the Council who shrank from enforcing it when challenged, because they knew well that if they had taken up his challenge they would have brought censure, not on the Queen's University, but on themselves. After what he had shown with regard to the riding and driving fraternity—(laughter)—he was not astonished that the people of England were dissatisfied with the Medical Council for having sanctioned such a

scandalous state of things; and he was not surprised to find that they were determined that something must be done to put an end to it; but he urged that such evils as existed were not to be met by panic legislation, but rather by a statesmanlike investigation of the subject such as would lead to some permanent measure which would be real and effectual in its operation. (Applause.)

Mr. Simon suggested the postponement of Sir Dominic Corrigan's amendment. In the present stage of the debate he should feel bound to vote against it, whereas, after a full discussion of the subject, he might either be constrained to vote for it, or some middle course might be adopted which would be generally acceptable to the Council. He thought that the Council might fairly hope, after a day or two's session, and particularly if they imitated the Congress of Berlin by not attempting to do too much at one sitting—(a laugh)—and leaving intervals for a little private conversation—(laughter)—they might come to some conclusion upon the subject. Then, if those who represented the public wished for a Select Committee, well and good, but it might not be necessary for the Council to recommend it. He would take the opportunity of removing a misapprehension which existed in the minds of many persons with regard to the Government Bill as it at present stood, who thought that all the old machinery in connexion with the Corporations would be done away with; but if Clause 4 were read in connexion with Clause 17 they would find that the measure was not so obnoxious as it seemed at first sight. He quite agreed that there was ambiguity in the Bill, and that it required some further explanation, and he might mention that at the College of Surgeons they had agreed to a form of words which it was believed would remove the ambiguity to which he had referred.

Mr. Macnamara agreed with Mr. Simon that Sir Dominic Corrigan's resolution was inopportune, and as matters stood at present he should feel it his duty to vote against it, whereas if brought forward at the proper time he might vote for it. Taking the Bill as it stood, he would certainly prefer to refer it to a Select Committee rather than it should pass in its present state; but in consequence of the action of the Council they might be able to persuade the Government to accept certain alterations, because he had good reasons for saying that the Government was prepared to accept any reasonable alterations suggested by the Council. He thought it would be a pity, therefore, to lose so much time as would be lost by simply referring the question to a Select Committee after all the trouble and pains which had been taken by the Lord President in receiving deputations, etc. He was persuaded that both Lord Ripon and the Duke of Richmond were anxious to do that which was right, not only by the public, but also by the profession—(applause)—and it would be a pity to accept Sir Dominic Corrigan's resolution at the present time, because it would be tantamount to saying, "We abandon all hope of carrying anything this session." There was so much good in the Bill that it would be a pity to lose the whole because there were certain things in it which might be objectionable. He therefore appealed to Sir Dominic Corrigan to withdraw his resolution, in order that the Council by discussion might see whether they could so amend the Bill as to render it unnecessary to incur further delay.

After a few words from Mr. Simon and Professor Rolleston in the same direction,

Sir William Gull said: After hearing Sir Dominic Corrigan's discursive oration, and having before me the fact that the Queen's University has failed to do its duty to the profession, I think the time has come for us quietly and silently to vote out Sir Dominic Corrigan's resolution. We have already occupied a week this year upon the same question. There have been points introduced into this Bill that we can discuss afterwards; and to attempt at this moment to defer legislation upon the subject, and to make the whole work of the session upon this important Bill nugatory, is simply disgraceful. I will say no more than that I hope Dr. Andrew Wood will say all he has to say, and I hope the Council will then proceed to vote upon the subject.

Dr. Andrew Wood, in seconding the amendment of Sir Dominic Corrigan, said he should certainly say all he had to say, but he hoped he should address the Council in a less authoritative tone than that which Sir William Gull had thought fit to throw into his observations, because the sort of *sic volo sic jubeo* style adopted by the hon. baronet was not altogether becoming a member of the Council. He (Dr. Andrew Wood) preferred to give reasons for what he would propose. At the last meeting of the Council he had at some length endeavoured to show that the demand for medical reform is not such as has been pretended. That speech had been printed and circulated, but either because it was unanswerable, or because it was considered not worth while to answer a representative of one of the Scotch Corporations, who were treated so cavalierly by some of the Crown nominees, it had hitherto remained unanswered, or at all events the only answer which was given to it was—"You had better take what we provide for you, or, depend upon it, you will get something worse in the future." He repudiated with great warmth the suggestion of Dr. Gull, that the representatives of the educational bodies on the Council were tinctured with corporate interests. If he thought he was there as a mere delegate from the Corporation he had the honour to represent, he would resign his position at once. He was sent to the Council as a deliberative representative, and in all that he felt it his duty to do at the council-table he claimed the same right to be considered as acting as conscientiously as any Crown member at the Board. He claimed the same zeal for the honour of the profession, and he was perfectly sincere when he said that he believed the medical profession was not in such a bad condition as was endeavoured to be made out in some quarters. Moreover, he believed in his heart that any such measure as that now introduced by the Government would have the effect, not of assisting in the progress of the profession, but rather of interrupting its progress. He now appeared, not as on the former occasion, as the defender of the Government and the supporter of what he considered to be a straightforward, wholesome measure—the Conservative measure of a Conservative Government—but he was now obliged to say, that which had aforetime excited the wrath of Sir William Gull, if this joint system was agreed upon it would lead downwards into Avernus. The introduction of the Marquis of Ripon's amendment had hurried the measure on that downward path even quicker than he had anticipated. He (Dr. Andrew Wood) had been a consistent Conservative all his life—in fact, a strong Tory. But now what was the spectacle before them? They had this revolutionary measure, this *monstrum horrendum informe, ingens cui lumen ademptum*—a revolutionary measure begotten by a Tory Government. (Applause.) He had no wish to speak in any way disrespectfully of the Duke of Richmond, who, as the head of the Privy Council Department, had charge of this measure, and who had all along shown the most eager desire to do what was right in the matter. He had taken an immensity of pains, such as he believed no other man could have devoted to the subject, and his courtesy to all who came in contact with him was conspicuous on every occasion. At the same time, speaking of him as a public man, a Minister and a statesman, he was entitled to say that he did not expect that the Duke of Richmond or any Conservative Government would have agreed, under whatever pressure, to bring into Parliament a revolutionary measure which at one fell swoop would have the effect of disfranchising the whole of the Corporations and Universities of the country connected with medical education, by depriving them of their licensing powers. One of the strongest arguments which could be adduced to show that we were not in a condition at present to go on calmly with medical legislation might be found by a comparison of the chronological history of what had happened within the last few months. It showed that there had been no stability of thought, no consistency of action in relation to it, and when Sir William Gull suggested that everything was cut and dried, and that in two minutes the Council ought to settle the whole thing, it would be seen that the more this matter had been discussed in Parliament, the more perplexing it had proved itself to be. The first appearance of a Medical Bill in this session was that introduced by Dr. Lush on January 18. On the same day Mr. Errington introduced a Bill into the House of Commons providing that no person should be registered without a double qualification. The third was a measure which provided that no person should be allowed to obtain certain public appointments, unless, in addition to the qualifications, he had gone through the test of a State examination. The fourth measure was that introduced by the Duke of Richmond into the House of Lords, the Government Bill which was discussed in this

Council at the last meeting, which required a double qualification, and in which the joint examination was recommended but not made compulsory. That was the Bill which he (Dr. Andrew Wood) supported, together with nine other members of the Council, but upon which he was defeated by a majority of three. Then the Council sent up to the Government the resolution of Dr. Humphry, which in effect recommended that there should be introduced into the Bill a joint scheme for the three kingdoms similar to that which had been adopted by the English bodies. But before long the Duke of Richmond introduced another amendment to the effect that the Corporations should be conjoined together in the different parts of the kingdom, and that the Universities should be left to do as they liked. The Corporations did not exactly like that; they thought that what was sauce for the goose was sauce for the gander, and they thought that any such conjoint scheme should include Universities as well as Corporations. Therefore, on May 24, the Duke of Richmond brought in a provision to that effect—in fact, left the Bill very much in the condition that the Medical Council at its last meeting desired it to be. Then Mr. Arthur Mills, in a very quiet way, on May 29, introduced a most important Bill, which adopted all the disfranchising clauses of the Marquis of Ripon's amendment, and in addition embodied that most important question of representation of the profession in the Medical Council. That actually got into the House without the knowledge of the Scotch representatives, although they were generally pretty sharp, and employed a Parliamentary solicitor to watch the progress of the legislation. Now, he did not object to the representation of the profession in the Medical Council, but it was a most important change, and it had been discussed in reference to the Education Bill. Then came the present revolutionary measure on Monday, June 3. He, in connexion with Professor Turner, telegraphed to the Duke of Richmond to say that if these amendments were received there would be a serious opposition from various quarters. No answer was returned, and the reason was quite apparent on the next morning, for, with hardly any discussion whatever, the House of Lords not having sat upon the measure for more than an hour, there were introduced into it clauses which materially altered the constitution of the Bill, and changed it entirely from what the Medical Council agreed to at the last meeting; and he ventured to say there was not a man there who would wish to see the Bill carried in its present state with the Marquis of Ripon's amendments in it. (Hear, hear, and applause.) Those amendments were accepted on the Monday, and on the Thursday after the Bill was read a third time it was sent down to the House of Commons. His only comment was that he never expected the profession to be treated in this cavalier way by any Government, much less by a Conservative Government. A few years ago Lord Beaconsfield said the country was opposed to an administration which interfered with every profession and harassed every interest. But there was something very like interference and harassing in the present measure. (Laughter and applause.) This little history would show that they ought to pause before adopting a new Medical Act. It had not been proved that the profession was going back under the present legislation, or that the Corporations and Universities were not doing their duty with regard to the licensing of the general practitioners in the country. He was aware that the most injurious statements had been made from time to time in the most offensive manner against Scotch diplomas and degrees. All he could say was, that if any man told him that Scotch diplomas and degrees were granted with leniency and upon low conditions, in order to lure students to Scotland, the statement was absolutely false. They were not lured by any such means, but by the fact that in Scotland they found that they were well taught, and taught in a practical and good manner, and well tested, and he could point to traces of this all through England and Scotland, where men who had no other than Scotch qualifications were to be seen holding some of the very highest positions in the country. But more; sometimes when (continued the learned doctor) you have some difficulty in getting the best teachers in your own schools, what do you do? You come and steal them from us. (Laughter.) The other day you took Mr. Lister from us, you took Dr. Matthews Duncan, and in former days you took Mr. Liston. You also tried to take Mr. Syme, but he repented of it, and came back again. (Laughter and applause.) Therefore, if you ground your grievance and demand for such a radical amendment of the Medical Act upon Scotch leniency, you are grounding it upon a rotten foundation. The proportion of rejections in Scotland is about 37 per cent., and if the standard were attempted to be raised above that, the result would be that country districts would not be supplied, and that the Army and Navy would not be supplied even in the scanty way in which they now were by practitioners. It was for those reasons he urged that if legislation must come it ought to be founded upon full investigation, and not in the helter-skelter way in which it was now attempted to be thrust upon the profession. Before the Act of 1858 was passed it was subjected to the crucial test of a Select Committee of the House of Commons, consisting of such men as Lord Macaulay and Lord Advocate Rutherford, and others, and he would contrast that statesmanlike mode of dealing with a measure of this importance with the suggestion now made to run amuck against all the licensing bodies and deprive them of their privileges, on the ground that they are not doing their work. Where was the evidence for that suggestion? This Council had constantly sent inspectors down to Scotland, whose reports were not that the examinations were in a bad state, but that they were quite as good as those of either England or Ireland. There was another matter with respect to the proposed legislation which required statesmanlike consideration before anything was done upon it, and that was the provision with regard to foreign degrees and diplomas. In the programme of the day they would find an extract from the *Journal Officiel Français*, which provides that no British practitioner shall be allowed to settle and practise in France unless, in addition to his British qualifications, he passes two examinations in France. Therefore, before coming to any decision to admit foreign and colonial degrees in England, not only to equal privileges with our own degrees and diplomas, but to higher privileges, as was suggested by the present Bill, the Government was bound to make inquiries both in the colonies and in America in order to ascertain exactly how British practitioners were treated, and also to ascertain whether there might not be some reciprocal treaty by which an equitable arrangement might be made. Considering all that had passed, he believed that the Duke of Richmond would be extremely glad to cut the Gordian knot by saying—"I have received deputations, I have received letters, I have received advice from all quarters upon this matter, and my mind has become so perplexed with all these various conflicting statements that I prefer to send the whole question to a Select Committee, where it will receive a disinterested, calm, impartial, and statesmanlike investigation—where the different statements made by the different bodies, and by any individuals who choose to give their evidence, may be received—and then, after we have got that groundwork for a Bill, we shall be in a position to bring forward such a Bill as will meet with general approval." He (Dr. Andrew Wood) felt convinced that any Bill founded on such a groundwork as that would not be a Bill which would strike at the root of these glorious old institutions, by depriving them of their hard-earned and time-honoured privileges, upon no valid ground shown. He said this in spite of the leaders in some of the medical journals, which seemed to gloat over the fall of these institutions—institutions which were peculiarly English in their foundation and character, and which had done good work in the past by elevating the character of the profession. A friend of his, before the meeting, had advised him not to support the amendment, because he would be sure to be beaten. He (Dr. Wood) did not care for that. He believed it was the duty of every man, whether he succeeded or not, to state his opinions, to advance the best arguments he could in support of them, and not to be put down by the mere statement that he was a supporter of corporate interests.

Professor Rolleston deprecated the course suggested by Sir Dominic Corrigan, and seconded in the eloquent speech they had just listened to, because it would have the effect of rendering nugatory all the efforts of the Government and of the Council to carry a measure of reform which was urgently needed. They were now met together, having been called, at great expense and great inconvenience to many of them, from distant parts to consider this question, and he would ask them seriously to discuss it. The fears which had been expressed with regard to the revolutionary tendency of the measure proposed seemed really prompted

by a prospective loss of fees—that great *cadentis aut stantis ecclesiæ conditio*—(laughter)—but it would be found by looking at Clause 17 that these were preserved, and therefore the whole of this money question, which, as Ecclesiasticus saith, "answereth all things," was at an end. Those Corporations who were to be so much congratulated in having such disinterested advocates — (laughter) — had therefore really no occasion to cry out at all. Looking at the thing in a more serious as well as in a larger way, if the Council now did its duty the measure would be carried; there would be a little sentence in the Queen's speech about *sanitas sanitatis*; and supposing even that the worst came to the worst—that the Bill passed with those defects which had been most feared, including the admission of foreign diplomas, which could be corrected with a stroke of the pen—and even that other change, which since the time of Horace (as Dr. Andrew Wood would remember) had been the *teterrima causa belli*—(laughter)—it would be better than, after all the trouble and pains that had been taken with the matter, that the Council should not separate and Parliament be prorogued, *re infectâ*. (Applause.)

Sir James Paget said he hoped when the Bill came to be discussed clause by clause a great many of the apprehended difficulties would vanish, and that the Council would be able to come to some agreement with a sufficient majority to induce the Government to proceed with the Bill as amended in accordance with the recommendations of the Council. He agreed with Mr. Simon, that the Bill as it stood did not inflict that loss upon the Universities which at first sight might appear. Under Clause 17 the scheme might be so constructed as to require that all persons passing the examination of the Joint Board should enrol themselves as members or licentiates, or by some other form of affiliation, with one or more of the educational bodies taking part in the scheme. He admitted that the Bill as it at present stood was not clear upon this subject; and therefore at the right time he would propose to add words which would have the effect of making it so, and also with regard to the question of the registration of titles.

A discussion then ensued, involving questions of verbal criticism upon several of the principal clauses of the Bill, in which Dr. Fergus, Mr. Simon, Dr. Apjohn, and Sir James Paget took part. After which,

The President said he wished to make a remark as to the supposition that the Bill had been hurried through the House of Lords. No doubt it was hurried through, but it had been hurried through because it was the opinion of the Government and those who were desiring to assist the Council, that if any Medical Bill was to pass this session, if all their labour was not to be thrown away, it must be got through the House of Lords before Whitsuntide, or else there would be an end of it. It was quite true, therefore, that unusual pressure was put upon those who were concerned in the work; but great pains had been taken to get the amendments forward as much as possible, and to get the Bill through before Whitsuntide, on the understanding that any amendments which might hereafter appear desirable to be incorporated into the Bill could be introduced in the House of Commons. Under the circumstances, it would be best to carry out what had been suggested from several quarters, namely, to state clearly their opinion as to what was wanted at the present juncture of things, and what the changes were that they would like to have made by the Legislature.

Professor Turner inquired when it was proposed to bring the Bill forward for the second reading in the House of Commons.

The President replied that it would almost amount to rashness to give any opinions on matters of that sort, but there was some Government business which must precede their Bill, and in all probability it would not be brought forward for three weeks. That would give the Council time seriously to consider what changes were desirable, and the Bill would be brought forward, if possible, in time to complete the work this session. He gave this opinion with the greatest hesitation, because it was not in his power to give any accurate answer, but that was what was expected at the present moment.

Sir Dominic Corrigan, in replying, thanked the President for the explanation he had given of the cause of the great hurry which had taken place in passing the Bill through the House of Lords; but still he thought he was justified in saying, as he did at the commencement, that the haste was most unwarrantable, because amendments were introduced on the Monday and passed into law on Thursday morning without any single Corporation in the United Kingdom having had an opportunity of considering those amendments. With regard to the amendment before the Council, Mr. Macnamara had said that the time for bringing it forward was inopportune. He (Sir Dominic Corrigan) thought that the present was the proper moment for introducing it, especially after he had heard Mr. Simon's speech. Dr. Rolleston had said that the way to extinguish this Bill was to refer it to a Committee, and that all there was to be dealt with was "three little details." What were the three little details? The first was the destruction of the privileges of all licensing bodies. That surely was not a little detail. They were all important details not only as regards the medical profession, but as regards the Constitution under which the nation flourished. The rights and privileges of such bodies as Universities ought not to be dealt with in the hurried manner in which it had been admitted by the President they had been dealt with. With regard to the money clause in the Bill, he did not anticipate that the Corporations would get anything, but that when the money came to be doled out by the Council there would not be any for them. The Treasury did not permit the money for an assistant on circuit to go into the hands of the judges, but it stopped so much money, which passed not through the hands of the judges, but direct to the assistant. He had great trust in the Medical Council, but he would not trust them with his money—he meant as a Corporation. Dr. Rolleston drew a romantic picture of the Queen sitting on her throne dissolving Parliament, and saying, "I have a loyal set of subjects before me, but here I have a body of doctors who are utterly unmanageable: they ask for something, and when they get it they are not satisfied with it, and I call upon you to treat them as they deserve." The idea of the Queen making such a speech as that from the throne was utterly ridiculous. They were called upon to deal with the Bill as it was presented to them by the House of Lords, and however good the intention of the promoters of the Bill might be, they had no security that the House of Commons would adopt any of the suggestions which were made. Their intentions were no doubt good, but there was an old saying in Ireland that "the road to hell was paved with good intentions." (Laughter.) With regard to persons who had passed the State examinations being entitled to affiliate themselves to one or more of the licensing bodies, if they did not give the licensing bodies their fees what were the licensing bodies to gain by these men being affiliated? Suppose the Bill passed in its present form, and that a man got a certificate from this examining board, what interest would he have in coming before any of the licensing bodies for their certificate? (Hear, hear.) There was no inducement whatever for his seeking what was called "a higher qualification," and their only course out of the dilemma was to refer the Bill to a Select Committee of the House of Commons. (Applause.)

The amendment on being put to the Council was negatived, 7 members voting for and 14 against it.

The President then put the original motion, which was also declared lost.

The motion, notice of which was given by Dr. Pitman, proposing the following amendment in the Medical Act (1858) Amendment Bill—"Page 4, Clause 8, Sub-clause 7, line 40, before the words 'in respect' to insert 'or'; page 8, Clause 13, Sub-clause 4, line 2, to omit all the words after 'examinations' to end of line 4,"—was then postponed.

The Council resolved itself into a committee of the whole Council for the consideration of the Medical Act (1858) Amendment Bill, as "ordered by the House of Commons to be printed, June 13, 1878," and the Registrar proceeded to read the Bill as it now stands.

Professor Turner said if the members of the Council would compare the clauses which had just been read by the Registrar with the clauses in the Bill as it was originally presented, they would find a very considerable alteration had been made. In the Bill as originally brought forward, the bodies who had not already done so had been allowed the interval up to the last day of December, 1879, within which to frame a scheme. The time was now cut down to the last day of June, 1879, making a difference of six months. In the last clause of the Bill they were originally granted an extension

of time, subject to the approval of the Privy Council, to the last day of July, 1880, whereas now the period was altered to the last day of December, 1879, so that if the Bill were to become law in the month of August, those bodies who had not yet prepared a scheme would have some eight or nine months only within which to do so. It was not possible to get a scheme properly framed in so limited a period. This provision was particularly hard upon Scotland and Ireland, who were thus called upon to do in a few months what England had taken as many years to do.

Dr. QUAIN: Scotland has had the same time.

Professor TURNER: Scotland has not begun to frame her scheme, and there is the difference. You made a start, and took seven years to get to the end of the race, whereas we have not made our start. He (Professor Turner) thought that the Irish and Scotch representatives were not asking too much of the English members in requesting them to agree to an extension of time. With regard to the question of the relations of the existing medical students to this Conjoint Board scheme, supposing it to be entered into, there were on the Medical Register some thousands of medical students who had commenced their medical studies with certain definite objects, and who intended to obtain certain qualifications, and be put on the Register in conformity with the qualifications they obtained; but by the introduction of this Conjoint Board scheme a new element altogether was about to be introduced into the qualifications of those students. The question was, whether existing medical students on the Register should be required to conform to this Conjoint Board scheme. In order to make this matter clear, there should be a proviso inserted guarding the interests of existing students, because it was not fair that the circumstances should be altered under which men had just commenced their studies, and that additional examinations and additional expense should be imposed on them. In conclusion, he would move—"That an additional six months be granted before the commencement of the Joint Board system."

Sir JAMES PAGET seconded the resolution.

Dr. ANDREW WOOD said that the framing of a scheme in Scotland would be a much more difficult thing than in England, because they required to have representatives from Aberdeen, from St. Andrews, and from Glasgow. How many meetings did it take to frame the English scheme? Fifty meetings?

Sir JAMES PAGET said that a large number of those meetings were not connected with the scheme, but were as to regulations under which students should study.

Dr. ANDREW WOOD replied that when they did try to make a scheme they had several meetings, and found at each meeting that the difficulty increased. It also put the various bodies to great expense by reason of their having to send delegates all the way to Edinburgh. He thought it was a very small petition indeed to appeal to the mercy of their English brethren, and ask them to consent to extend the time. He was in great hopes that they would not be obliged to frame a scheme at all; but, if they were, the least that could be done was to give them plenty of time.

Dr. PITMAN: Do you say that subject to the extension you submit?

Dr. ANDREW WOOD declined to assent. The Bill might be passed in spite of them, and then it would be a very hard thing not to give time.

Dr. PITMAN: The minimum time after the passing of the Bill will be to the last day of next year.

Dr. ANDREW WOOD: The Bill is not passed yet. We got more time as the Bill was originally framed, and some blast from somewhere has blown it away and curtailed it. If you are going to tyrannise over us we will obstruct you in every way we can.

Mr. MACNAMARA said he thought the Irish bodies would be prepared to carry out a scheme within the time mentioned in the Act. The cause of the delay in England was not so much the difficulty of framing a scheme, but the necessity for legislation to enable the different bodies to provide for it; and there was a clause in the Bill which gave all the bodies, in spite of charters and so on, power to form a Conjoint Scheme. One of the great difficulties which had been experienced in Ireland was in consequence of the charters of some of the bodies requiring a particular number of examiners and censors to be present. All that was now done away with; but, at the same time, if the Scotch members wished for an extension of six months he should concur in it.

Dr. STORRAR deprecated any system of conjoint examination coming into force in Scotland or Ireland six months after the system had been established in England. The system should come into operation in the three kingdoms at the same time.

The resolution, on being put to the meeting, was carried.

The Council then resumed.

On the motion of Dr. ANDREW WOOD, the standing orders were suspended till the business now before the Council should be completed.

The Council then balloted for the Executive Committee, whereupon the following members were found to be duly elected:—Dr. Pitman, Sir James Paget, Dr. Humphry, Dr. Andrew Wood, Dr. Aquilla Smith, and Dr. Quain.

The Council then adjourned.

SECOND DAY—SATURDAY, JUNE 29.

The Minutes of the previous meeting were read and confirmed.

On the motion of Dr. ANDREW WOOD, the Council went into committee on the adjourned consideration of the Medical Act (1858) Amendment Bill as "ordered by the House of Commons to be printed, June 13, 1878."

The Registrar read Clause 4 of the Bill with regard to the registration of qualifications.

Sir JAMES PAGET moved the addition of the following rider at the end of the clause:—"Provided, as regards the first case, that, if the scheme of any Joint Board requires that any persons passing the examinations of the Board, and not being graduates in medicine or surgery of any British University, shall become affiliated to any medical Corporation or Corporations concerned in the scheme, it shall be the duty of such Corporation or Corporations to affiliate, as the scheme requires, each such person on his application, and a person so required to be affiliated shall not be registered as a licentiate under the Act above enacted until he shall have been affiliated by the Corporation or Corporations." It was considered advisable to make a change in the Act, not by going back to what the Act was before the insertion of the Marquis of Ripon's amendments, but by way of addition or interpretation. Many of the bodies required certain relations in the scheme of examination, and according to that clause no person could be registered under the Act without having entered into those relations. The design of this clause was merely to interpret that which was already in the Act, and it was felt necessary that the Act should be very clear in not removing from any of the authorities in the kingdom the privileges they had held, nor indeed to affect in any way that was avoidable the rights or privileges or honours of any of the Corporations entering into the Conjoint Scheme. It was not possible that their rights should not be interfered with in some degree, but by the addition of this clause they would be interfered with as little as possible. In fact, the Marquis of Ripon had expressed the most anxious desire not to interfere with the rights or privileges of any of the medical authorities in the United Kingdom.

Mr. SIMON seconded the motion for the addition of the rider.

Mr. TURNER asked Sir James Paget to explain in what sense the Council were to understand the word "affiliated," and in what sense the Royal College of Surgeons employed the word when they adopted it as part of the proviso. Did they intend to signify a conferring of their membership, and was that to be the evidence of the affiliation? He supposed that not merely would they inscribe the name of the person affiliated on their books, but that they would give him something to let the outside world know he was affiliated to a particular body. Those were matters on which it was very advisable the Council should have information from the Members of the Royal College of Surgeons present, who had taken part in framing this proviso.

Mr. SIMON explained that there was no intention of using the word in any invidious sense. The College of Surgeons wanted to cover several cases—viz., the licence of the Apothecaries' Company, and the membership of the Colleges of Surgeons and Physicians. They wanted to cover a variety of cases, and it seemed that "affiliation" was the most convenient term for the purpose. With regard to the other question as to the affiliation certificate being registered, he would suggest that the matter could be more properly

discussed in connexion with the registration clauses of the Bill. It might involve a long discussion when the time came for it, but it did not concern the main object at present under consideration.

Mr. TURNER could not agree that the one point should be considered without the other. Was the affiliation meant to cover the lower qualifications of the Apothecaries' Hall and the Colleges of Surgeons and Physicians?

Mr. SIMON said every candidate passing the necessary examinations was entitled to be registered as a licentiate.

Mr. TURNER's vote would be very much influenced by the conclusion which should be come to on both questions.

Sir DOMINIC CORRIGAN pointed out that Mr. Simon had admitted that the word "affiliate" had half a dozen different meanings.

Mr. SIMON had stated that it would include several things, not that it had several meanings.

Sir DOMINIC CORRIGAN thought there should be some definite meaning attributed to it, and could not vote for the clause if the word were introduced indefinitely. It was not just that power should be granted to any governing body to stipulate that candidates should affiliate themselves to the College of Physicians in London or to the College of Physicians in Dublin. He objected on that ground, and also because it would confound the degrees of all Universities together. Some Universities required courses in arts, and others did not—as, for instance, St. Andrews—and gave degrees without any such qualification whatever. There were so many differences of that kind among the Universities that it was wrong to comprise in this clause all the Universities as if they were exactly on a level, and as if each person who was to enter into that affiliation was to get it on the same terms. For that reason he could not vote for this amendment, and he thought the members of the Council ought to know exactly what they were voting for. "Affiliation" was something like the word "fish," which could be used for everything from whitebait to salmon. (Laughter.)

Dr. HUMPHRY said the only important question for the Council was, in what way they could return as nearly as possible to the provisions of the Lord President's Bill as it stood before the unfortunate introduction of the Marquis of Ripon's amendment. The majority of the Council considered it was desirable on purely professional grounds, and for the sake of the character of the profession, that the relations which exist between its members and its various authorities should be maintained. Those relations had to a very considerable extent been broken by the amendment; and the proposal of Sir James Paget was made for the purpose of repairing that rupture. For himself, he would prefer to see a simple return to the Lord President's Bill as it was before the amendment, and he believed that was what the Council desired; but there appeared to be Parliamentary reasons why that could not be done, and therefore their object must be to return to it as nearly as possible. Sir James Paget's proposal accordingly provided for the affiliation of the members of the profession to the Corporations, and it had been pointed out that that affiliation should be effected by means of the diplomas of the several licensing bodies. The resolution should carry with it, not simply a proposal for affiliation to those bodies, but a proposal of some definite manner in which that affiliation should be effected. It should be evidenced by some act, and that could be done by entry on the Register. He would therefore add to the resolution before the Council —"That it be further provided that the diploma or diplomas by which any person is so affiliated be entered on the Register, and that degrees in medicine and surgery which have been granted to persons qualifying by certificates from abroad shall also be entered on the Register." At present there was no provision in this Bill for the entry of those qualifications on the Register, but that should be provided for, and not left optional in any scheme.

Dr. ROLLESTON seconded the motion.

Sir DOMINIC CORRIGAN objected that it would simply have the effect of abolishing the Corporations.

Dr. HUMPHRY. Not the least in the world.

Mr. SIMON said it was not desirable to attempt to settle off-hand a subject of so great importance, but that it should be deferred for consideration with the registration clause.

Dr. HUMPHRY said they were really then upon the registration clause. He would not object to defer the consideration of the whole question, but the clause would be very imperfect without the addition he had suggested. The affiliation was only to the Corporations, and not to the Universities, as was shown by the previous part of the clause.

Dr. QUAIN asked, as it had been stated by Mr. Simon that the affiliation was intended to cover five or six conditions, whether it would not be better to state distinctly what those conditions were. It would be very easy to say, for example, that the affiliation should be the granting by the bodies of the following diplomas, as mentioned in a schedule. That would express what the affiliation meant by identifying it with some diploma which would be stated.

Mr. MACNAMARA proposed to leave out the word "affiliation" altogether, and to substitute a reference to such certificates as the bodies should be required to grant.

Sir WILLIAM GULL pointed out that a difficulty would arise in the affiliation of women, who would be enabled to pass the Conjoint Scheme.

Dr. ANDREW WOOD said they were losing sight of the fact that they were now going into the consideration of the matter as if the Council had accepted the Marquis of Ripon's amendment. (Hear, hear.) He would infinitely prefer the old course to this new scheme, which was one of complete disfranchisement, and did not dream of going on with the licensing power of the Corporations; and the Duke of Richmond, in attempting to make such a radical change in the profession, had altogether prevented the passing of the Bill. In Scotland it had been imagined that the old licences were to be registered, but by this new scheme all that was done away with. They should not sanction a mere sham, mock, and make-believe which nobody could understand, but go honestly to Government and tell them they were not prepared to support a Bill which did away with the licensing powers possessed by the Universities and Corporations. In a well-written article which had appeared in the *Medical Times and Gazette* it was said: "Under the system adopted by the English Conjoint Scheme, before a diploma or degree could be obtained, the degree or diploma, and not the qualification certificate, was to be registered. That was the Conjoint Scheme that was agreed to." Were they prepared, then, to say that they would prefer the Marquis of Ripon's amendments? By the present proposal the registration of degrees and diplomas was entirely superseded, and with that the licensing powers of the Corporations, and indeed the Corporations and Universities themselves, were abolished. The medical authorities were to form the scheme, and it depended upon the majority of those authorities whether they would adopt affiliation, or registration, or anything else. This was not proper legislation; it was an attempt to cling to a position that was manifestly untenable, and an attempt to rob the Corporations of their power, and was but a blinding substitute. He could not see why the House of Commons, if it was not thought desirable that the Bill should be exactly restored, could not permit it to be altered. It would be much more likely to command success if, instead of making up a sham affair like this, to give an idea that something would be saved, they were to say at once that they disapproved of Lord Ripon's amendments and approved the Bill as it had been agreed upon; whereas the Council were tacitly admitting that they agreed that the licensing power should be taken away from the different Universities and Corporations.

Mr. MACNAMARA said the difficulty was, what was to be done with the women under the old scheme.

Dr. ROLLESTON, referring to what had been done by the corporate bodies, said it was for the public good that they should maintain privileges of their own so far as that they would not give a licence except to people who had passed the conjoined scheme of examination. It was of the very essence of the scheme that the examination should not slip from their grasp. For the purpose of carrying out the Conjoint Scheme, the corporate bodies, having the public good in view, had given up certain powers of licensing and examining, and had given up the privilege of each putting its own private trade mark on the examination. Dr. Andrew Wood had warned the Council to consider what they were doing, and now let them further consider what they could do in the matter. He thought this amendment of Sir James Paget's would just bring them back to the desired position without violating the susceptibilities of the two Houses of Parliament. Surely they would not throw the Bill over for a trifle of this kind—those in charge of the Bill having thought that Clause 7 entirely covered the Corporations. The whole question was one of words.

Sir Dominic Corrigan thought there need be no delicacy felt about going back. Nothing was more common than for the House of Lords to throw out an amendment, and for the House of Commons then to go back on their steps. Allusion had been just made to the sacrifices of the corporate bodies, but what had Dr. Rolleston's University sacrificed? With all its array of professors, the number of graduates they had been called upon to examine was evidenced by the fact that they had granted only one degree. The emoluments of the Corporations, on the contrary, were simply derived from the payments of the candidates.

Mr. Turner believed he quite understood the English scheme as far as this question was concerned; but there was a most material difference in it, as it was before the Medical Council in April last, and as it now came before them on Lord Ripon's amendments, which it was of the greatest importance the Council should not tacitly appear to approve. ("Hear, hear," from Dr. Andrew Wood.) They must not let those amendments pass over without giving their opinion upon them; but they should be fully discussed, and a conclusion come to upon them by the Council one way or the other as to their acceptance. When the majority of the Council approved of the Bill in April it was on the principle of the English Scheme, that the registered qualification should be the diploma of the Corporations—(hear, hear)—whereas the principle of Lord Ripon's measure was that the licentiateship should be conferred by the Medical Board. What was pointed at by Sir James Paget's proposal was to remedy that mischief, the object of the Council being to screw in the diplomas of the Corporations and get them recognised on the Register. (Hear, hear.) They should insist upon requiring registration of those diplomas, and not merely be satisfied with the new licence to be conferred by the Medical Board, and having no relation whatever to the diplomas of the existing bodies.

Sir William Gull would take no part in any legislation which did not include women; and the Corporations had all said they would have nothing to do with the women at all. (No, no.) Well, nearly all of them had said so. The passing of the Conjoint Scheme must entail registration conditions, and there was no escape from those conditions. The Colleges of Surgeons and Physicians had said they would have nothing to do with them; but that would not dispose of the difficulty that if women were placed on the Register the men must also be registered, for how else were they to hold power over the men? That was really the position of the matter; and it was no use attempting to pursue a dog-in-the-manger policy of neither allowing the women to come into the Corporations, nor permitting the men to be registered for these conjoint examinations.

Mr. Simon remarked that if a Conjoint Scheme had any meaning at all, it meant that those bodies assenting to it merged their own licences in the joint licence. If the diplomas were to constitute any higher title, well and good; but as it was the mere question whether the Corporations should get upon the Register some mention of their particular degrees, that really ought not to be allowed to occupy the Council. It was an utterly insignificant and trumpery matter. The real importance of the Corporations in relation to this measure, was that they were the licensors, but they were so conjointly instead of separately. The registration of these particular titles was a question to be discussed on the registration clauses when the time came, but they were at present on the question of principle, and the principle accepted by a majority of the Council was that the separate bodies should merge their licensing powers in the joint examination. No doubt it had been dissented from; nearly half the Council had dissented from that view, and he regretted extremely that such a question should have been carried by a mere majority of votes. But that fact would account for the way in which the question, really so small, had been discussed. Having once given up their individual qualifications, the matter of Lord Ripon's amendments followed with merely logical consistency. Let them not ignore the fact that the man who would in future pass the candidates was the licensor of seven authorities; and if they would only regard the question as the outside world would look at it, they would recognise that it would be ridiculous for the titles of all the contributory authorities to be stated. Licentiates became, at the hands of the amalgamated bodies of each division of the United Kingdom, under the sanction of the General Medical Council, members of the general profession of surgery and medicine. That all this should now be superseded could only be said by persons suffering from nightmare. To talk of the authorities being set aside by this measure was absurd, and too much importance should not be given to merely clerical matters which could never involve the great destinies of the profession. He would therefore suggest that questions of this kind should be taken in their proper place; the scheme was a matter concerning the combined authorities, and the question of registration was so infinitesimally small that it should not be mixed up with the larger question.

Dr. Humphry was at a loss to conceive why so much warmth had been excited in Mr. Simon's mind against the registration of the additional qualification, which would carry with it the assurance that the licentiate had passed the examining bodies; and it was certainly necessary that all qualified persons should be connected with some one or other of the authorities.

Mr. Simon: Male and female?

Dr. Humphry said nothing about sex.

Sir William Gull: But that is an important question.

Dr. Humphry said it was desirable that there should be that connexion with the various authorities, and evidence of that connexion on the Register; but as the Bill stood, there was no provision for showing what a man had done in medicine or surgery. Then, if it was desirable that licentiates should be connected with the authorities, why should not that connexion be distinctly stated—not by a mere affiliation, but by plainly recording it on the Register? This was a matter which should not be left open as permissive in any scheme, but it ought to be provided for as something to be done.

Sir James Paget would not oppose Dr. Humphry's motion, but thought that what was proposed to be done by it was achieved by Clause 8, which carried with it the right of everyone who desired to pass the joint examination, and was affiliated to one of the Corporations, to enter with his documents, the first showing that he had a right to be examined as a licentiate, and the others permitting him at the same time to be registered as a licentiate of some Corporations and a member of others. And it really seemed that the registration of that membership was a matter of secondary importance. He strongly urged the Council not to give their assent to any measure which would reduce the existing diploma of any Corporation lower than the second level. If this Act passed in its present form, its absolute necessary condition would be the granting of licences in medicine, surgery, and midwifery; and second only to that should be the right of registration as one of the medical bodies of the United Kingdom.

Mr. Turner disagreed with Sir James Paget's interpretation of the Act. The Act would come into operation in 1879, while the Conjoint Board system would not commence until about a year and a half afterwards; so that in the interval the various medical bodies would be going on conferring their diplomas. Clause 8 simply referred to the diplomas granted in that interval, and had no relation whatever to diplomas conferred after the commencement of the Joint Board system.

Sir James Paget said they should take care that when the licences in medicine, surgery, and midwifery were to be taken there should be a right of registering degrees conferred by Universities.

Dr. Quain would prefer to go back to the scheme of the Conjoint Board if possible, but though they could not go back and adopt the very same thing, they could provide for it in other words. The Council would probably be unanimous on the point of getting Conjoint Boards on such terms as had been suggested by Dr. Andrew Wood. With regard to the other difficulty, the women were perfectly content with the power to join the bodies who had consented to take them in. They could, at any time they pleased, either join the University of London or the College of Physicians in Ireland. Was the Council prepared to go beyond that, and tell the House of Lords that women could be converted into men; or that women should be qualified, as he understood had actually happened in one case, to sound a man for stone in the bladder?

Dr. Aquilla Smith said the circumstance had happened after the female graduate had passed the College of Physicians.

Sir William Gull urged that there was no more infamy in a woman attending a man than there was in a man attending a woman.

Dr. Quain did not agree, and thought there was a natural modesty and refinement about a woman which should not be violated at the risk of degrading not alone herself, but her sex. General disfavour would be shown towards any attempt to interfere with legislation in that direction, and it would never be allowed that the wishes of a few women should interfere with a great and important public question. Women might very well desire to be relieved from being placed in an invidious position—they might have special examinations; and certainly everything that could be granted to them would be granted.

Dr. Aquilla Smith warned the Council against drifting into collateral questions, and thought they should keep to the consideration of Lord Ripon's amendments. They ought not to rest satisfied with what they were told were the *intentions* of the Act, but insure that everything should be clearly expressed. A great deal of complication would arise if they were to contend for the necessity of registering what were called the degrees showing affiliation, and the more direct course would be to take the sense of the Council upon Lord Ripon's amendments.

Mr. Macnamara pointed out that Sir James Paget's amendment remedied the mischief of the Marquis of Ripon's proposal altogether, and was indeed the only way out of the "women" difficulty, because it was clear they must be taken now for better and for worse. (Laughter.) That plan was the simplest way out of the dilemma, for when a woman came up before the Joint Board she would get the same examination as a man, and having received her qualifying certificate from them, she would turn, for example, to the College of Surgeons for a further qualification, and would be refused, and she could then say, "Oh, very well, I take my qualifying certificate and I get on the Register." That was clearly the object of the Bill. The five medical authorities in Ireland had had to frame a scheme for themselves, and they had managed to get out of this difficulty. He had found that Irishwomen were all so lovely and virtuous that they did not want to become doctors, and he had never met one who did not express the greatest horror of a lady doctor. (Hear, hear.) He believed if the sex were polled in Ireland, there would not be one vote per cent. of the female population for allowing women to become doctors. However, they had to meet the difficulty as best they could, and they had therefore told the women they might take their certificates and do as they liked with them; but they were obliged to give the men a *quid pro quo* for the thirty guineas they had to pay, for if they did not give them the licence of the College, they would have no right to charge any fees beyond the mere expenses of examination.

Sir Dominic Corrigan referred to the question said to have been invariably asked by a great statesman when a difficulty arose, "Where is she?"—being convinced that a woman must be at the bottom of it. Here, too, it seemed to be the case, but there was a mode of getting out of the difficulty by simply passing a resolution that it was the opinion of the Council that women should be admissible all through the examinations. He had had some experience with regard to the admission of women by the Pharmaceutical Society of Ireland, which was formed in 1875, and of which he had been appointed President. After his appointment he was overwhelmed with applications to use his influence to obtain the admission of women to the practice of pharmacy, and the Society did pass a resolution admitting them. What had been the result? Having gained their point, from 1875 to the present hour not one woman had ever presented herself for examination! (Laughter.) The whole question strongly reminded him of an answer given by a man who was asked to join in a testimonial to a great statesman, and who emphatically refused. "Why not?" he was asked; "you know he has done so-and-so for us, and besides, he has disestablished the Irish Church." "Yes," was the reply, "hang him! that is what I blame him for; he has taken away the only grievance we had." (Loud laughter.)

Dr. Pitman said the questions of examination and registration taken together would have been very simple indeed if it had not been for the peculiar views taken by some of the Corporations. It was clearly the opinion both of the public and the profession in England that the number of examining bodies should be diminished, and that there should be one common Board established in each division of the country. If there were to be a common Examining Board it seemed only reasonable that all persons who were permitted to enter the profession, irrespective of sex (and it was now settled that women might be allowed to enter it as well as men), should be examined by that Board. Up to that point there was not much difference of opinion. All were agreed that there should be facilities for women as well as for men to present themselves to the Board. The examination, then, was to be the same for all, and therefore when persons, male or female, had passed, their qualification to enter the profession would be the same, having been tested by the same examination. When they had passed, what evidence were they to have of having done so? There would be some kind of certificate given by the Examining Board to show that they had passed. What was to be the next step? The simplest thing would be to say that all who had passed the same examination, and who were to have the same privileges of practice, should be admitted to the profession on the same terms, and be placed on the Register with the same qualification. But then came the other qualifying bodies, saying that if they were to grant licences they would not grant them to all those to whom the State would grant licences, but only to the males. Had they been content to admit women to their licences as well as men, this difficulty would never have arisen, because every woman would have been enabled to get upon the Register with the same licence as a man. That would have been the simplest way of dealing with the matter, and with that he would himself have been quite content, strongly as he objected to women entering the profession, not considering them fitted for it; but when it became necessary for him, as a member of a Corporation, to say whether he would grant licences to all whom the State recognised, or only to such persons as the Corporations should choose, he thought they would be going beyond their charters to refuse, for the State required them by their charters to grant licences to all whom the State recognised. However, the Corporation he represented had thought differently, and though he respected their opinion because they had given it honestly, entertaining the contrary view, he would express it before the Council and the profession. Next came the provision that the qualifying certificate was to be registered, and the question now raised thereupon was whether the male licentiates ought not to be affiliated to the Corporations as well as possessing the qualifying certificate. It was admitted that the latter should be registered, but Sir James Paget's proposal, while not objecting to that, was that documents of affiliation to one or other of the corporate bodies should be recognised as nothing less than second to it. Whether that affiliation or enrolment, or whatever it was called, was to be a registrable document or not, as well as being a qualifying degree, was the question. The object of the Act of 1858 was to enable persons requiring medical aid to distinguish between qualified and unqualified practitioners, and a registration with one qualification was sufficient to enable a person to practise. That entry certified that the person had been examined and found efficient in all necessary subjects, and that he was a fit person to give medical aid to all in her Majesty's dominions. Then what was to be the value of the affiliation certificate? If it was a higher qualification, if it was evidence of anything more than the qualifying certificate itself, he would say, let it be registered; but if it was simply a document of enrolment, what business had it on the register, since it gave no certificate that a man had been examined at all except through the Board? He was in favour of affiliation, considering that much would be lost if persons passing were not affiliated to the corporate bodies, but that that evidence of affiliation should be a registrable document was an entirely different matter, it having no value whatever by itself, beyond the fact that he had been simply admitted by that body, and nothing more. It might, on the other hand, lead the public to suppose that a person had gone through some additional study, and if so they ought not to encourage a deception on the public. If anything was to be entered on the Register beyond the qualifying certificate it should be something of higher value, something obtained after additional examination; in short, they should only allow registration of documents which evidenced qualification by examination. But what were they proposing to do now? Simply to enrol or affiliate persons to the corporate bodies, from whom they should get some evidence of the fact, and then go and have it entered on the Medical Register. By allowing that they would be deceiving the public, and he would be no party to it. Amend the Bill altogether, and he would have no objec-

tion; but then what were they to do with the women? (Oh, oh!) They might exclaim, but they could not help themselves. The women were to be examined: the State had said it. Why were men and women licentiates to be dealt with differently? They were to have the same practice, and must pass the same examination; then why should not they be entered in the same way on the Register, and have simply the same qualifying certificate? He entirely objected to anything being entered on the Register which was not a certificate of examination.

Dr. Fergus could not see his way to passing Sir James Paget's rider, as it seemed to be exactly contrary to Clause 3 of the Act.

Sir James Paget reminded the Council that they could not tell how far their recommendations would be adopted by the Government, and explained that, as expressed, the rider would not be in contradiction of the other clauses of the Act.

Sir William Gull attributed the present position of matters to the general feeling that the profession ought not to be left at large without any relation to the Corporations. At the same time, the study of medicine could never advance in this country if any scheme obtained which would give them a less important position than they now held. (Hear, hear.) It should, on the contrary, be an object to encourage the Corporations in exacting study of a still higher character. Nothing could be more injurious to the country than that the great medical bodies should be obstructed in that direction, and it was their duty to promote that object. But the question was, whether Sir James Paget's amendment would promote it, or whether it would not be better to accept the qualifying certificate for registration, and then let the Universities and Corporations in every way they could give higher titles to public confidence. What they were discussing was, in fact, only the minimum qualification, and they might advance higher if they dared, but the public must be provided with practitioners, and they could not go too far. Let the Corporations, having done their duty to the public, see what they could do for the profession. They had answered the pressure from the public by giving this Conjoint Board and its qualifying certificate. As a matter of fact, medical men of good position were satisfied to describe themselves simply as "registered medical practitioners"—a clean, straightforward statement, which did not require the support of "L.C.P." or "L.C.S." or anything of the kind.

Dr. Humphry proposed a motion (seconded by Mr. Turner) by way of protest against the Council being regarded as having in any way accepted Lord Ripon's amendment.

Dr. Andrew Wood said they had been called together to give their opinion upon the amendments of Lord Ripon. Until they were proposed there had been no opposition to the Bill, but no sooner was it announced that the Government had adopted them than a regular storm of opposition arose. If they went on discussing how the Bill was to be accommodated to Lord Ripon's amendments, they would be to that extent endorsing them—(hear, hear),—and therefore the opinion of the Council upon them should in the first place be ascertained. Should the tendency of the amendments be approved, the Council would go on to consider in what respect they should be modified to meet their views. The straightforward course would be for the Council to resolve that the Government should be told the Council had approved of the Bill before the introduction of Lord Ripon's amendments, and did not approve of it with them.

Dr. Rolleston thought the proposed addition to Clause 4 reiterated what was provided by Clause 17, and that they were therefore at present making "much ado about nothing."

Mr. Teale said Lord Ripon had informed him his object was to relieve the Corporations from what appeared to be a burdensome obligation by preventing persons passing the conjoint examination from claiming credentials from them.

Mr. Macnamara would support Dr. Wood's proposal if brought forward as a substantive resolution, and moved that they should resolve into Council for the purpose of voting upon the general principle.

The motion was carried by a majority of 6, and the Council resumed.

Dr. Andrew Wood moved—"That the Council cannot approve the alterations with reference to registration in Clauses 3 and 4, which were introduced in the House of Lords as the Bill passed through Committee on recommitment—viz., that a person can be registered upon obtaining a qualifying certificate without obtaining a diploma from a medical authority, and that the only registration title is to be Licentiate in Medicine, Surgery, and Midwifery."

Mr. Turner seconded the motion, and while it was being put into form,

Dr. Quain remarked that Sir John Lubbock's (Dentists) Bill had passed through the House of Commons, and was before the Upper House, and asked, as the Bill had not been brought formally before the Council, whether any information could be given with regard to it.

Dr. Storrar said it was not intended to press the Bill if the Duke of Richmond's Bill should pass.

The President put Dr. Wood's motion.

Mr. Simon gave notice of an amendment to it as being brought forward by the opposers of the Conjoint Scheme.

Dr. Andrew Wood said it expressed the opinion of many who had not opposed the scheme.

The President said as the hour of adjournment had almost arrived, and notice of an amendment had been given, a vote could not be taken that day on the motion. He announced that amendments to the Dentists Bill had been prepared by Government in order to make it conformable with that now under discussion, and to prevent discrepancy between them should the Duke of Richmond's Bill become law. The earliest information would be communicated to the Council with regard to the advance of these separate columns of medical legislation.

Adjourned to Monday next at two o'clock.

Third Day—Monday, July 1.

After the formal business had been transacted,

The President read a letter received from the Government draftsman, explaining that, as the Bill now stands, no diplomas will be entered in the Register unless they are for higher qualifications granted by examination; and that those persons who pass the examination of the proposed Joint Board will be registered by the title given in the Bill, viz., "Licentiate in Medicine, Surgery, and Midwifery."

The Council then proceeded to the adjourned consideration of Dr. Andrew Wood's motion—"That the Council cannot approve the alterations with reference to registration in Clauses 3 and 4 which were introduced in the House of Lords as the Bill passed through Committee on recommitment, viz., that a person can be registered upon obtaining a qualifying certificate without obtaining a diploma from a medical authority, and that the only registration title is to be Licentiate in Medicine, Surgery, and Midwifery."

Dr. Andrew Wood, in speaking to the motion, said that this was, perhaps, one of the most important subjects the Council could have brought before them, and he was glad that the way had been so far cleared by the answer which the President had just read from the Government, because it was now admitted that if the Bill passed in its present form the only title for registration would be "Licentiate in Medicine, Surgery, and Midwifery," and that no other qualification would entitle a man to practise. Moreover, none of the medical authorities would be entitled to put any of their qualifications upon the Register unless they had been granted after a higher examination than that required for the qualifying title. He must confess that when these amendments had been introduced into the Bill by the Marquis of Ripon he foresaw that, whilst there already had been a considerable amount of perplexity—he might almost say, muddle—in the past, that perplexity would become considerably increased in the future, and that they would raise a very different feeling in the minds of many supporters of the Joint Examination Scheme from that which they had when they had given their voice for the Government measure. He called upon the Council to reject, so far as they were able, the Government amendments, and in so doing he was advocating the cause of no individual Corporation, of no individual University, but of the whole of the medical authorities of this country; and he should be surprised indeed if in England and Ireland the example were not to be followed which had already been given by Scotland—viz., that of petitioning against the admission of the amendments—because it was no longer a question of the individual privileges of the authorities, but of their very existence. Contrasting the Bill as it now stood with its position when it was agreed to by the Council, it would be found that matters were very different. Formerly, although there was to be a Conjoint Board and a

qualifying certificate, the qualifying certificate was not to be the title of registration, it was to be the passport of entrance to any of the bodies who were parties to the Conjoint Board; and as a consequence it was not the certificate of qualification which was to be registered, but the diploma of a collegiate body such as the Royal College of Surgeons, the College of Physicians, or the Society of Apothecaries, as the case might be. But the moment the Marquis of Ripon's amendments were introduced, the medical Universities and Corporations were disfranchised, and their power of licensing was taken away from them, and although they were to be entitled to enter into combination in order to make examinations, so far as their licences to practise surgery or medicine, or so far as degrees in medicine were concerned, their privileges were totally ignored, and nothing was to be put on the Register except the one certificate of the Conjoint Board, of "Licentiate in Medicine, Surgery, and Midwifery." Looking back to Lord Ripon's Bill of 1870 this was most clearly brought out, because in the schedule to that Bill, after the usual columns for name, residence, etc., there was at the end a column the heading of which contained the very peculiar phrase, "Medical authorities, if any"—showing clearly by the addition of those two words, "if any," that it was contemplated that there might be none, and that any man (or he supposed he must say "woman" now) might be on the Register without having been connected with any educational Corporation; and whether they were connected or not, none of their diplomas would be registered except those for higher titles. Now, if the Council were prepared on the part of the bodies they represented to abandon their licensing power, why then they might vote against this motion. If they were prepared to see the bodies they represented become not even mere registering bodies, but nothing more than particles in a joint scheme without the power of putting their licences or degrees on the Register, then let them vote against this motion. But if, on the other hand, they did feel that it was an advantage to the profession and to the public that the bodies they represented should still continue to exercise those privileges which they had for so many years, and some of them for centuries, exercised, then he claimed their votes. He could not believe that the College of Surgeons of London was content with those amendments. He could not believe that the College of Physicians was content with them. Nor could he conceive that the Apothecaries' Company was content. Therefore it seemed that they had arrived at some sort of unanimity upon the subject, and that they were not content to abandon those privileges and powers which these honourable societies had for so long a time exercised, seeing that no case had ever been brought against them, showing that they had failed in doing their duty. But this was not only the feeling of the academical bodies, but of the profession generally. He held in his hand a memorial to the House of Commons signed by 600 members of the Metropolitan Counties Branch of the British Medical Association, approving of the Conjoint Medical Boards as essential to the well-being of the profession and the public, but stating that it was expedient, for the purpose of moral and professional discipline, among other reasons, that every registered practitioner should be attached to some corporate body in the United Kingdom. In reality the profession was unanimous upon the subject, and it was only a very noisy and a very small minority who were agitating in the other direction. Some of his friends opposite talked of him (Dr. Andrew Wood) as being tinctured with the interests of the corporate body whom he represented. But he would ask who sent him to this Council? The answer was the College of Surgeons of Edinburgh, which contained about three or four pure surgeons, the whole of the rest of its members being general practitioners. Therefore the interests of these corporate bodies was in no way distinct from the profession at large. He (Dr. Andrew Wood) had been a salaried practitioner for the last forty-five years, his father was the same before him, and his grandfather, and his great-grandfather, and he had a son coming up in the same path of life. Therefore he represented five generations of doctors, and they must not be surprised if he felt an extreme anxiety to preserve to the profession all those rights, privileges, and amenities with which it was handed down to him. He would not stand by and see two bodies like the College of Surgeons and the College of Physicians of Edinburgh completely deprived of their prestige and power in the way that these amendments of Lord Ripon proposed, and therefore he had brought forward this motion. Believing that he would have a large majority in its favour, he would not further trespass on the time of the Council. (Applause.)

Professor Turner, in seconding the resolution, pointed out that in 1870, and again this year, the Council had resolved that while it was expedient to establish the Conjoint Examining Board, it should not affect the existing rights and privileges of the Universities and Corporations. Who could say that the present Bill was in accordance with those former resolutions of the Council?

Sir William Gull could not see in what way the Bill interfered with those rights and privileges.

Professor Turner said the matter was too apparent to need any further remarks from him to satisfy the incredulity of Sir William Gull. He characterised the Bill as a high-handed measure attempted to be forced upon the Council and upon the profession—a measure which never would receive the compliance of the Council, but which, as he pointed out, was in direct contrast with its resolutions formally recorded on two recent occasions.

Sir William Gull opposed the motion, and supported Mr. Simon's amendment—"That the alterations with reference to registration in Clauses 3 and 4, introduced in the House of Lords as the Bill passed through Committee on recommitment, as consequential on the acceptance of the Joint Board system, require to be considered in connexion with those provisions in Clause 17 which are intended to maintain the rights and privileges of existing authorities, and to provide (by affiliation arrangements) for the proper professional influence of the Corporations; and that the Council now resolve itself again into committee, and proceed to consider what (if any) amendments are required in those parts of the Bill for the purpose of showing more clearly the connexion between them, or for other purposes." He defied anyone to point out in what way those who passed the examination of the new Board would be worse off than those who now obtained entrance to the profession through the different examining bodies.

Professor Turner: It is not the question of the man, but of the Universities and Corporations.

Sir William Gull: If we are not considering the welfare of the profession and of the public, but only that of the Corporations, I have done. (Cries of "No, no," and "Question.") He (Sir William) said that was the question. But he would go farther, and say that the Bill did not injuriously affect the Corporations, because the fees obtained from future candidates for examination would be divided amongst the Corporations. This was a consideration, however, which he was ashamed to urge, because the real question before the Council was, what is for the best interests of medicine in this country? ("Hear, hear," from Dr. Andrew Wood.) The future qualifying certificate should be the certificate of the Conjoint Board, and the Council would be stultifying itself by imposing the necessity of registering diplomas in the way suggested.

Mr. Simon then addressed the Council in support of his amendment. He characterised Dr. Andrew Wood's second speech as an anachronism; because the Council had decided four months ago that it did *not* wish to see the medical profession "handed down in the state in which it now was." (Laughter.) He defended the Government measure from the charges brought against it by Dr. Andrew Wood and Professor Turner; urging that the present educational bodies would still be the real licensing power of the country, because they would form the Conjoint Scheme; and as for the objection that had been raised to the new title proposed to be conferred—that of "Licentiate in Medicine, Surgery, and Midwifery"—he admitted there was an ellipsis in that title; but he supposed everyone would know that it meant Licentiate of all the Universities and Medical Corporations of that part of the kingdom in which it was given.

Sir James Paget: May I ask how that will appear?

Mr. Simon: Can anyone doubt that that is the meaning of it? He had not the least objection to specify the whole of the seven authorities, but it would be very cumbersome.

Sir William Gull: Let it be "Licentiate of the Joint Board of England." (Cries of "Oh, oh!" and laughter.)

Mr. Simon added that this difficulty had been foreseen, and fully discussed in drawing the Bill; but, taking all things into consideration, the Government did not see its way to anything except an uniform title, and had therefore

adopted the one of "Licentiate in Medicine, Surgery, and Midwifery." Some conjoint title must be adopted. He did not stand out for the particular one named by the Bill, if it could be improved upon; but what he did regard as essential, as a matter of principle, was that all the authorities, having merged their separate licensing power in the Conjoint Board, that principle should be expressed by the common title which they would confer. In conclusion, he appealed to the candour of Dr. Andrew Wood and Professor Turner to say whether the Bill, when it was amended by the proviso moved by Sir James Paget and seconded by himself, and which, but for their opposition, would have been accepted in Committee, would be open to the denunciations that they had expressed with regard to it.

Professor Rolleston could not agree with Sir William Gull's amendment, but, on the other hand, he did not agree with Dr. Andrew Wood, because he made very much the same speech against the Bill before it contained the objectionable clauses; and his remarks now, making every allowance for the fervour of his Scotch nature, cut at the very root of the measure. It would therefore be seen that (*medio tutissimus ibis*) he had chosen a middle path between the two parties in the Council. His view was, that having secured the great principle of the Bill by making the Conjoint Board compulsory, and having as he believed by Clause 17—though not very clearly—secured the rights of the Corporations, the Council should now, *ex abundanti cautela*, introduce something into Clause 23 so that "he who runs may read," insuring the same thing as that which the Government had done by Clause 17. They would thus have the Conjoint Scheme, the compulsory powers, and—what he valued just as much as either of them—that individuality and spontaneity of the Corporations which he regarded as one of the most precious heirlooms of the profession. (Applause.) The Corporations had been not altogether without blame; because, although the President had said in his opening address that "he forbore to speculate upon how far the real difficulty of adjusting the claims and meeting the wishes of female practitioners led to these changes in the Bill—(hear, hear)—seeing that "where angels feared to tread" others "rushed in"—(laughter)—he (Professor Rolleston) would venture to speculate that this opposition on the part of the Corporations had a great deal to do with it. (Applause.) The fear of some ladies from England and Scotland (because, according to Mr. Macnamara, there were none coming from Ireland) had been made into a bugbear by the Corporations, and they had got themselves into this further difficulty by not adopting good liberal opinions. He believed that there was sufficient upon the paper in the way of amendments to make the Bill a good measure.

Mr. Macnamara said it was exceedingly unfair to Dr. Andrew Wood to charge him with objecting to joint examinations. What he and those who thought with him did object to was the joint title. Dust had been thrown in his eyes, which had been only removed when the President read that letter from the Government office showing what the real meaning of the Bill was. He now saw how accurate Sir Dominie Corrigan was in his diagnosis when he asked for an explanation of that word "affiliation." He (Mr. Macnamara) had understood that it meant that the students who had passed a final examination conducted by the Board were to be subject to the by-laws of the licensing bodies, and that they should then be entitled to receive the licences of those bodies, and that such licences were to be registered; in other words, that no man was to get on the Register by the certificate of the Board. To that principle his College would be loyal; but he would state most distinctly that he would not support any scheme which enabled a man who passed the Board's examination to get on the Register simply by the production of his certificate. He insisted that there would be no difficulty in registering the titles of the Universities and Corporations, and that the proposed title of "Licentiate in Medicine, Surgery, and Midwifery" would be a miserable substitute for the qualifications which had hitherto been registered, and would greatly lower the present status of the profession. In conclusion, he protested against selfish motives being attributed to the Corporations. He had heard the word "disgraceful" used in that room. He held that it was disgraceful in the extreme to attribute base motives to honourable societies, who had done their duty in the past, who had earned their money honourably, and had used it in the most disinterested manner for the good of the profession. (Loud applause.)

Dr. Storrar had hoped to be able to give a silent vote on this question, but he felt it his duty to say that it must not be supposed that this was a matter of absolute indifference to the Universities, although it more especially concerned the medical Corporations. There was one point in connexion with this measure which the Council seemed to be losing sight of, but which he believed lay at the bottom of the whole matter. What was it that had induced the Government at the last moment to alter the form of the proposed registration, and to make the qualifying certificate the registrable document instead of the diplomas of the College of Surgeons and College of Physicians? It was no use blinking the question: the real reason was that those bodies refused to admit women to the profession. Sooner or later the Council would have to recognise this change of feeling on the part of the Government, reflecting as it did public opinion. He (Dr. Storrar) had never been in favour of female doctors. He did not believe they were physically or mentally qualified for the profession; but the country had made up its mind that they should be admitted, and he believed that the best course would be for the educational bodies to frankly acknowledge this phase of public opinion, and to act in accordance with it.

Dr. Quain said the real question before the Council was whether the bodies that for centuries had been thought worthy of the power of licensing and conferring the right to practise were to be now entirely deprived of that power. (Hear, hear, and applause.) Was the Council prepared to vote for or against that measure? No Conjoint Board would ever stand in the stead of those distinguished Universities which had granted degrees in the past, and he was astonished to hear that any government was prepared to sacrifice such important bodies for the sake of a few ladies. He could not believe it possible that Dr. Storrar's theory was correct, and that this was at the bottom of it all; because the admission of women to the profession and to the educational establishments could, if necessary, be effected by a special Act of Parliament. Therefore it was that he thought it incredible that Parliament was prepared to sweep away the whole of these ancient privileges for the purpose of carrying out in an indirect way what might be effected by the short and ready method of a special Act. He was surprised to find Dr. Storrar giving way to an agitation which he admitted had more energy than weight. The reason that an agitation of this sort appeared to be so powerful was that the ordinary run of people thought it beneath their notice to take action on the other side. He would undertake to say that there was not one woman in ten thousand whom they were in the habit of meeting in general society who wished for the change. (Applause.) The majority of the sex either pooh-poohed it or expressed their horror of it—as well they might. It was therefore a fallacy to hold it out as the national opinion. He believed that if the question were fairly discussed in the House of Commons it would obtain even less support than the Women's Suffrage Bill the other day. We heard less about that now, and the annual motions in support of it were defeated by an ever-increasing majority. (Applause.)

Dr. Pitman supported the motion of Dr. Andrew Wood, and appealed to Mr. Simon, as it was evident he could not carry the Government measure before the Council in its present state, to yield the point insisted upon almost unanimously by the Corporations, in order that the wholesome legislation which was necessary for the good of the profession should not be further delayed. (Cheers.)

Professor Humphry spoke in the same direction. He could not approve of the alterations introduced into the Bill. There was a great principle at stake—one more important even than that which had hitherto been touched upon—viz., whether it was professionally wise that a legal severance should be effected between the medical authorities and the future members of the profession. He hoped that Dr. Andrew Wood's motion would not have the effect of throwing out the Bill; but he must confess that he would rather see it thrown out altogether than passed in its present form. (Applause.)

Sir James Paget, in supporting Dr. Wood's motion, and opposing the amendment, pointed out that the Government scheme, if adopted, would have the effect of actually throwing into the shade the honourable titles now bestowed by the Royal College of Surgeons and the Royal College of

Physicians. A man who gained the new title of L.S.M. would be able to represent that the older titles were things of the past; and thus the best degrees would be depreciated in value. He repudiated the suggestion that the Corporations were actuated by love of fees. They had very well earned and very well expended their fees in the past; and had bestowed great benefit upon the public and upon the profession. (Cheers.) But it was said that their fees would be preserved to them; and that supposing thirty guineas were exacted from the candidates for examination before the Conjoint Board, a moiety would be given to the college to which each candidate was affiliated. But the candidate might not unnaturally ask, "What am I paying this money for?" If it were answered, "Oh, it is an affiliation fee!"—(laughter)—the candidate might reply that he objected to the stigma of illegitimacy implied in the term—(laughter);—and if it were said, "You are going to be looked after by the College," he would probably reply, "Well, I did not expect to have to pay money for that; and besides, I am going into the Army or the Navy, and they will look after me there sharp enough"; and if it were said that he would have the privileges of the museum or the library, his answer might be, "Yes, but I am going to the colonies." Indeed, it was difficult to see what the candidate would get in return for his fee, because although probably if he wrote a book he might put M.R.C.S. after his name, it was very doubtful if he would be able to do so in signing a death certificate or any public document. He (Sir James Paget) did feel very strongly upon the subject that the Royal Colleges and other Corporations ought not to be asked to give up their privileges without some adequate consideration. They had already given up a great deal. It was not a small thing for them to give up their individual action, which they had cheerfully relinquished because they believed the work would be better done by a Conjoint Examination. It was asking too much, and his conviction was that more damage would be done to the profession than would balance the good obtained by the Conjoint Examination. On these grounds he would most vehemently oppose the Government amendments.

Sir Dominic Corrigan said that after the eloquent speech they had listened to there was very little left to say in opposition to the Government scheme. Mr. Simon seemed to have borrowed his tactics from a very distinguished party in the English Constitution—the Irish obstructionists—(loud laughter)—because, in spite of all that had been said, he did not believe there would be more than two dissentient voices from Dr. Andrew Wood's resolution. He had one observation to make with reference to Dr. Storrar. Dr. Storrar was the last convert to the admission of women into the profession. He felt the deepest commiseration for his position, for his own confession was, that having fought against tide and time, against overwhelming numbers, in support of his own convictions as to the undesirability of the admission of women, he was now obliged to turn round and become their advocate. It was true that he recanted with an apology, and said, "My poverty, and not my will, consents"; but they would all agree that this was his only resemblance to the starving apothecary in *Romeo and Juliet*. (Loud laughter.) The whole thing put him in mind of a classical fable, where a fox, having got into trouble and lost his tail in a trap, escaped to his native country, and in an assemblage of foxes dilated upon the immense convenience which the docking process had produced. (A laugh.) How cool, how comfortable, and how improving to the appearance it was to be without a tail—(laughter)—and how much all his brethren would benefit if they were to begin and get rid of this useless appendage! (Loud laughter.)

The Chairman put the amendment of Mr. Simon, seconded by Sir William Gull, to the vote, and declared it to be lost.

Dr. Andrew Wood's resolution was then put to the vote, and carried by a majority of 19 to 2, only the mover and seconder of the amendment having voted against it.

The Council then proceeded in committee to the adjourned consideration of the following motion moved by Sir James Paget and seconded by Mr. Simon, to add at the end of Clause 4 the following proviso:—"Provided, as regards the first case, that, if the scheme of any Joint Board requires that any persons passing the examinations of the Board, and not being graduates in medicine or surgery of any University in the United Kingdom, shall become affiliated to any medical Corporation or Corporations concerned in the scheme, it shall be the duty of such Corporation or Corporations to affiliate, as the scheme requires, each such person on his application, and a person so required to be affiliated shall not be registered as a licentiate under the above enactment till he shall have been affiliated by the Corporation or Corporations."

Professor Rolleston, agreeing with the remarks of Dr. Storrar as to the motive of the Government in introducing these changes, said that they had better take the bull by the horns, and, after having got "a sound form of words," which would bring the Bill back to the shape into which the Council had moulded it in May last, pass a formal resolution providing that any woman who shall have passed the Conjoint Board's examination shall have the right to claim the diploma of any one of the co-operating Corporations. That would have the effect of satisfying the Government upon this subject, and of avoiding all further delay in the passing of the measure.

Sir William Gull said the Council should express its decided opinion that a person should not merely be registered on the qualifying certificate, but should be associated with some Corporation. It was a matter of grave regret that the College of Physicians did not admit women as licentiates, as it was the duty of the College to supervise them, and see that they did their work well.

The President felt bound to assent to what had fallen from Sir James Paget and Sir William Gull, and he had never before in his life kept silence for so long with so much difficulty. Two courses were open to them—one was, to say to the women that, being on the Register, they would decline to give them any advice or assistance whatever; and the other was, not to entirely reserve their sympathy for the men. In his opinion they should not throw the women outside the medical profession to take the chance of what might happen.

Dr. Humphry moved as an amendment—"That it should be provided that any person who has passed the examination of the Board, not being a graduate in medicine or surgery of a University of the United Kingdom, shall receive the diploma or diplomas of one or more of the Corporations combined in the scheme."

Mr. Teale seconded the motion.

Mr. Turner had the same objection to this amendment as he had to Sir James Paget's motion, and proposed that there be inserted a provision with reference to the first case mentioned in the Bill (with regard to persons receiving diplomas from one of the medical authorities), that the possession of such a diploma or degree should be a necessary condition of registration, and that such degree should be a necessary qualification. In other words, that the title by which persons should get upon the Register should be a title conferred either by a University or Corporation. As objections had been raised that that would only provide for men, he had drawn up a further proposition that power should be given to those authorities who were desirous of granting diplomas to women, to give a new diploma to women, which for registration purposes should be precisely on the same footing as the diplomas specified in Schedule (A) of the Medical Act. He thought that amendment would bring matters back to the position which Dr. Rolleston referred to when he spoke of the Bill as it was on May 24. Perhaps it would be as well to point out why he objected to Sir James Paget's motion and to the amendment suggested by Dr. Humphry: it was because they contained expressions with reference to graduates of medicine at the Universities which seemed to place those graduates in a somewhat difficult position. If graduates wished to obtain Corporation diplomas they should have opportunities of doing so, and that was not clearly stated in either of the motions. It would be much better to deal with that matter in a direct form than by any amendment, as that would bring them back more distinctly, with regard to the registration of diplomas and degrees, to the condition of things expressed in the Duke of Richmond's Bill of May 24; and it was because that would not be done by these motions that he opposed them.

Sir James Paget asked if any Scotch Corporations could be mentioned which admitted women to degrees?

Mr. Turner was unable to afford an answer, having no information on the subject.

Dr. Humphry explained that he simply desired to insure that the diplomas or degrees could be obtained. He did

not intend that those persons who were graduates should be excluded from obtaining diplomas.

Mr. Turner inquired whether the motion was intended to affirm that the diplomas were to be required prior to registration?

Dr. Humphry said, Certainly, the Council having already passed a resolution objecting to persons being registered upon merely obtaining a qualifying certificate, without obtaining a diploma from a medical authority; and he now wanted to insure that the diploma could be obtained, and that it should not be left open to a scheme. The difficulty to be provided for was that persons passing the Conjoint Board should be admissible to the examinations, and it was desirable to insure that graduates should be admitted to the examinations in the Universities at a lower fee, and to provide that all persons who were not graduates should be enabled to obtain diplomas.

Dr. Rolleston, in reference to Mr. Turner's remark, that this would bring them back to the position of matters on May 24, said that, as the Premier had stated upon another question, "A good deal has happened since then"; and what had happened was that it had been recognised that the Corporations were still left to play the old game of locking their doors, if they chose, against women. That condition of things had entirely passed away; and it was no longer open to the Corporations to do the thing voluntarily, for the Government had said the women should not be kept knocking at their doors any longer, and that had been the object of inserting Clause 3. The Council would now, by accepting Dr. Pitman's amendment, be asking Government to take back Clause 3; and it would not do any longer for them to say that the Corporations should have the right of refusing a diploma. He hoped the Corporations would take this lesson to heart, and see that it was "wise to agree with their adversary quickly, whiles they were in the way with him." They should recall the history of the Sibylline books, having here so good an illustration of it; for one of the books it might be said had been actually destroyed already, and another was in danger of destruction too.

Mr. Turner pressed the Council to remember the actual position of matters. They had already carried by a large majority a motion that they did not approve of the Marquis of Ripon's amendments, and upon that they understood that the qualification conferred by a medical authority was to be a registrable qualification. His feeling was that that should be expressed, as it was very important they should say, having by a large majority objected to Lord Ripon's amendments, what they would accept. He would, to facilitate their action in that respect, ask permission to split this motion into two parts, and to take the first half separately, leaving the remainder with reference to the women to be discussed in that form or in any other that might be thought desirable after the portion referring to the diploma or degree as a registrable qualification had been disposed of.

Sir William Gull objected that the women's part of the motion was really the whole question at issue, and they should not run the risk of losing the result of three days' discussion by having the second part of the motion left out altogether. What they had so long been arguing was, whether this qualifying certificate should be registrable or whether the condition of the possession of a diploma should necessarily be attached to it. The Corporations had said they would not give a diploma to certain persons which they would give to others; and the Council, representing the public, must fight them upon that question. If they were to say with Mr. Turner that the diploma should only be given to one class, and not to the rest, they would have to do all their work over again.

The President then put Mr. Turner's amendment—"That the possession of a diploma or degree to be obtained from one or other of the licensing bodies as specified in Schedule (A) of the Medical Act of 1858 be a necessary condition for registration under the amended Act, and that such diploma or degree shall be a registrable qualification; and further, that power shall be given to those authorities which may desire to grant licences to women to constitute a new diploma, which for the purpose of registration shall be regarded as on the same footing as the diplomas mentioned in Schedule (A) of the Medical Act."

Mr. Macnamara was willing to second the motion if put as a whole, but not if it were split.

Sir James Paget objected to leave it to the Corporations to decide whether women should be admitted or not to the Register. (Hear, hear.) It was to escape from that difficulty that these changes had been introduced into the Bill. It had been determined by the Government that women should in some form or other be admitted on the Register. The Corporations had said they would not admit them; then, said the Government, a fresh arrangement must be made; and they had accordingly made an arrangement that there should be a licence in medicine, surgery, and midwifery granted, upon which women should be admitted to the Register. Men were to be admitted by the same licence; and the difficulty seemed to be resolvable only in this way, that either the Corporations must be compelled to admit women in some form to the diploma, or else the title of "licentiate" must be registrable for women only, and the men must be registrable by diploma or in some other form.

Dr. Fergus suggested, as an easy solution of the whole difficulty, for Mr. Turner to omit the second part of his motion, and introduce the words "of either sex." He was utterly tired of seeing the whole work of the Council stopped by this question, and if that were done it would be disposed of, and the necessity for the second part of the motion obviated. To substitute the words, "the possession of a diploma by persons of either sex," would solve the whole difficulty.

Mr. Turner: But supposing that women cannot obtain diplomas, what then? That is the whole difficulty.

Dr. Aquilla Smith, with regard to Mr. Turner's second proposal, that there should be a new diploma instituted for women, said there was a very serious objection to granting any further diploma. The Medical Council had been trying for many years to secure uniformity of education, and Mr. Turner was actually proposing to create a diploma differing from the existing degrees.

Mr. Turner: Differing in name.

Dr. Aquilla Smith said the proper course would be for the Council to announce at once that every Corporation in the kingdom should be obliged to register women. (Hear, hear.)

Dr. Haldane said they were bound to do so in the present circumstances. Under the scheme as now framed, women must be admitted to examination, but though they were so admitted and received their certificates, the whole thing would become illusory if the Corporations had the power of stopping them. Every person who passed the qualification examination should have a right to recognition by the Corporations.

Mr. Turner's amendment was then put, and negatived by a majority of 8. The names were taken at Mr. Simon's request.

The President then put Sir James Paget's original motion.

Dr. Humphry gave notice that he would move an amendment.

Dr. Rolleston asked that notice of the amendment should be placed on the paper for to-morrow, in order that confusion might be prevented.

The Council then resumed.

The President read a letter explaining that the object of the amendments to the Dental Practitioners Bill, with regard to which a question had been asked by Dr. Quain yesterday, was to make that Bill conformable with the Medical Amendment Act.

Some further correspondence was also read, and the Council adjourned.

Fourth Day—Tuesday, July 2.

The minutes having been confirmed, the Council proceeded in committee with the adjourned consideration of Sir James Paget's motion.

Dr. Humphry moved the following amendment:—"It shall be provided that any person who has passed the examination of the Board, not being a graduate of medicine or surgery of a University in the United Kingdom, unless such graduate shall apply for it, shall receive a diploma or diplomas from one or more of the Corporations combining in the scheme." He said that as the Government Bill provided for the admission of women to the profession, and the Council had passed a resolution providing that every person, before registration, should have a diploma, it was important to provide how such diploma should be granted; and it was for this purpose that he had prepared the amendment. He felt that the present

was a very important juncture for the authorities as to their relation to the profession. This was probably their last opportunity for such relation to be preserved, because his strong feeling was that unless it was preserved by this Bill it was scarcely to be hoped that any future Government measure would complicate itself with the rights of Corporations at all.

The amendment was seconded by Mr. Teale, and, on being put to the vote, was carried by a large majority; and then carried also as a substantive motion.

Dr. Pitman then moved "in Clause 3, line 18, after 'has obtained,' to leave out the words to 'midwifery' inclusive in line 22, and to substitute the following words: 'from one or more of the medical authorities uniting to frame a scheme for conducting examinations by a Medical Board under this Act, a medical degree, diploma, or licence, granted after examination by such Medical Board.'" This was almost a necessary consequence of the resolution which had just been carried; for whereas the one provided for the method of obtaining the diploma, the other provided for its registration. The Council had, by agreeing to Dr. Wood's motion, stated that which they did not want in the Bill; the present motion was to affirm that which they desired to put in the place of what they had cut out by Dr. Andrew Wood's motion. With the addition that he proposed, the clause would run thus: "After the commencement of this Act the Registrar shall not register any person unless either such person has obtained from one or more of the medical authorities united to form the scheme under this Act, a medical degree or diploma, or a licence granted after examination by such Medical Board." With regard to a remark by Professor Turner, that this would not quite accord with the wishes of the Universities, because it ignored their right to confer honorary degrees, he (Dr. Pitman) thought that such a right ought not to be claimed, and would scarcely ever be exercised. There was this objection to any such practice, that a person so obtaining a degree from a University, without passing the examination of the Conjoint Board, might go abroad for a series of years, get his degree acknowledged in the colonies, and then come back to this country and claim to be put on the Register under another clause in the Act. He believed that the English Universities did not contemplate the possibility of using any such power. Indeed, unless he was misinformed, the London University got an Act of Parliament specially passed in order that they might oblige all persons who came for their degrees to pass the ordinary examination.

Dr. Rolleston seconded the motion, which he believed was quite in accordance with the recorded decisions of the Council.

Dr. Quain thought the plainest way to arrive at the result would be to simply pass a resolution expressing to the Lord President that the registration clauses of the Medical Act Amendment Bill should be restored as nearly as possible to the form they held before the Bill was amended on recommitment in the House of Lords. Then the Government draughtsman would be able to put the thing into proper form.

Sir William Gull said that Dr. Quain must see the fallacy of any such course as this, because the view of the Council now was that people should not be put on the Register simply because of the qualifying certificate of the Conjoint Board, because they thought it would not be advantageous to the public to let people loose on the world without any kind of restraint. They wished therefore to provide that candidates should have a diploma from one of the authorities uniting in the Conjoint Scheme, in order that there might be something like order and supervision. That was a view which the House of Commons could thoroughly understand. But then the Council must be prepared to affirm that this diploma shall be granted to any person who passes a certain examination, whether that person be male or female; and that Dr. Quain was not prepared to admit.

Dr. Quain said that when the question of the admission of women arose directly before the Council he would be ready to propose that they should be incorporated into a university of their own. He did not know why this red rag of women's rights should always be held up before the Council.

Sir William Gull: It is not a red rag to me at all.

Dr. Humphry then moved, and Dr. Rolleston seconded, the following rider to Dr. Humphry's motion previously carried: —"And that it be further provided that the diploma or diplomas by which any person is so affiliated shall be entered on the Register, and that the degrees in medicine and surgery so granted by the Universities shall be entered on the Register," and explained that it was to remove a cause of opposition which would certainly be excited on the part of the Universities if the clause stood without that amendment.

Dr. Storrar, in supporting Dr. Humphry's rider, explained that it was quite true the London University had obtained a special Act to enable them to pass a by-law, but it was a by-law not to make it imperative upon, but to leave it optional to the University of London to exact that no person should be admissible to a medical degree unless he should previously have passed the conjoint examination. The Universities would never give up their ancient privilege of granting degrees irrespective of any relation with outside powers; and it was easy to imagine circumstances in which such power would be of great importance for the convenience of graduates.

Dr. Rolleston said the cases were so rare in which Universities would confer their medical degree, except to those who had passed the highest examination, that the maxim *De minimis* applied. He proposed to get over the present difficulty by a proviso—"That after the commencement of this Act the Registrar shall not register any person unless either such person has obtained from one or more of the medical authorities uniting to frame a scheme for conducting examinations by the Medical Board under this Act, a medical diploma or licence granted after examination by such Medical Board; or, in the case of medical graduates of any co-operating University, a medical degree granted by any such University either before or after the Conjoint Board's examination."

Some further discussion took place upon these last three motions, the point in issue being whether the Universities should retain their privilege of granting degrees in medicine without the examination of the Conjoint Board. Ultimately, Dr. Pitman withdrew his motion; and the rider of Dr. Humphry, seconded by Dr. Rolleston, was put to the vote and carried by a large majority.

Dr. Rolleston then moved to amend Clause 19, so as to make it run thus:—"Any woman who shall have passed the examination of the Conjoint Board shall have the right to claim the diploma of any one or more of the co-operating authorities; but she shall not in respect of that diploma, except so far as such medical authorities shall provide, have any share in the government, management, or proceedings of that authority." He preferred to state the thing in this plain and simple form, because it simply carried out that which the Council had already affirmed, that "*any person* who had passed the examination of the Board should receive a diploma from one of the Corporations combined in the scheme," and the word "person" would include a woman as well as a man; but it was important to make this perfectly clear to the Government.

Sir William Gull seconded the motion. The thing could not be avoided. The Government had felt the difficulty and was not desirous of forcing the Corporations to do that which they do not wish. But he maintained that the country had a right to claim that the Corporations should take part in the management of this question of the admission of women to the profession. It would be a very great public evil if women were admitted without such supervision. It was true that the Corporations had not a very strong influence with their licentiates, but they had some influence, and it was an influence for good. The public feeling demanded it. He was sorry to hear the President of the College of Physicians say yesterday that if his College admitted women he would resign his seat. He believed that a refusal by the College of Physicians would hold it up to public reprobation. Holding a Royal Charter, that College was bound to act for the public good, and inasmuch as it was quite certain now that women would be admitted into the profession, it was most desirable that the profession should in a liberal way try to guide and to help them in that walk of life. The day was gone by when this thing would be treated with contempt; and it was a disgrace to the profession so to deal with it. It was only putting themselves in a false position. He personally felt that it was a dreadful thing for women to be allowed to study and to practise medicine, but if there were women whose minds were so disposed, it was the duty of the Corporations to deal with them honourably and to assist them in the path they had chosen.

Dr. Quain, referring to former resolutions of the Council said that nothing could be more ridiculous than for them to stultify themselves by agreeing to any such motion as that now before them. It was only last session that the Council had recommended separate examination and separate regis-

tration for women. If women must be admitted to the profession it was perfectly easy for the Council to grant them diplomas or qualifications; but they should not try to force the Corporations, who would not have anything to do with them, to admit them. He hoped, therefore, that the Council would be consistent enough to adhere to the resolution which they had agreed to only two months ago.

Dr. Andrew Wood said that Dr. Rolleston appeared to speak with authority when he said that Parliament was in favour of the admission of women into the profession. But how he proved this he failed to see. He believed that the way in which this Bill was passed through the House of Lords was simply shameful; because he would like to ask how many noble Lords knew anything about it. He doubted whether even the few who were present knew—if even the proposer and seconder of it knew what they were voting upon. (Applause.) In the House of Commons the case would be very different. There would be a full discussion there, because there were men in that House who had mastered the subject, and would be able to enter into the whole question, and then probably they would have a totally different decision with regard to the women's question. He (Dr. Audrew Wood) had never changed his opinion upon it. He thought the Council were wrong when they originally passed the resolution, which was not very distinct in its terms, but which he believed had more effect in encouraging women to go on with their claims than any other thing that had been done. The consequence of that was that the Council had been drifting on and on, and now they were actually told that the claims of some twenty-four or twenty-five women in this country were so powerful as to bring this Bill upon them, which threatened to deprive the licensing bodies of all their rights and privileges! It might be forced upon the Council, but he (Dr. Andrew Wood) would never sanction it; for he held, in common with, he believed, the large majority of the members of the Council, that women were totally unfit to exercise the practice of medicine. Let them, then, honestly give their votes and say, "Whatever you may force upon us, at all events we will not encourage any such scheme." But what would be the result of the proposal now on the paper? It would be to encourage a movement which the Council in their hearts thoroughly disapproved of. (Applause.)

Sir James Paget thought that the Council should neither encourage nor discourage the movement, but be content with the resolution they had already passed, which was amply sufficient to cover the whole ground. The Government draughtsman would now deal with it in accordance with the expressed wishes of the Council. It was unnecessary to enlarge upon the thing at all. Having agreed in principle to admit women into the profession, it was illusory to refuse to grant them diplomas in this country, or to refuse to register them, because the result would simply be that they would go abroad, obtain their diplomas in Paris or elsewhere, come back to this country, and then the Council would be obliged to register their degrees. Having agreed that women shall be subject to examination by the Conjoint Board, the question was how they were to be admitted to the profession. If it were not done by the Corporations it must be done by the Medical Council; and, after the decision that they had arrived at, it would be much better to let the matter take its course.

Sir Dominic Corrigan, in speaking to Professor Rolleston's motion, said that he was in favour of the most perfect liberty being accorded to women to enter the profession; but having said that, he must add that which he had before stated at the College of Physicians in Ireland—that he would not meet a female practitioner in practice. There was nothing inconsistent in those two statements, because while he believed that women ought not to be kept down or crushed in any way by the law, he was equally conviuced that a man's sense of propriety would forbid him to meet a woman in consultation upon a case; because he could not conceive a case where a medical man would not be obliged to lose his respect for the sex in the discussion which must necessarily occur in practice, unless indeed some important elements were left out of the conference from a sense of propriety.

Mr. Teale then moved—"That the Conjoint Scheme shall provide a way by which every woman passing the examination of the Board shall be entitled to affiliation to one at least of the Corporations concerned in the scheme."

This motion failed for want of a seconder.

Professor Rolleston said it was important to face the real issue, and not to attempt to hide the assent of the Council to the admission of women to the profession in any way.

Dr. Pitman said there was no reason why they should not make an explicit statement of the real meaning of Dr. Humphry's motion.

Upon the President putting Dr. Rolleston's motion from the chair,

Mr. Macnamara said that such a resolution would have the effect of wrecking the Bill, because it would raise such a storm in the House of Commons that it would be impossible to get it through this session.

Upon the division being taken, the President declared the resolution passed by a majority of 10 to 5.

Mr. Simon inquired, while the matter was still fresh in the recollection of the Council, whether it was distinctly understood that it was to be taken in connexion with their other resolutions relating to the status of women.

The President said that was of course understood.

Mr. Simon suggested that a note to that effect should appear in the report, showing that the scheme would provide for the substance of what was pointed at.

The President reminded the Council that before they broke up it would be necessary that what the Council had done should be put in a somewhat different form.

Professor Turner, upon the resumed discussion of the clauses, said that if Lord Ripon's amendments were to remain as the principle of the Bill, the clauses bearing on the registration of foreign and colonial practitioners would require considerable alteration, as otherwise advantages would be given as regarded registration to colonists and foreign graduates, or of course British-born graduates holding foreign degrees, which would be denied to graduates of Universities of the United Kingdom. In Clauses 5 and 6 of the Bill alternatives were allowed to foreign and colonial practitioners. One advantage was that a domiciled colonial practitioner could, as soon as he had obtained his degree, come to England and register himself; and the other was that any colonist or foreigner who had practised medicine or surgery or a branch of them for more than ten years elsewhere than in the United Kingdom might do the same thing. The latter case would cover the case of an Englishman who had obtained a foreign degree, and then after practising for ten years came to practise in England. Perhaps Mr. Simon, who was more familiar with these matters, would assist the Council.

Mr. Simon was not prepared to deal with the matter, not having had it recently before him, and suggested that a committee would be better able to give an answer.

Professor Turner added that if Lord Ripon's principle were accepted he must certainly object to the clauses, as they would put a colonist who had just obtained his degree, and had not therefore had the advantage of ten years' practice, in the position of being able to come to England and claim his registration without any examination at all. This was an important matter, and one which the Council should not pass over without consideration.

Dr. Andrew Wood seconded Mr. Simon's motion, that Clauses 5, 6, and 7, with regard to the registration of foreign and colonial practitioners, should be referred to a committee, to report upon them to the Council to-morrow.

The resolution was carried, the committee appointed consisting of Drs. Pitman and Andrew Wood, and Messrs. Simon and Turner.

The President said the Government were very desirous of ascertaining the wishes of the Council; and there could be no question that the result of their deliberations would receive the most careful attention.

Mr. Macnamara moved that a committee be also appointed to take into consideration and report upon the question of registration being made imperial, and not local, as referred to in a letter from the Privy Council Office.

A committee was appointed for the purpose, consisting of Mr. Macnamara, Mr. Haldane, and Mr. Teale.

Sir James Paget, with reference to the provisions in Clause 8 of the Bill, with regard to the acceptance by the Council of testimonials of special esteem on the part of the medical authority granting them, said the body he represented had power to elect yearly to fellowships two of their members who had distinguished themselves; and whenever such testimonials were given it was desirable that the Council should have the power of directing their registration.

Dr. Pitman, in seconding the motion, said most of them knew that the College of Physicians had a fellowship, and that

that fellowship was not granted upon examination. That body selected from among members who had been four years on its roll those who were considered to have sufficiently distinguished themselves to have deserved an honour which was generally held in high estimation, viz., fellowship of the College. If this clause stood as it was, it would affect the fellowships of all institutions which were granted upon other grounds than examination; while they had, on the other hand, always held that it was a far higher test that a man should have publicly distinguished himself by his achievements and discoveries. He therefore suggested that the word "distinction" should be substituted for "esteem" in the motion.

The motion that degrees granted by way of special distinction should be accepted was then put and carried.

Professor Turner pointed out that though it was left entirely in the hands of the Medical Council to say whether these additional diplomas of special distinction should be held sufficient to enable a person to be placed on the Register, powers were, on the other hand, conferred on the Privy Council to act as a court of appeal in cases where any of the medical authorities, feeling aggrieved at the action of the Medical Council, chose to invoke them. In such cases, therefore, the medical authority was not constituted the absolute authority. He could very well conceive a case where an authority might say they had conferred a testimonial of distinction, or an additional diploma, on a test which they held to be much higher than that required for ordinary registration; but the General Medical Council might think otherwise, and then the diploma conferred by that body would not be registrable. Would it not be advisable, therefore, that there should be a right of appeal to the Privy Council from the Medical Council, supposing the authorities felt aggrieved by any such decision? He thought it a matter of common justice that the authorities should have that right.

Dr. Andrew Wood agreed, and thought the medical bodies ought not to be compelled to come to the Council and ask whether a person was of sufficient distinction to permit of a testimonial being given to him.

Sir James Paget thought it should rest with the Council to determine whether an honorary degree granted by one of the authorities should or should not be registered, not from any consideration affecting the person to whom it was granted, but as regarded the degree itself.

Dr. Haldane was of opinion that the intention of the clause was that a man who had passed the fellowship should be eligible from that very fact. It would be necessary for the authorities to lay down a scheme for membership, and then to add certain conditions for the promotion of members to the fellowship. Then if the Council approved of the scheme, further interference would be unnecessary.

The motion proposed by Professor Turner, and seconded by Sir James Paget—that there should be added to the clause, "That the right of appeal to the Privy Council should be granted to the medical authorities in the event of the General Medical Council refusing to register additional diplomas or testimonials of distinction granted by one of those authorities"—was then carried.

A number of verbal alterations in succeeding clauses of the Bill were then discussed.

Mr. Macnamara pointed out an obscurity in Clause 13 with regard to the examination-rules. The meaning of the sub-section evidently was that a candidate should not be bound to say when he obtained the licence that he would adopt or refrain from adopting the practice of any particular theory of medicine or surgery. For instance, candidates should not be required to bind themselves to practise allopathy, and not homœopathy, and the introduction of some such words would make the meaning of the clause perfectly clear. Wherever the enactments of the Medical Bill could be made clearer and more consistent with common sense, he certainly thought they should be made so.

The proposition, finding no seconder, was dropped.

Professor Turner, with regard to the position of existing students under the proposed Act, inquired whether students who had been registered before the date of the commencement of the Act would be required to go through the examination of the Conjoint Board before being admitted on the Register. It appeared the examination rolls were to determine the admission of candidates; and he moved—"That sub-section 3 of Clause 13 should provide for making regulations in favour of medical students who had commenced their medical studies before the passing of the Act."

The motion was seconded by Mr. Simon, and agreed to.

Mr. Simon proposed that the examination-rules should provide for the admission of women to the examinations, so that the examinations might be in all general respects equal.

Dr. Pitman suggested that the motion should only provide for the admission of women, and there stop, leaving the rest to the discretion of the examiners.

Professor Turner, in seconding the motion, remarked that they had to consider the position of the persons examined as well as the functions of the examiners, and while they should not allow candidates the privilege of selecting the subjects of examination, there might be very good reasons why the last words of the motion should remain.

Dr. Quain entirely approved of the motion, as it in some degree redeemed the character of the Council after what had passed on the women's question.

After some further discussion the motion was put in the form—"That the examination-rules should provide for the admission of women to the examinations, making such distinctions as may be judged proper between the cases of men and women, so, however, that the examinations of men and women may be in all general respects equal,"—and was agreed to.

Professor Turner reminded the Council that before the English scheme could be adopted it must be sanctioned by the Privy Council—before it could be confirmed by any Act. In all probability the scheme would require some further alteration, and it should therefore be perfected before the Act was to come into operation.

Clause 25 of the Bill, with regard to dentists and midwives, was then agreed to be omitted, being elsewhere provided for, a motion by Dr. Andrew Wood, that it was necessary to retain it, being negatived.

The Council then resumed and adjourned.

ORIGINAL LECTURES.

LECTURES ON THE DIAGNOSIS AND SURGICAL TREATMENT OF ABDOMINAL TUMOURS.

Delivered at the Royal College of Surgeons of England.

By T. SPENCER WELLS, F.R.C.S.,
Consulting Surgeon to the Samaritan Hospital, etc.

Lecture IV.

Details of Different Steps in the Operation of Ovariotomy—Position of Patient—Incision—Adhesions—Opening and Emptying of Cyst—its Removal—Treatment of Pedicle—Closure of Wound—Dressing and After-Treatment.

At the end of the last lecture, we had a supposed patient upon the table, in the position in which we usually operate at the present day. I should say that some operators still prefer the old position, in which the patient is placed at the foot of the bed, in something like the position for lithotomy, or sitting half reclining on the table, the legs widely separated. Some operators fix the legs in a kind of splint. Péan and Hegar operate in this way, fixing the patient on a table, lying on her back, the legs separated, very much as if lithotomy were to be performed on the male. The operator sits between the legs of the patient, and operates sitting. I have seen Péan doing this. The reason he gives is that he is a long time operating. English operators, he says, operate too fast. He takes from one to two or three hours. It is extremely fatiguing for the surgeon to stand all that time, and therefore he prefers the sitting position. There are still operators in this country who prefer this position. It was always adopted by Mr. Baker Brown, and in my first three cases I followed the old practice, but I very soon gave it up. I found it extremely inconvenient to sit or stand between the legs of the patient. It was difficult to get to the bottom of the pelvis, difficult to tie bleeding vessels, difficult to arrange for the escape of fluid without letting it flow into the peritoneal cavity; and after the third case I adopted the position which I showed last week, and which is represented again to-day, on the ordinary dressing-tables to be found in every house. The patient lies down; her knees are fastened down by a strap, the hands tied, and she is protected from the moisture of the spray (supposing it to be used) by this piece of indiarubber cloth, which is fixed over the abdomen,

and covers the chest of the patient. Then I also spoke of the length of the incision, the situation in which it is made along the linea alba, and the different precautions we use for checking the bleeding from vessels as they are divided, so that no blood may sink into the peritoneal cavity. I also spoke of the mode of opening the peritoneum, raising it up with this hook, making a small opening, and then passing a broad Key's director into the peritoneal cavity, and with a blunt-pointed knife dividing the peritoneum upwards and downwards; speaking of the necessity of using a blunt-pointed knife in order not to injure any of the viscera or the bladder. I also showed the trocar by which the cyst when exposed is punctured, withdrawing the point, emptying the cyst, the fluid running away through this tube into a pail, and then by a pair of forceps and the two hooks holding the cyst on to the canula, and withdrawing it gradually through the opening in the abdominal wall as the cyst is emptied. All that I spoke about in some detail at the last lecture.

The next point to consider is the mode of dealing with adhesions—supposing the cyst, instead of being free, instead of coming out when it is empty, still adheres, either to the abdominal wall, or some other part of the abdominal cavity, or to the omentum, or intestine, or to some of the structures in the pelvis. It is very possible that, in making the first incision, one has found the cyst is not free, but that it is closely adhering to the abdominal wall in front, and it is necessary to make a separation. Sometimes it may be well to do this while the cyst is tense, passing the fingers between the abdominal wall and the cyst, and, after separating some adhesions, to tap and empty; but if the adhesions be very close, I believe the safest plan is to empty the principal cyst before making any attempt to separate the adhesions. There are some obvious advantages in this mode of procedure. When the cyst is opened, there being only an incision in the abdominal wall, the peritoneum being still undisturbed, of course any fluid that escapes from the cyst cannot pass into the peritoneal cavity. It must run away through the opening made in the abdominal wall, and in this way the fluid can do no harm. Then when the cyst is empty, it is often extremely easy to draw it out by passing one hand into the interior and then grasping the back of the cyst and inverting it, as it were, drawing out the back part through the opening made in the front part. In this way it will often come out without much trouble, whereas if one attempt to proceed to separate an adhering cyst from the abdominal wall, without being very certain where the cyst and peritoneum join, then mistakes are apt to be made. In many cases, when trying to separate closely adhering cysts, surgeons have torn off portions of the peritoneum, and have got into considerable trouble. When the cyst is closely adhering in front, I believe the best plan is to empty it, to invert it, to draw the posterior part of the cyst forwards, and endeavour to draw it out. If that cannot be done, and there are still firm adhesions, then it is necessary to proceed systematically, and find out, by carrying the incision upwards and downwards, exactly where the limit is between the cyst and abdominal wall; and proceeding to that point, one hand draws the cyst outwards, while with the other hand we separate it. Occasionally, some very firm band must be divided with the knife or scissors, but it is very rarely this is the case; it almost always can be done without dissection. Then when the adhesions have been separated, it may be occasionally necessary to break up the tumour—if it is too large to come out through an incision of moderate length—and this may be done either by tapping any distinct cysts, or with the fingers tearing the septa which divide the cavity into several compartments; and when the contents of each compartment are pressed out, the main cyst usually follows. If there be a great deal of solid matter, it may be necessary to extend the incision till the opening is sufficiently large to allow the tumour to pass outwards without using too much force.

The tumour having been drawn out of the abdomen, the pedicle comes into view. It is seen that the cyst is connected with one or other side of the uterus by a band of greater or less breadth, or by a sort of cord or root, long or short. This cord or pedicle may possibly be divided into more than one portion, but at any rate the connexion between the uterus and the cyst is seen or felt, and this must be secured before it is divided. There are various ways of dealing with the pedicle. In the earliest operations, the pedicle was tied with whipcord, and the ends were brought out through the wound. After a time, leather ligatures were used and the ends were cut off short, and the ligature, with the pedicle, was returned into the abdominal cavity, and allowed to sink down into the pelvis. Still later, the use of the clamp was introduced by Mr. Hutchinson, and was followed by me and by others.

The different modes of using ligatures, the clamp, and the cautery, I will presently describe; but I will first show the clamp which, after a good many trials, is the one that is now used. This is a cyst I removed last week. Here are the remains of the pedicle and the Fallopian tube; and this is where the cyst was separated from the side of the uterus. Now, suppose that the cyst has been drawn out through the opening in the abdominal wall, and that round the neck or pedicle, between the cyst and the uterus, the clamp is applied in this manner. It is passed round at the precise spot selected, and is firmly grasped by these handles. Then the surgeon holds the whole perfectly secure while he fastens the screw on the arc. I generally prefer, instead of trusting to my fingers, to take a pair of forceps, and, giving an additional turn to the screw, to fix the clamp so that there is a certainty that it will not slip. Occasionally, when one part of the pedicle is very much thinner than another part, it is possible the thin part might slip through and troublesome bleeding might follow. If there be any fear of that, it is a good plan to pass a ligature round the pedicle below the clamp and tie it. If the silk be passed round before the clamp is thoroughly tightened, it makes a circular constriction, presses it altogether into a circular form, and then the clamp is fastened. There are several advantages in doing this. You see exactly where you are going to put the clamp; it scarcely takes a moment of time, and putting the clamp over the tied part, it is so tightly held that there is no possibility of any thin part slipping out. That is the way in which the clamp is now used. There is the clamp. It is curved; whatever tension there may be, it does not press upon the sides of the wound. It holds the pedicle very firmly against the abdominal wall, and keeps any dead or dying portion of the pedicle well outside. The part that is left above the clamp outside the abdominal wall is very small, and upon this one sprinkles a little perchloride or persulphate of iron. This converts what would otherwise become putrid almost into hard leather, which cannot do any possible harm.

Supposing the pedicle is too short or too broad for the clamp to be used, or the surgeon wishes to use the ligature in any particular case, then it is easily done by one of these forms of needle. They are all made with blunt points. It is dangerous to use sharp-pointed instruments near the abdominal cavity, or with portions of small intestine occasionally coming in the way; and it is also advisable to avoid any wounds of the large veins which are frequently met with in a pedicle. Then, to avoid troublesome entanglement of the silk, I have had a double eye made, so that, after the instrument is past the ligature, it is left almost ready for use. Even through the thick part of the wall of this cyst it is not difficult to push the blunt point, and then, when the instrument is withdrawn, two threads are ready to be tied. I first make what is known as the "surgeon's knot," so that there is no probability of its slipping, and I like an additional knot also, because I believe there is a greater safety in the surgeon's knot with a third knot than in any reef-knot. With the third knot and the pedicle tied in two or more parts, I believe it is, as a rule, secure; but sometimes, just at the point where the needle has been passed, the pedicle may split in a very troublesome way. The thin membrane of the broad ligament seems to separate, or the opening made by the needle extends or splits downwards, and blood oozes from it. If so, all that is necessary is to take another turn of the silk and just bring it round from one side to the other, so that the whole pedicle is compressed. The objection to doing that is, that it keeps the broad ligament rather too much on the stretch. It is better to leave it, if one can, with the different portions tied separately, than to tie it altogether. It crumples up the whole of the surface, and makes a tight band across the pelvis, which it is desirable to avoid.

The third mode one can adopt is by the cautery; but I think, before going into that, I will just ask you to suppose we have got so far with the operation, that the tumour has been removed, the clamp applied, or the ligature has been used and the tumour cut away. The next thing is to cleanse

the peritoneal cavity of anything which ought to be removed from it, either blood that has oozed from the separated adhesions, or any ovarian fluid that may have accidentally passed into the cavity, in spite of all the care we may have used; to do that, it is only necessary to take one sponge after another, and to carefully wipe away anything that there may be in the peritoneal cavity. I do not think we can be too careful about this. It is said that the sponging rubs off the delicate secreting surface of the peritoneum, and so does great harm. Microscopically, it has been shown that the peritoneum looks extremely bare after being sponged; but, practically, it is found that the more careful this sponging, the better is the result to the patient. Just a word of caution as to the number of sponges. Be sure that every sponge passed into the peritoneal cavity is removed. There are cases on record in which a sponge has been found in the peritoneal cavity of a patient after her death. Once it occurred to me to make this mistake myself; but I got the sponge out afterwards. I was just finishing an operation when one of the gentlemen who was assisting me said, "You left a sponge in." I said to the nurse, "Count them." We always count the sponges before the operation. She said, "They are all here; I have sixteen." I said, "Are you quite sure you have them all?" I was feeling about the peritoneal cavity to try and find a sponge, but I could not find one. I took all the pains I could, and then the nurse said, "I am quite sure I have got them all." So I was satisfied, and I sewed up the wound. It was about two or three in the afternoon. At eight or nine o'clock at night, they came round to me to say the nurse missed one of the sponges—a sponge she knew; it could not be found; it must be in the patient. It was difficult to know what to do for the best. The patient seemed pretty well, and I did not like to open the abdominal cavity again to see whether there was a sponge there, so I decided to wait till the morning. In the morning she seemed very ill; she had had a very restless night, and I thought it better to open the wound. I took out two stitches, and the instant I put my finger in I felt the sponge. It had been pressed, I suppose, by the movements of the intestines towards the wound, and there it was. I took it out, reclosed the wound, and the patient was not much the worse for it. So I would again impress upon you as strongly as I can the necessity of always counting the sponges, and always being quite sure they are all away. In one other case I was a long time searching for a sponge before I could find it. No one who has not tried would believe the difficulty of finding a sponge in the abdominal cavity, if it be not very large, and have become saturated with fluid. The lady was the wife of a surgeon, and I operated upon her in the fifth month of pregnancy. After the pedicle was secured, and I was closing the wound, the nurse said there was a sponge missing. I said, "Are you quite sure?" She counted again, and said, "I am sure there is a sponge missing." I felt in every direction in this lady's abdomen; put my hand to the bottom of the pelvis, to the front of the uterus, and everywhere I could think; but find the sponge I could not. But at last, up to the back of the liver, between the liver and the diaphragm, I found a small sponge, and removed it. The patient made an excellent recovery, in spite of all this groping. But this leads me to repeat the caution not to use sponges so small that they are not easily found.

When the peritoneum has been cleansed, the next thing is to close the wound. In the early cases I closed the wound by hare-lip pins, putting a twisted suture round them. That plan is still followed by Kœberlé and other well-known operators. But for a long time I have only used pure silk. I have the needles threaded in pairs (two needles to each piece of silk), and put into a piece of carbolised gauze all ready for use. The needle with the thread is held in Mr. Wormald's needle-holder, the simplest and most satisfactory needle-holder one can use. Each needle is passed from within outwards. There is no danger of wounding the intestine, if the needles are passed in that way. Taking one side of the opening in the abdominal wall between the finger and thumb, one needle is passed from within outwards. This is easily done through any thickness of abdominal wall. On the other side of the opening the second needle on the same piece of silk is used in the same way, and so the silk passed from within outwards is ready for tying the sides of the opening in the abdominal wall together. When one suture is passed, the assistant holds up the ends and you pass another. In this way some five or six, or eight, are employed, according to the length of the incision, and, when they are all made, it is ready for the tying process. I should have said that, before beginning to pass the sutures, a flat sponge is passed within the abdominal cavity, and is left behind the line of incision to be ready to catch any drop of blood that may pass inwards from each prick of the needle, and also serve to prevent any escape of intestine. In this way, with a large sponge covering the intestines and omentum, lying close behind the abdominal wall, you are kept safe from doing any possible harm. When all the stitches have been passed, and the sponge is removed, the assistant grasps the abdominal wall and holds it tightly while the sutures are being tied, so that there can be no escape or protrusion of intestine or omentum between the lips of the wound. There are cases on record in which fatal obstruction of intestines has occurred simply because the intestine has been tied in closing the wound. A loop of intestine has been sharply constricted by a suture, and in this way the patient has been absolutely killed. Sometimes a piece of omentum may be strangulated in the same way, and lead to troublesome vomiting, so that it is very necessary that the surgeon, in sewing up the abdominal wall, should occasionally pass his finger inwards behind the line of sutures, and make sure that there is nothing interfering between the two edges of the united wound.

The wound having been closed, the next thing is to apply the dressing and bandage. I have for many years followed the teaching of Sir James Paget, and endeavoured to keep all wounds as dry as possible. I believe a great deal of harm has been done by keeping them moist. My chief aim has been to keep all wounds quite dry, and I have tried a variety of modes of doing this: charcoal-bags, bags of carbolised lime, cotton-wool, and blotting-paper. The last thing I have tried seems to me to answer better than anything. It is gauze saturated with thymol, the last substitute for carbolic acid. Thymol and spermaceti are mixed together. The gauze is charged with it, and makes a very nice soft antiseptic dressing, which is simply put over the united wound. Eight or ten other folds are put over the first, and then you support the whole with strips of plaster and the flannel bandage (lined with linen or calico to lessen the irritating action of the flannel on the skin of the patient), and this bandage is tightly fastened over the gauze with safety-pins. That being done, the patient is carried to bed, and is left there, quiet and comfortably warm, with only the nurse in the room.

Now a word or two about the cautery treatment. It originated in this way: Mr. John Clay, of Birmingham, contrived this instrument for separating adhesions with the cautery. This is what is called "Clay's adhesion-clamp." He passed it over any firm adhesion or any adhering portion of omentum, screwed it up, and then, with a cauterising-iron heated in the fire, he burnt it off. There is a little rim here which prevents the cautery from slipping. Very soon after Mr. Clay had introduced this plan for treating adhesions and adhering omentum, Mr. Baker Brown extended the plan to the treatment of the pedicle. He found it did so well for adhesions and omentum that he thought it would also do well for the pedicle; and here is one of his original instruments. The instrument is in two pieces. It is fastened on to the pedicle with a screw. When fastened, one of the irons, heated in the fire, was gradually passed along the cyst on the upper surface of the clamp. A guard prevented the iron slipping, and an ivory plate prevented the clamp getting overheated and burning the patient. Of course, with a large tumour, that was sometimes a troublesome process, and after a little practice I began to cut off the cyst; and then, with an ordinary druggist's plaster-spreading spatula, well heated, and used slowly, so as to burn or scorch the portion of the pedicle between the two blades of the clamp, it was very seldom in opening it that the vessels bled; but every now and then one or more did bleed. Various contrivances were made to avoid damage from that. The most convenient was the Russian, or Maslowsky's. The pedicle was seized with that; and then, as it only holds the cauterised part in certain portions, it was seen whether it was bleeding or not. Supposing it did bleed, then any bleeding vessel was tied. In a good many cases where the cautery was used, some vessels did bleed, and we had to resort to the ligature; and it was this uncertainty which led me, after great success with its use—I think, out of sixteen cases in which I tried it, only two died—finding

it uncertain and troublesome, and that we were obliged often to use the ligature instead of trusting to the cautery only, I gradually abandoned it, and, in cases where I could not use the clamp, resorted to the ligature only. There are various forms of cautery and clamp. This is Maslowsky's cautery-clamp, which is a very convenient instrument, and has the advantage of two little catches which enable one, in opening it, to see whether the charred tissue is bleeding. Here is a piece of talc, the best non-conductor of heat known, which is placed beneath the clamp to guard the skin from the effects of the hot iron. And here is a very ingenious clamp made by a late colleague of mine, Dr. Wright, who had seen me troubled in one or two cases by bleeding in opening a cautery-clamp; and he arranged a set of screws by which one could open portions of the cautery in succession, to see whether any vessels bled or not. Once or twice I found it had the disadvantage, in opening it, of separating the two layers of charred tissue, and in that way setting up bleeding, which otherwise might not have occurred.

Different forms of clamp for use without any cautery, where we trust to the clamp alone, are here on the table. Mr. Hutchinson was the first to introduce it, and he first used the common "calliper" of the carpenters. This is simply a compass fixed by an arc and screw. That is the instrument which Mr. Hutchinson used in his first cases, and it is really a very effective instrument. The pedicle is very well compressed by the calliper, and is quite tightly held. His first improvement was to make the handles so that they could be taken off, leaving the clamp only lying upon the abdomen of the patient, without any handle. Then there were trials made to make the blades act in a more parallel way. Here is one which I have kept, as showing the amount of force I occasionally put upon the pedicle. This bend I actually made upon the pedicle of a living patient. When I took the clamp off, this strong piece of steel was bent in the way you see. Then I tried to get a clamp like the hæmorrhoidal clamp, as it is called. If I could get that action upon a pedicle, I thought we should get circular compression without the necessity of applying a ligature. Here is Kœberlé's clamp, which he still uses, although it is extremely sharp, and evidently only intended for a small pedicle. After it is secured, the two rings serve to keep it from being drawn into the abdomen. The nearest approach to the circular clamp I succeeded in obtaining was made for me by Mayer and Meltzer. It acts so as to produce a very complete circular compression. It is easily fastened by the screw. But I found this (although it appears smooth and blunt enough) more than once cut the pedicle behind the place where it was applied, and led to troublesome and dangerous bleeding, so that I was obliged to abandon that; and, although I see it frequently figured in books, particularly foreign books, as my clamp, it is a clamp I have given up for the last seven or eight years.

But I should like to show you, before passing from the clamp, three preparations here from the museum, showing what takes place after the use of the clamp. Here is one from the abdomen of a patient who died from tetanus fourteen days after ovariotomy. Here is a portion of the abdominal wall; here are the remains of the pedicle brought through still adhering; and on this side you see the way the Fallopian tube is fastened to the abdominal wall. In the second preparation, you may observe the uterus and the abdominal wall, with the pedicle of one ovary and a cyst in the other ovary. The patient died some years after ovariotomy, and after her death the cyst in the other ovary was found. This is a preparation removed two years after ovariotomy. I removed both ovaries. You see the two pedicles brought up adhering to the inner surface of the abdominal wall, and allowing free movement to the uterus.

Here I have a series of preparations which show the results of uniting the wound in the abdominal wall, including the peritoneum in the sutures, or not including it. In showing just now the way of using the silk and two needles, I said, "You pass it from within outwards"; but I did not sufficiently explain that, in doing this, it is necessary to include the whole thickness of the abdominal wall. It does not do simply to sew the skin together, or the skin and muscle together; the peritoneum must be included; the two edges of peritoneum must be folded together. In this way they very soon unite, and the peritoneal cavity is completely protected from the sinking downwards or inwards of any blood or pus that may possibly form, or any blood from any small vessel that may go on oozing between the lips of the incision. If the two peritoneal surfaces be held together, they unite quite firmly and accurately. These preparations are the only examples of my own practice of vivisection, although I have been loudly accused of cruelty in the anti-vivisection journals. Really these preparations include the whole of my practice on the lower animals. I believe there were six rabbits, four guinea-pigs, and four dogs. Fourteen experiments upon the lower animals complete the list of my crimes so far as vivisection is concerned. These specimens are really worth the attention of gentlemen after the lecture. They show the abdominal wall of rabbits united by passing iron-wire sutures. We were all using wire at that time. Everybody thought wire was better than silk; and in these two cases I united two wounds of the same size together in two similar animals, in the one bringing the edges of the peritoneum together, and in the other not doing so. These animals were killed three days after the operation. In one preparation, the iron wires are seen on the outside quite distinctly; but on the inside it is impossible to see them. The peritoneal edges have been folded together; some lymph has been effused; and the sutures are covered just as if a coat of plaster had been put over a wall, and the abdominal cavity is most perfectly protected. In the other preparation, the sutures are seen just as distinctly inside the abdominal cavity as outside. You can see where the edges of the peritoneum are separated. You can distinctly see some quarter of an inch on either side of the roughened surface of the muscles. Here are other specimens. This is from a guinea-pig; and there, where the peritoneum was not united, a portion of intestine and omentum has adhered to the inner surface of the wound and blocked up the opening. Where the peritoneal edges were not accurately united, a part of the omentum has adhered and completed the closing of the cavity. Here the same thing is shown from a dog. The large portion of omentum which has attached itself to the under surface of the abdominal wall is quite curious. The wound was left with the skin; fascia and muscles only united. Great care was taken to avoid the peritoneal edges; and then the peritoneal coat of the abdominal wall is completed by a portion of the omentum coming and adhering there. I do not think there could be a more complete proof of the propriety and necessity, in all cases of wounds of the abdominal wall, of bringing the two peritoneal edges accurately and closely together.

In the few minutes which are left before the clock strikes I will show a very convenient form of lamp for throwing light upon any dark spot in the abdominal cavity, when it is difficult to find some small bleeding vessel. By concentrating such a ray of light as this portable lamp of Collins's gives upon it, it is often easy to find a vessel which cannot otherwise be found. In practice this becomes of very great use.

Then, supposing one wishes to use the cautery, this is the well-known instrument of Paquelin, called a "thermo-cautère," and if there should be a return to the use of the cautery, in ovariotomy, this would be the most convenient instrument one could use. It is simply a hollow platinum cautery, first heated in a spirit-lamp, and then, by sending a stream of benzoline through the platinum end, a dull red heat or white heat can be kept up and maintained as long as the surgeon wishes it. Irons taken from a fire are clumsy. Copper cauteries are less liable to rust and scale off than iron; but platinum has the very great advantage of not rusting, and also the advantage that an assistant can, by working these bellows, keep up any degree of heat required, and the surgeon can use his cautery as long as he pleases. There is one little imperfection in the instrument: there should be some fastening to secure the plug in the bottle. If one use the bellows a little too fast, the air accumulates in the bottle rather faster than it passes through the tube, the plug flies out of the bottle, and the cautery cools just at the time it is required.

THE Council of the Sanitary Institute of Great Britain have appointed a committee consisting of his Grace the Duke of Northumberland (President), Mr. Edwin Chadwick, C.B., Dr. Richardson, and Dr. Lory Marsh, to represent the Sanitary Institute at the Congrès International d'Hygiène, to be held in Paris from August 1 to 10 next.

ORIGINAL COMMUNICATIONS.

SKIN DROPSY.

By A. W. MAYO ROBSON, M.R.C.S. and L.R.C.P. Lond.,
Demonstrator of Anatomy at Leeds School of Medicine.

During my fourth year as a student, my attention was specially drawn to a case in the out-patient department of the Leeds Infirmary, which was said to be one of renal disease, but without any albumen in the urine. I moreover noticed that the specific gravity of the urine was nearly normal, and could find no casts on examining with the microscope; there was neither heart nor lung affection, and, in fact, no evident cause for the anasarca. I was puzzled, and inquired of more than one medical man as to what their opinion of the case was, but received no enlightenment; hence, I determined by watching for similar cases, and carefully scrutinising the symptoms, to endeavour to throw some light on this evidently obscure affection.

My endeavours in the way of discovering cases have not gone unrewarded, for I have seen several analogous to the one I first saw, besides some of a more acute character, but which I believe to be essentially the same disease, only in a different stage. Whether my success in divining the cause is real or not, I must leave it to others to decide; but in the fact that such cases do occasionally come under observation I suppose most will agree with me, although many may perhaps dissent from my explanation of their causation. The following are histories of some of the cases that I have personally seen:—

Case 1.—A. H., aged thirty-eight, cook in a gentleman's family, said that she had caught cold on the Sunday by getting wet through; she felt chilly, and had aching pains all over the body, or, as she put it, "felt as if she had been beaten all over." During the night she was feverish and restless, and I was called to see her on the Monday. At first sight I remarked to myself, "Acute kidney mischief," from the characteristic swollen face; the eyelids being semitransparent, shining, and puffy. This was so marked that she feared erysipelas was setting in, but there was no redness nor any sign of an eruption. The arms were a little swollen, and the backs of her hands and fingers were puffy and pitted slightly on pressure. She complained of joint pain and general malaise. Pulse 100, full and moderately good; temperature 99·8°. No headache and no pain in the back. The heart and lungs were quite healthy. Menstruation regular. I ordered her to have a warm bath and to take ammonia mixture. On the Tuesday she felt relieved; the swelling of the hands was much better, and her face was rather less puffy. Her general condition improved gradually, and at the end of the week she was quite well, the swelling having entirely disappeared. The urine was non-albuminous and quite normal throughout the entire case.

Case 2.—A. B., aged twenty-nine, widow, having had two children, cook in a gentleman's family, came to consult me, saying she felt generally ill and could not get warm anywhere; that this was the second day of her illness, and that she had been previously well, although usually pale-looking and thin. In this case I again thought there must be kidney mischief, for the face was puffy and œdematous, the eyelids especially showing it, the skin over them having a semi-transparent appearance; the hands and arms were also swollen, but there was no evident swelling in the legs and feet. Her temperature was raised 1½°; pulse 98, and rather feeble. There was neither heart nor lung disease; and the urine was normal except an excess of lithates—there were no casts on examination with the microscope. She attributed her illness to working in a draughty kitchen after being heated with cooking. I prescribed a diaphoretic medicine, with rest and low diet. She recovered gradually, being well in a week.

I have seen both the above patients since; there has been no return of the symptoms, and they are now quite well. Two other cases similar to these have come under my observation; but as they have essentially the same histories I need not recite them. All have been, curiously, either in domestic servants, or in women who do their own housework; but I have never seen any similar symptoms in men.

Case 3.—The third case I shall relate is a chronic one, and is as follows:—Mrs. S., aged forty-one, said that previous to being married, which was at the age of twenty-five (*i.e.*, sixteen years ago) she used to go out dressmaking, and frequently got wet, and sat all day in her damp clothes, so that colds were not infrequent. About that time she began to notice that her face, chest, and arms were rather swollen, but as it was not very marked she sought no advice, and, in fact, never consulted anyone till she was twenty-nine, when the swelling was very marked in her face and hands, and slightly in her legs and feet; she was then told she had dropsy, but no mention was made of any organic disease. Since that time she has been better and worse, but usually ailing a little, and never feeling really well. Her menses have been regular, and she has had several children, usually getting up after confinement tolerably well. I saw her a year ago, when she consulted me for pain in the limbs and back, depression of spirits, dyspepsia, and general malaise; her anomalous symptoms, and her somewhat pale, swollen face, at once led me to suspect renal trouble, for there was general œdema of the skin and subcutaneous tissues, it being especially marked in the face, hands, and legs; the eyelids were puffy and semi-transparent, but there was no subconjunctival effusion; the forehead slightly pitted on pressure. The urine was said to be abundant and pale, and on examination I found its specific gravity to be 1016, and that it was quite free from albumen and casts. There was neither heart nor lung disease, nor any cutaneous eruption. Rest, warmth, and saline mixture soon relieved the symptoms, and the anasarca was lessened, but did not disappear. I have since seen her on several occasions, and have carefully examined the urine, which is always free from albumen and casts, and has a specific gravity of from 1015 to 1020. She has still the general œdema, but gets on tolerably well. Her intellect is unimpaired; and she has neither the pink tinge of the skin, and "spade-like" shape of the hands, as described by Sir William Gull in his paper on "Cretinoid Condition supervening in Adult Life in Women," nor the slowness of perception, slow articulation, torpidity of action, and slowness of speech, as described by Dr. Ord in his lecture on Myxœdema.

After hearing the preceding histories, I think you will agree with me in saying that we have a form of dropsy which does not coincide with any of the ordinary kinds. And since it has such distinct and unmistakable symptoms, it behoves one to look about to discover what is the real cause, for, as far as I know, neither the acute nor chronic form of this disease has been previously described. And since I cannot find either any mechanical cause or disease of the usually affected excretory apparatus, I venture to suggest that this is essentially an affection of the glands of the skin; for, next to the kidneys, they are—or rather, I should say, it is—"massing the numerous glands into one"—one of the most important excretory organs. And, again, the structure of the glands is essentially similar; for in both we have fine tubes lined with columnar epithelium, and surrounded by a fine network of bloodvessels. You will see I refer especially to the sudoriparous glands, and not to the sebaceous; for the function of the latter is rather secretory than excretory, the secretion serving a mechanical purpose. Again, a similarity between this skin-gland and the kidney is proved by our everyday experience; for it is quite an acknowledged fact that in disease of the latter organ we try to bring on vicarious action of the former by hot baths, warm clothing, and diaphoretic medicine. But the importance of this organ may perhaps be better appreciated by drawing attention to its size and function. These little tubes are abundantly distributed over the whole surface of the body, varying from 3500 to the square inch in the palm of the hand, to 420 in the same space in the neck and back. Their total number has been estimated at two millions and a half; and Krause estimates that, if placed side by side, their openings would present an evaporating surface of eight square inches, but further he calculates that if the tubes were unravelled, and placed end to end, they would reach about two miles and a half.

This immense tubular apparatus has undoubtedly very important offices to fulfil in the way of excretion, an analysis of the perspiration giving water, fat, acetic and butyric acids, urea, and salts; there are also traces of an organic substance similar to albumen, a free volatile acid, and carbonic acid, the last excretion being equal to 1-150th of that exhaled by the lungs. The absolute quantity of water exhaled daily

averages a pound and a half to two pounds. Placing side by side the excretion of the renal and cutaneous glands, we find—water 23,000 grs., organic matter 680 grs., and saline matter 420 grs., given off by the former; and water 11,500 grs., solid and gaseous matter 250 grs., by the latter, in twenty-four hours.

My reason for giving so much detail is to bring out more forcibly what an important excretory organ we have in the skin, and what a close analogy exists between it and the kidneys. These two glands having similarities in structure and function, one would expect to find them somethat similarly affected by disease, and that as one finds diseased conditions of the epithelial lining and of the tubes and their immediate surroundings in one, so one would not be surprised to find analogous conditions of the other; and probably, when more extended observations have been made, this may be found to be true.

Why the acute cases should have occurred in women only, and in those who usually have their neck and arms bare, I cannot say, unless it is that they are more exposed to sudden changes of temperature, and from their social position run the greatest risks of catching cold.

I may say that I have elicited from several medical men in large practice that they have had under their care subacute and chronic cases of dropsy, more especially affecting the face, arms, and hands, without any disease of the usually affected organs to account for it; but I have not been able to get exact notes from others, nor have I heard of anyone noticing the acute cases, unless one mentioned to me by Dr. Clifford Allbutt would come under the category; but in his case there was more feverishness, and altogether more severe symptoms showed themselves than in the cases I have noticed, and in the end typhoid fever developed. The reason for mentioning this case is, that if my observations be correct, this "skin-gland" affection may complicate other diseases, as we know that kidney disease does; and if so, it is certainly a factor worth taking into consideration.

I must apologise for bringing the subject before the profession in such a crude form, but by so doing I hope to elicit the opinions of my professional brethren on a matter which seems to be wrapped up as yet in a certain amount of mystery; and, moreover, I hope that, by attracting attention to the subject, the observation of others may be directed to any similar cases as they turn up, and that thus more accurate data may be made on a larger number of cases, especially with regard to the exact amount of excretion by the kidneys—for one would expect them to take on vicarious action, and so repay the kindness which their sister organ does not hesitate to do when they are in difficulties.

THE MEDICAL OFFICER OF HEALTH FOR KENSINGTON.—We have pleasure in announcing that the Vestry of Kensington, by an unanimous vote, have increased the salary of their Medical Officer of Health, Dr. Dudfield, from £400 to £500 per annum, on a notice of motion to that effect by the Chairman of the five standing committees. We have before us a special report of Dr. Dudfield's upon the prevalence of small-pox at Brompton and Fulham, designed to neutralise the effect of a grave charge against the Metropolitan Asylums Board, by one of the district medical officers, for the alleged introduction of small-pox into the district in consequence of the opening of a small-pox hospital in the neighbourhood. Mr. Godrich, one of the district medical officers for Chelsea, had reported to the Kensington Vestry that, with few exceptions, all the cases of small-pox occurred in parts nearest the hospital, which, therefore, he believed to be the focus of infection. Dr. Dudfield, having made a careful inquiry into the facts connected with the commencement and spread of the epidemic, showed that while the small-pox cases were undoubtedly most numerous in streets and houses not very far from the hospital, yet that the situation of the building was so distant from any of the houses where the epidemic prevailed as to render it very unlikely that the epidemic had spread from this source. He was ready to admit the possibility of *indirect* infection from this as from any other centre of infectious disease. Dr. Dudfield further remarked that the increase of the number of cases in Brompton was coincident with a great increase of the disease in the metropolis generally; the opening of the hospital being a consequence, and not the cause, of the spread of the epidemic.

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Medical Times and Gazette.

SATURDAY, JULY 6, 1878.

THE GENERAL MEDICAL COUNCIL.

THE twenty-sixth session of the General Medical Council was opened on the afternoon of Friday, June 28, by a short address from the President, Dr. Acland, stating the present position of the Medical Bills now before Parliament, and remarking upon the points which he thought demanded especial consideration by the Council. He referred to the most important of the points wherein the Government Medical Bill differs from the Bill brought in by Mr. Mills, Mr. Childers, and Mr. Goldney, and known as "The Medical Act (1858) Amendment Bill, No. 2"—viz., that the latter Bill proposes to enlarge the Medical Council by adding six members chosen by voting papers from every registered medical practitioner resident in the kingdom, while the former does not in any way reconstruct the executive which has to carry on the work directed to be done by the Medical Acts. And with regard to this he observed that the reasons alleged for a change in the construction of the Medical Council must be thoroughly sifted, and the change to be made, if any, must be adopted after careful consideration of the modifications from which a choice would be made. Should the Government Bill pass in anything like its present form, much more work will devolve on the Council and its office; and the President thinks that when this work is entered upon and understood, it may be highly desirable to inquire if a Council better adapted to the wants of the future can be constituted. The Government, the Medical Authorities, the Public Medical Services, and the Profession at large would each expect to have a voice in the matter; and questions of numbers, cost, and of administrative convenience, as well as of modes of appointment, would have to be considered. But Dr. Acland thought the present a most ill-chosen time for agitating such a question as that of the reconstruction of the Council; though he himself will be glad if, when the present Bill has been passed, the Government will as soon as possible determine what will be the best constitution for the Medical Council of the future. Dr. Acland then pointed out that during the passage of the

Government Bill through the House of Lords two changes of great importance had been made—the formation of a Joint Examining Board for each division of the kingdom had been made compulsory; and the certificate of a Joint Board had been made the sole requirement for registration. The second of these two changes, made by Lord Ripon's amendment, was that to which the Council had now to give their most careful consideration, as many who had a right to be heard held that the consequences of it might be most injurious to the general character of British Medicine. And Dr. Acland pointed out to the Council that they had to calmly consider the conflicting opinions which they so well knew existed, and which they alone perhaps could harmonise. He declared that "the advice which is tendered to members of Parliament on subjects of medical legislation is not seldom so contradictory as to be perplexing. It is apt to throw into the regions of mere chance questions that should be more fixed and determinate. The Council may now assist to remove much uncertainty, and by clear statements make true men feel that commissions and committees can elicit nothing that is not already known, and will import, while the sand is fast running out, yet new perplexity and yet more delay."

We note merely the main subjects of the President's speech, as our readers have the advantage of reading it *in extenso* in our report of the proceedings of the Council.

Dr. Apjohn then moved—"That there be instituted a single Examining Board for the entire of the United Kingdom, and that all persons who shall have passed the examinations of this Board, and can also produce a medical degree from a University, and a licence from a medical Corporation, shall be entitled to registration, but no others."

Sir William Gull observed that Dr. Apjohn's motion included two distinct subjects, and offered to second the part recommending the formation of Conjoint Boards if it were put separately. Dr. Apjohn acceded to this, and Sir William commenced what no doubt would have been an "eloquent" speech in favour of Joint Boards. The amendments to the Medical Act now introduced by the Duke of Richmond were such, he said, as the entire country called for and meant to have. And he went on to declare that if the members of Council who believed in the advisability of having a central Examining Board "could be freed from their corporate interests, or from what they believed to be their corporate interests, and could discuss this great question upon its merits, they would at once agree by a large majority that there should be a single Examining Board in each division of the kingdom." Here Sir William was reminded that the proposal was for one Board for the whole kingdom; and he had to confess that he had not so understood it; he should indeed be charmed could that be done, but that it was utterly impracticable: and his intended speech collapsed. Dr. Apjohn's motion was then put as a whole, Dr. Aquilla Smith seconding it *pro formâ* in order that it might be discussed.

Sir Dominic Corrigan proposed an amendment to the effect that legislation should be deferred for the present, with the view of having all the Medical Bills and the whole question of medical legislation referred to a Select Committee of the House of Commons, with power to take evidence. He made a long speech, referring to all the shortcomings and misdeeds of the Medical Council, to all the grievances he had against them, and to the need of a reform in the constitution of the Council; to the sins of the profession in England in the employment of unqualified assistants, or assistants whose only qualification was that they "could ride and drive well"; and to the necessity for "statesmanlike investigation" instead of "panic legislation." This discursive speech was followed by a long and equally discursive discussion. Mr. Simon, Mr. Macnamara, and some other members of Council, desired the postponement of Sir D. Corrigan's amendment till after the Bill had been fully discussed, as then they might feel able to support it, which at present they were not prepared to do. Sir William Gull declared that the attempt to defer legislation, and make the whole work of the session upon the Bill nugatory, was simply disgraceful. Dr. Andrew Wood seconded Sir Dominic Corrigan's amendment in a long and able speech. He repudiated with great, and not unnatural, warmth Sir William Gull's suggestion that the representatives of the educational bodies on the Council were tinctured with corporate interests. He said that in all that he felt it his duty to do at the council-table he claimed the right to be considered as acting as conscientiously as any Crown nominee; and he claimed to be actuated by equal zeal for the honour of the profession. He did not believe that the profession was in such a bad condition as was endeavoured to be made out in certain quarters; and he believed in his heart that any such measure as that now introduced by the Government would have the effect, not of assisting in the progress of the profession, but rather of interrupting its progress. The joint system, if agreed upon, would lead downwards into Avernus; and the introduction of the Marquis of Ripon's amendment had hurried the measure on that downward path even quicker than he had anticipated. The measure was now a revolutionary measure, begotten by a Tory Government. He gave the Duke of Richmond the fullest credit for the best intentions, and for an eager desire to do what was right; but he had been gradually led into introducing a measure that at one fell swoop would have the effect of disfranchising the whole of the Universities and Corporations of the country connected with medical education, by depriving them of their licensing powers. He then criticised the history of the Bill, showing that there had been no stability of thought, no consistency of action, in relation to it. He complained that most injurious statements had from time to time been made, in the most offensive manner, against Scotch diplomas and Scotch degrees, and declared that if anyone said that they were granted with leniency and upon low conditions in order to lure students, such a statement was absolutely false. If students were lured to Scotland, it was by the superiority of the teaching there; and when we in England were in need of superior teachers we stole them from Scotland. He referred to some other matters, and to some other bad points in the Bill, and finally asserted that the best thing to be done was to refer the Bill to a Select Committee of the House of Commons, and expressed a belief that the Duke of Richmond would be glad of the real help such a step would afford him. Professor Rolleston deprecated the course proposed by Sir Dominic Corrigan, and seconded by Dr. Andrew Wood in the eloquent speech they had just heard. It would be better, even supposing the worst came to the worst, and the Bill passed with the defects that had been feared—and he did not share in those fears—it would be better than, after all the trouble and pains that had been taken with the matter, that the Council should not separate and Parliament be prorogued, *re infectâ*. Sir James Paget hoped that when the Bill came to be discussed clause by clause a great many of the apprehended difficulties would disappear. He admitted that the Bill was not clear upon some points, and therefore at the right time he should propose to add words which would have the effect of making it clear as to the question of affiliation of all persons passing the examination of a Joint Board with one or more of the educational bodies; and also with regard to the question of the registration of titles.

A discussion followed involving questions of verbal criticism upon some of the principal clauses of the Bill, and in this Dr. Fergus, Mr. Simon, Dr. Apjohn, and Sir James Paget took part. And then the President remarked that it was true that the course of the Bill through the House of Lords had been hastened; but this was because the Government were

convinced that unless it was passed through that House before Whitsuntide there would be no chance at all of getting through the Lower House; and, in answer to a question from Professor Turner, he stated that it seemed probable that it would be three weeks before the second reading of the Bill could be taken in the House of Commons.

Sir Dominic Corrigan replied, and then the amendment was put to the vote, and negatived by fourteen votes to seven. The original motion was put, and was also lost.

We have noticed this discussion at length because it shows with great clearness and fulness the tendency that besets the Members of Council to consume—we will not be so rude as to say waste—time in recrimination, in going back to subjects long ago discussed, in wandering from the subject before them, and in general discursive talk and criticism. After this discussion, a resolution, moved by Professor Turner and seconded by Sir James Paget, "That an additional six months be granted before the commencement of the Joint Board system," was agreed to, on the ground that the Scotch bodies would require more time than the Bill now gives to frame a Conjoint Scheme.

When the Council met on the second day, Sir James Paget moved that the rider, prepared by a committee appointed by the Council of the Royal College of Surgeons of England, be added at the end of Clause 4 of the Bill. The design of the clause was, he said, merely to interpret that which was already in the Act, and it was felt necessary that the Act should be very clear in not removing from any of the authorities in the kingdom the privileges they had held, nor indeed affect in any way that was avoidable the rights or privileges or honours of any of the Corporations entering into the Conjoint Scheme, and with the proposed addition they would be interfered with as little as possible. We put this rider before our readers last week, and showed how, in our opinion, it fails completely to do what is required, and what it is said it is intended to do, and our opinion apparently was shared in by many of the Council, Dr. Andrew Wood, indeed, doing us the honour of referring to our article on the subject in his speech against Sir James Paget's proposal. The discussion upon it was a long one, many of the Council taking part in it, and the objections taken to it being very varied in character. Dr. Humphry thought it ought to carry with it not simply a proposal for affiliation to the licensing bodies, but a proposal of some definite manner in which that affiliation should be effected; and said he should, therefore, propose to add to it the words, "that it be further provided that the diploma or diplomas by which any person is so affiliated be entered on the Register; and that degrees in medicine and surgery which have been granted by the Universities to persons who have obtained qualifying certificates from a Board shall be entered on the Register." It would be impossible to give here even an idea of the many phases of the discussion, but as the sitting neared its close it was proposed, and decided on a division, that the Council should resume, in order that Dr. Andrew Wood might propose the resolution, "That the Council cannot approve of the alterations with reference to registration in Clauses 3 and 4, which were introduced in the House of Lords as the Bill passed through Committee on recommitment, viz.: 'That a person can be registered upon a qualifying certificate without obtaining a diploma from a medical authority'; and 'That the only registration title is to be Licentiate in Medicine, Surgery, and Midwifery.'" Mr. Simon gave notice of an amendment to this, and the discussion upon it was therefore adjourned to Monday. On that day Dr. Wood proposed his resolution, observing that in calling upon the Council to reject, so far as they were able, the Government amendments, he was advocating the cause of no individual Corporation, of no individual University, but of the whole of the medical authorities of this country; and he should be surprised indeed if in England and Ireland the example were not to be followed which had already been given by Scotland—viz., that of petitioning against the admission of the amendments, because it was no longer a question of the individual privileges of the authorities, but of their very existence. By the amendments the medical Universities and Corporations were disfranchised, and their power of licensing to practise was taken away from them; and though they were to be entitled to enter into combination in order to make examinations, so far as their licences to practise medicine or surgery, or so far as degrees in medicine were concerned, their privileges were totally ignored. He could not believe that any of the bodies would be content to suffer that; and the profession objected to it. A memorial had been presented to the House of Commons, signed by 600 members of the Metropolitan Branch of the British Medical Association, stating that it was expedient for the purpose of moral and professional discipline, among other reasons, that every registered practitioner should be attached to some corporate body in the United Kingdom. In reality the profession was unanimous on the subject, and it was only a very noisy and very small minority who were agitating in the other direction. He represented five generations of doctors, and it was no wonder if he felt an extreme anxiety to preserve to the profession all those rights, privileges, and amenities with which it was handed down to him.

Professor Turner seconded the motion. Sir William Gull opposed it, and seconded Mr. Simon's amendment, which was to the effect that the amendments referred to were consequential on the acceptance of the Joint Board system, and must be considered in connexion with Clause 17, the provisions of which were intended to maintain the rights and privileges of existing authorities, and to provide (by affiliation arrangements) for the proper professional influence of the Corporations. Mr. Simon supported his amendment, declared that Dr. Wood's speech was an anachronism, defended the Government measure, and affirmed that with his and Sir James Paget's rider the Bill would be all right. Professor Rolleston could not agree with either the amendment or the motion, and thought that all that was needed was the introduction of something into Clause 23 which would make the good intentions of Clause 17 clearer; and he, like many others of the speakers, dragged in the woman question. Dr Pitman and Professor Humphry supported Dr. Andrew Wood's motion, as also did Sir James Paget, who pointed out that the amendments objected to would have the effect of actually throwing into the shade the honourable titles bestowed by the Royal College of Surgeons and the Royal College of Physicians. He eloquently defended the Corporations from the suggestion made that they were actuated by a love of fees, and said that he felt very strongly that the Corporations ought not to be asked to give up their privileges without some adequate consideration. They had already given up a great deal; but these amendments demanded too much, and his conviction was that more damage would be done by them to the profession than would balance the good obtained by the conjoint examination. He should therefore vehemently oppose the Government amendments. Dr. Storrar said that it was no use evading the fact that the real reason why the Government had at the last moment altered the form of the proposed registration was the refusal of the Royal Colleges of Physicians and of Surgeons to admit women to their qualifications. He had himself never been in favour of female doctors. He did not believe that they were fitted, physically or mentally, for the profession; but the country had determined that they should be admitted, and he believed the best course would be for the educational bodies to frankly acknowledge this phase of public opinion, and to act in accordance with it. Dr. Quain altogether differed from Dr. Storrar's views and suggestion. He believed that the vast

majority of women either pooh-poohed the question of medical women, or expressed their horror at the idea. It was a fallacy to say that the national opinion was in favour of such a change, and he believed that if fairly discussed in the House of Commons it would obtain even less support than the Woman's Suffrage Bill, and the supporters of that lessened in number year by year. Sir Dominic Corrigan enlivened the debate by a very amusing speech on Dr. Storrar's perversion, and finally the amendment of Mr. Simon and Sir William Gull was rejected by nineteen votes to three; and Dr. Wood's resolution, on being put to the vote, was carried by nineteen votes to two.

The Council then went into committee, and resumed the discussion of the rider proposed by Sir James Paget and Mr. Simon. Professor Turner proposed an amendment, to which the objection was taken by Sir James Paget and others that it did not meet the root of the difficulty—that of providing women with diplomas; inasmuch as, while making the possession of a diploma or diplomas a necessary condition of registration, it left the Corporations free to decide whether they would or would not grant any diploma to women. The amendment was negatived.

On Tuesday, the fourth day of the session, on the adjourned consideration of Sir James Paget's motion, Dr. Humphry proposed an amendment, which was carried both as an amendment and as a substantive motion, and then added to and finally carried by seventeen votes (seven members declining to vote) in the following form:—"It shall be provided that any person who has passed the examination of the Board, not being a graduate of medicine or surgery of a University in the United Kingdom, unless such graduate shall apply for it, shall receive a diploma or diplomas from one or more of the Corporations combining in the Scheme. 'And that it be further provided that the diploma or diplomas so granted shall be entered on the Register, and that the degrees in medicine and surgery granted by the Universities to persons who have obtained qualifying certificates from a Board shall be entered on the Register.'"

The woman question was then dealt with directly by a proposal, made by Dr. Rolleston and seconded by Sir William Gull, to alter Clause 19, sub-sections 1 and 2, by omitting the following words:—"This enactment shall not render compulsory the exercise of that power (of granting by a medical authority a medical diploma to persons of both sexes) when existing otherwise than under this Act, and a woman who receives a medical diploma from a medical authority who at the commencement of this Act have not any obligation to grant a medical diploma to any woman;" and inserting in place thereof the following:—"Any woman who shall have passed the examinations of the Conjoint Board shall have the right to claim a diploma of any one or more of the co-operating Corporations, but"—the further part of the clause as it stands in the Bill, declaring that the women, by reason of the possession of the diploma, were not to be entitled to share in the government of the Corporation. The motion was carried with the word "obtain" in place of the word "claim," by ten votes to five, seven members declining to vote, and Sir William Gull and Dr. Quain being unavoidably absent.

On Wednesday the time of the Council was chiefly occupied by the discussion of propositions relating to the question of the reform of the Council itself, and in the end it was resolved —"That the constitution of this Council needs revision; and that the Council do affirm and represent to the Government that, at its first meeting after the present session of Parliament, it will consider what modifications of its constitution are demanded and are required, and will report to the Government accordingly." Eighteen members voted for this, and no one against it, though some declined to vote; and the following resolution was also passed by eleven votes:—"That the Council is of opinion that the consideration of the question of revision of the Council should not prevent the passing of the Government Medical Act (1858) Amendment Bill now before Parliament, with such alterations as the Council has suggested."

Any further notice of the proceedings of the Council must be deferred till next week.

ANIMAL VACCINATION.

At last the question of Animal Vaccination is beginning to attract the attention it so well deserves. For many years we have urged its importance, but we have been almost alone in our demands for an examination of its claims; and as regards these we have been sufficiently modest. We have never proposed that vaccination from arm to arm should be suppressed, but we have maintained and do maintain that a government which has made vaccination compulsory on all, is bound to provide a lymph which shall be free from all risk of spreading other diseases than that of vaccinia. It is no reply to this argument to say that the risks are small, and that the cases in which other diseases than cow-pox have been transmitted have been few. It is quite enough for us that such cases have occurred; and ever since this has been fairly demonstrated as likely to occur, even with careful vaccination, we have not ceased to uphold the doctrine that parents should not be compelled to vaccinate their children with a lymph which may be infected. The only vaccine lymph we know which is above all suspicion is that taken directly from the heifer, and we hold that it is the duty of Government to provide such a stock, which may be available for those of tender consciences should they desire it. There can be no doubt but that the vast majority will be quite content with ordinary vaccination efficiently performed.

Various documents of importance referring to this subject have of late appeared, one of them a paper by that Nestor of physic Sir Thomas Watson, in the *Nineteenth Century*; another a report made to the American Medical Association by Dr. Martin, of Boston, who has probably more experience of animal vaccination than any man now alive; and a third by a passed master on the subject, Mr. Greene, of Birmingham. Dr. Martin's paper was published in the *Transactions of the American Medical Association for* 1877, and has recently come to this country, though much of Dr. Martin's writings and views have already appeared in our columns. Mr. Greene's paper was read before the Metropolitan Branch of the British Medical Association, and appears in full in a recent number of the *British Medical Journal*.

We fear it is probable that no very definite notion is conveyed to the minds of many by the term "animal vaccination," and it may be useful to make this idea somewhat clearer by indicating certain forms of what might be called true and what spurious vaccination. Thus the earliest form of true vaccination known was that discovered by Jenner on the hands of those engaged in milking cows the subject of cow-pox. This, of course, is liable to occur at any time under similar conditions where cows are the subject of cow-pox, and those engaged in milking them are unprotected: it might be termed *accidental* animal vaccination. The *true artificial* animal vaccination is where the cow-pox in one animal is transmitted to another of the same kind, or where it is introduced into the human body by surgical means.

Two forms of what might be called spurious animal vaccination are known. In the one set of cases we have to deal with what is called *retro-vaccination*; that is, cases where the ordinary human vaccine virus has been used to inoculate a calf, and the fluid thus procured has been used to vaccinate

other animals of the same species or human beings. It was thought that this plan would suffice to regenerate and purify the lymph; but Ceely, of Aylesbury, showed long ago that such hopes were fallacious, so that the process of retro-vaccination has almost entirely, if not entirely, been abandoned.

The other form of spurious vaccination is of a more dangerous character. Most of our readers know something of the history of the inoculation of small-pox introduced into this country by Lady Mary Montagu. According to this plan the best time and condition of body was selected, and the patient was inoculated with small-pox. That few would risk such an operation now, tells more strongly than any other argument we could think of in favour of the benefits derived from Jenner's great discovery. By inoculation it was found that many of the personal dangers of small-pox were avoided; but it must be remembered that it was true small-pox which was being thus propagated, and not unfrequently, greatly to the injury of the people at large, from these cases of inoculated small-pox fresh epidemics arose. Early in the history of vaccination it was inferred that the disease called cow-pox, as seen in the heifer, was merely a modified small-pox—modified, that is to say, by passing through the system of an animal such as the cow; and acting on this view, more than one attempt has been made to renew the "stock," as it is called, by inoculating an animal with true small-pox and making use of the resulting vesicles for the purposes of vaccination. But neither has this plan proved very successful; nay, it is strongly suspected that in this way outbreaks of true small-pox have been produced.

To satisfy the conditions of true animal vaccination, then, we must be content to fall back, like Jenner, on an original outbreak of cow-pox. There was nothing artificial about the cow-pox in the vale of Berkeley when Jenner first found out its protective influence. So must we, if not wait, at least search till we find out true examples of cow-pox, and then endeavour to secure a continuous supply of vaccine lymph by carrying the infection from one animal to another. This Dr. Martin has shown can be done with perfect success through a long series of vaccinations; but the beginning must always be the same—the original or true animal cow-pox.

Nothing will, perhaps, give a clearer notion of the real meaning of animal vaccination than the history of one particular "stock"—the best known, perhaps, and that now so extensively used in America—the so-called Beaugency stock. On March 28, 1868, it was found by the woman milking a cow at the above-named place, not far from Orleans, that the animal was restless during the process. A midwife came in, and found vesicles on the udder of the animal similar to those produced by vaccination. A veterinary surgeon and four medical practitioners were called in, and more closely examined the animal. Seven or eight of these vesicles were found round about the bases of the teats. The lymph from these vesicles was tried on another cow and two children; all succeeded. Notice was sent to the Academy of Medicine at Paris, and a month after the discovery Dr. Depaul arrived from Paris, and a careful investigation took place. The result was a confirmation of the discovery of a natural stock in all particulars, and Dr. Depaul departed for Paris, taking with him animals vaccinated with the products of the original stock. From this a supply was kept up, until it seems to have been lost during the siege of Paris in 1870, but not before it had been introduced into America, where Dr. Martin has been able to preserve it in unimpaired vigour down to the present time. In Belgium other stocks are in use, but all are derived from some natural outbreak of cow-pox, not from any artificial inoculation of small-pox or other malady.

THE MEDICAL COUNCIL ON THE MEDICAL BILL.

When the General Medical Council was summoned to meet, for the second time this year, on Friday last week, it was well known that only two great subjects had made it necessary that they should be thus called together at what was to many of them an especially inconvenient time of the year—viz., the alterations made in Clauses 3 and 4 of the Government Medical Bill by the Marquis of Ripon's amendments; and what is known as the Medical Woman's Difficulty. The first of the two made the qualifying certificate of a Joint Examining Board the only qualification that would entitle to admission to the Medical Register, thus doing away with the need of a degree, diploma, or licence from any of the existing medical authorities, and depriving all those authorities of their power of giving licences to practise. And the Bill at the same time made the formation of a Joint Board in each division of the kingdom compulsory, and its examinations, therefore, the sole portal to the profession. But it was well known, or at least believed, that this power of alone and of itself giving admission to the Register had been conferred upon the qualifying certificate of a Joint Board because the vast majority of the medical authorities had refused to give any of their qualifications to women; and therefore it was necessary for the Medical Council to consider also how to meet this difficulty should they concur with the general belief that it is most desirable and important that every medical practitioner shall be affiliated to some one or more of the old-established medical authorities. It would be difficult to over-estimate the importance of the two subjects brought before the Council; but they were so well known beforehand, had been so fully before the profession, and so well considered, that it might have fairly been expected that the Council could have taken them up at once in some plain and simple form, and have finished their work in a very short session. Any expectation of this sort, if entertained by anyone, was quickly dispelled, and it was made apparent that it would be very difficult to get the Council either to keep to the real work before them, or to decide how to take it up. Dr. Apjohn's motion on the first day of the session went back to the question whether there should be one Examining Board for the whole of the United Kingdom, or one for each of the three divisions of it, and did not deal with the woman difficulty; and it was therefore unacceptable and ill-judged in two ways. It was met by an amendment to defer legislation for the present, and to refer the whole question of medical legislation to a Select Committee of the House of Commons, with powers to take evidence; and the consideration of the motion and the amendment occupied nearly the whole of the first day of the session. Both were negatived, and then the Council resolved itself into a committee for the consideration of the Bill as "ordered by the House of Commons to be printed"; but the only agreement come to on that day was to resolve that "an additional six months be granted before the commencement of the Joint Board system." On Saturday, the second day, the Council at once went into Committee on the Bill, taking into discussion the rider recommended by a Committee of the Royal College of Surgeons to be added at the end of Clause 4. It was proposed by Sir James Paget as the representative of the Royal College of Surgeons; but it is, we more than suspect, in reality the proposition of Mr. Simon who seconded it, and might be fairly and correctly called Mr. Simon's compromise. We brought it under the notice of our readers last week, and showed that it would do nothing towards restoring the licensing powers of the Universities and Corporations, or the registrable force of their qualifications; and would only substitute, for the privileges taken away from them, a somewhat shadowy and uncertain power of "affiliating" candidates

who had passed the Joint Board examination. The proposal met with very scant favour, and more than one amendment of it or addition to it was proposed. The discussions on or in connexion with it were lengthy and very confusing and involved, but the ground was at last cleared by the agreement of the Council, on Monday, to a resolution, proposed by Dr. Andrew Wood, disapproving of the amendments introduced into the Government Bill in the House of Lords with reference to registration in Clauses 3 and 4; and on Tuesday the Council carried resolutions making diplomas registrable, and providing that any woman who may pass the examination of a Conjoint Board "shall have the right to obtain a diploma of any one or more of the co-operating authorities," though not thereby obtaining any share in the management, etc., of any Corporation. The Council have thus faced the situation, and have offered to the Government the only compromise that seemed likely to be accepted, and that would at the same time restore matters to as nearly as possible the position in which they stood previous to the passing of the Marquis of Ripon's amendments. The Government found that the large majority of the licensing authorities refused to confer any of their qualifications on women, and that women would in consequence be almost absolutely debarred from admission to the Medical Register. The Government therefore decided that the qualifying certificate of a Joint Board should be the only title to registration; thus making it certain that the mass of the general practitioners of the country would in time be "free lances," owing no kind of allegiance to any of the medical authorities, and thus threatening to affect most disastrously the *morale* and discipline of the profession, and the power and prosperity of the old medical institutions. This would be a most grave misfortune for the general public, and the Council have resolved to risk the lesser evil of admitting women to the qualifications conferred by the old licensing bodies. Supposing the view taken of the determination of the Government to be correct, it may be fairly argued that the Council have done not unwisely, for surely it will be a far smaller evil that such women as may pass the Joint Boards shall be "affiliated" to the medical authorities, and subject in some degree to their influence, than that all the men who in the future enter the profession shall be at liberty to do so with absolute freedom and independence from all Corporations or Universities. It had come to be a choice of two evils, both very bad and distasteful; and the one avoided by the proposed compromise is the least bad of the two.

The Council is still sitting, however, as we go to press; and it would be rash to say that they will not before they rise pass some new resolution that will again raise the woman difficulty, or, which is less likely, solve it in some other and less unacceptable way.

THE WEEK.

TOPICS OF THE DAY.

The Order of St. John, which has recently brought itself prominently before the public in connexion with the ambulance movement, held its annual meeting last week, when the members of the Society met at the rooms of the Order at St. John's-gate, Clerkenwell, to hear the annual report, which was read and adopted. From this report it appears that the ambulance movement which has been initiated and organised by the Order has now fairly taken possession of the public mind, and there are between 1100 and 1200 students, male and female, in attendance at the classes for instruction in ambulance training and the dressing of wounds at London, Woolwich, Worcester, and other places; while schools for teaching how to treat the wounded, either in war or in civil life, have been opened, or are about to be opened, at Brighton, Chesterfield, Cardiff, and other populous towns. Papers on the practical treatment of cases of accident were read by Major Duncan, and by Surgeon-Major Porter of the Army Medical Service, the latter being illustrated by diagrams, models, etc., which are to form the nucleus of a museum of such objects to be exhibited at South Kensington or elsewhere. The Order of St. John has lately been recognised by royalty, the Princess of Wales having consented to become a patroness.

At a meeting of the Select Vestry of Liverpool Parish held last week, a member stated that when he joined that body, in 1858, the amount annually expended in the maintenance of pauper lunatics was £7847. In the present year the sum has increased to £20,585, and it seems almost impossible to account for the increased cost, when it is considered that the population of the parish, in the interval, has probably decreased by some 40,000.

With every respect for the opinions of Mr. Justice Manisty, we must venture to take exception to his decision in a recent case against one of the "Peculiar People." This man was charged at the Central Criminal Court with the manslaughter of his infant son by not procuring medical aid when the child was suffering from whooping-cough. The evidence showed that the life of the child might, or might not, have been saved if medical aid had been summoned, and Mr. Justice Manisty stopped the case, and the jury acquitted the prisoner. Before discharging him, however, the Judge warned him against such peculiar notions as those which he and his sect held, and told him that they were stupid people who adopted ideas at the dictation of others, without really knowing what they were doing or in what they believed. Probably a sharper fashion of dealing with such mistaken notions might have done more good; but in what are our Hahnemannian brethren the better?

The recent disclosures as to the adulteration of violet-powder have directed the attention of medical officers of health to the subject, and Mr. Thomas Stevenson, Food Analyst for the Parish of St. Pancras, has reported to the Vestry that he has examined eight samples of violet-powder, and found five of them to be genuine, consisting of farinaceous matter and scent, and three of them to contain from 16 to 33 per cent. of terra alba or gypsum, which might prove injurious to delicate skins; the former were all purchased from chemists, the latter from perfumers. The legal adviser of St. Pancras parish has been appealed to, to determine whether violet-powder can be considered a drug under the adulteration of Food and Drugs Act.

The keeper of a laundry in Walgrave-road, Kensington, was summoned at the Hammersmith Police-court, for transmitting certain clothing which had been exposed to contagion from small-pox, without previously disinfecting the same. Dr. Dudfield, Medical Officer of Health for Kensington, deposed that his attention was drawn to defendant's boy, aged fourteen years, who was in the front parlour suffering from small-pox. The business of the laundry was carried on in the basement underneath, by the mother, who accompanied him into the parlour, and said that her sister had charge of the invalid. At that time the sister was in the laundry. Linen was sent home to the customers after the defendant was cautioned. Corroborative evidence having been adduced, the magistrate observed that it was the duty of all persons belonging to laundries where infectious disease prevailed not to send home linen until it had been disinfected. He fined the defendant 10s. and costs, and intimated that the ful penalty would be imposed in all future cases.

The annual meeting of the Society for Improving the Condition of the Working Classes was held last week at Willis's

Rooms, under the presidency of the Earl of Shaftesbury. The report recorded continued success in the principal object of the Society, namely, the provision of suitable habitations for the poorer classes of the community; and admission to the dwellings provided was still equally sought for. In the Society's houses the rate of mortality for the past year had been only a little over 2 per cent., and the receipts had resulted in a balance at the end of the year of £467. The chairman explained that redoubled energy was required on the part of the supporters of the Society, in consequence of the difficulties experienced by many poor people who were expelled from their homes through the action of the Board of Works. So large a number required habitable tenements that it would be impossible to build sufficient houses to meet the demand. The best course to follow, therefore, would be to renovate existing courts and alleys, as had already been done in several instances with very satisfactory results.

At Preston, a butcher named John Sudell, who has been several times previously convicted for similar offences, was last week charged at the Police-court with having the carcase of a diseased cow prepared for human food. The magistrates remarked that the defendant evidently made a practice of trafficking in such unhealthy meat, and to mark their sense of such disgraceful conduct they sent him to prison for two months with hard labour, without the option of paying a fine.

At a meeting of the Health Committee of Liverpool held last week, it was stated that scarlet fever is very prevalent in the town. The Medical Officer reported that there was every appearance of the disease becoming epidemic during the present hot weather. During the preceding week twenty-two deaths from scarlatina had been reported, which was thirteen above the usual average.

The sanitary condition of Redruth, if judged from an official point of view, is anything but satisfactory. Mr. Smith, C.E., the Local Government Inspector, recently informed the Redruth Local Board that he visited the town in 1872, as Secretary to the Rivers' Pollution Commission, and he revisited it last year, and its condition was most deplorable for any town in the nineteenth century. No improvements of a permanent character had been effected; their debt was £250, and the rateable value over £24,000. The Local Government Board had given Redruth their most serious consideration; they had reasoned, and waited, and borne with them as long as they possibly could, and he had to tell them that unless the members present agreed to call a special meeting without delay, he should recommend the Local Government Board to direct a public inquiry with the view of dissolving the Urban Sanitary Authority, and merging it into the Rural. Redruth had applied to the Local Government Board for powers to borrow money for the erection of offices; but Mr. Smith remarked that outlay upon drainage would be outlay for the benefit of the community at large, whereas new offices would only add to the convenience of members of the Local Board, who, as far as he could learn, did nothing but talk, without arriving at any definite conclusion.

On Monday last the Canal Boats Act came into operation, and it now remains to be seen whether this recent piece of legislation will improve the sanitary condition of these floating habitations. Regulations have been issued which require that not less than sixty cubic feet of air-space shall be provided for each person above the age of twelve, and not less than forty cubic feet for each child under the age of twelve. Arrangements are also to be made for the separation of the sexes and to prevent overcrowding.

ROYAL COLLEGE OF SURGEONS.

The annual election of Fellows into the Council took place on Thursday, and excited unusual interest, owing to the unprecedented number of candidates for the three vacant seats, caused by the retirement in the prescribed order of Messrs. Erasmus Wilson, F.R.S., Henry Lee, and Barnard Holt, who offered themselves for re-election, with the following gentlemen, taking them according to seniority:—Mr. John Gay, of the Great Northern Hospital, a former member of the Council; Professor Joseph Lister, F.R.S., of King's College Hospital; Mr. Thomas Bryant, of Guy's Hospital; Sir Henry Thompson, of University College Hospital; Professor John Wood, F.R.S., of King's College Hospital; Mr. Henry Power, of St. Bartholomew's Hospital; and Mr. Edward Lund, of the Royal Infirmary, Manchester. The hour appointed for the election was two o'clock, long before which, many Fellows, chiefly from the provinces, to whom the annual display of additions about to be made to the Museum is always an interesting feature, assembled in the theatre, where Professor Flower was thoroughly "at home" in giving any information required by the many visitors, several of whom were gradually seduced from the paths of science to those of medical politics as the time for election approached, breaking up into small groups, and discussing the merits of the different candidates. Punctual to the hour, Mr. J. Birkett, the President of the College (whose reign as such will expire in a few days), accompanied by the Vice-Presidents, Mr. John Simon, C.B., F.R.S., and Mr. Luther Holden, with several members of the Council, and the principal officials, entered the library of the College, when the business was at once commenced by the President explaining the objects of the meeting, and calling on the Secretary, Mr. Trimmer, to read those portions of the by-laws relating to elections into the Council, together with a list of the candidates. These formalities having been gone through, the Fellows were invited to record their votes. The polling then commenced, and was not brought to a close until about five o'clock, when the votes were called out, and recorded in the usual way by officers of the College, any of the Fellows who were disposed to check the numeration being provided with papers. At the close, the President declared that the choice of the Fellows had fallen on Messrs. Lund, Wilson, and Gay; the numbers polled by each candidate being as follows, viz.:—Mr. Lund, 101 (including 24 plumpers); Mr. Wilson, 95 (including 3 plumpers); Mr. Gay, 92 (including 11 plumpers); Mr. Wood, 81 (including 3 plumpers); Mr. Power, 78 (including 11 plumpers); Mr. Lister, 76 (including 1 plumper); Mr. Bryant, 62 (including 6 plumpers); Sir H. Thompson, 58 (including 6 plumpers); Mr. Lee, 38 (including 1 plumper); Mr. Holt, 37 (including 2 plumpers). The number of Fellows who recorded their votes was 300; the votes of four of whom were pronounced to be invalid.

In the evening the Fellows dined together as usual at the Albion Tavern, under the able chairmanship of Mr. F. Le Gros Clark, F.R.S. As showing the great interest taken in this election, we may mention that Fellows attended from great distances, as Dr. Harris, of Redruth; Messrs. Archer, Baker, Bartleet, Goodall, Jones, and Tait, of Birmingham; Harrison and Leet, of Liverpool; Lund and Southam, of Manchester; Manby, of Wolverhampton; Cadge and Crosse, of Norwich; Humphry, of Cambridge; Jackson, of Plymouth; Teale, of Leeds.

INFANTILE MORTALITY IN LEICESTER.

The Sanitary Committee of the Borough of Leicester have presented a report to the Town Council dealing with the remarks published by Dr. Johnston, the Assistant Officer of Health, on zymotic diseases, and the exceptional death-rate from diarrhœa which prevails in the summer months in

Leicester, which, it will be remembered, was noticed in these columns a few weeks ago. The Committee consider Dr. Johnston's report well worthy the careful consideration of the Council, although they are unable to endorse all his views. They state that an application has been made to the Local Government Board with the object of obtaining for Leicester powers similar to those conferred upon the Corporation of Bolton, so that all cases of infectious disease may be immediately reported. The Committee further point out that although the sewers of the town are ventilated to a much larger extent than Dr. Johnston was aware of, they still agree with him that additional ventilation is required; and they are convinced that some cause peculiar to Leicester is at work to occasion the exceptionally high death-rate from diarrhœa that prevails. Under these circumstances, but without affirming that this peculiarity is entirely due to the condition of the sewers, they are of opinion that the facts elicited will justify the Highway and Sewage Committee in taking steps to clear out and ventilate the sewers, and by extra engine-power to keep them free in all ordinary times. In conclusion, they acknowledge the value of Dr. Johnston's report, and they express a hope that he will continue his investigations during the present summer with a view of elucidating the difficult problem of the exceptionally high infantile mortality in Leicester.

THE HUNTERIAN MUSEUM.

One of the most interesting features in connexion with the election of Fellows into the Council of the Royal College of Surgeons is the annual exhibition of preparations about to be added to the Museum of the College. From the report of Professor Flower, it appears that the additions to the different departments of the Museum have been fully equal to the average, and the old specimens have been kept in good order: 343 spirit preparations having been remounted during the year; three human skeletons which had long been in the Museum have been articulated, many others repaired, and a considerable number of crania mounted on stands. After paying full justice to all the assistants under him, Professor Flower gives a touching account of a most devoted official of the College—viz., the late Mr. James Flower, the articulator, a biographical notice of whom appeared in the *Medical Times and Gazette* at the time of his death. As showing the increasing interest taken by the public in the Museum of the College of Surgeons, it is deserving of mention that whereas in 1868 the number of visitors amounted to 4224 persons, they had increased in the past year to 8151; and the continued interest taken by the Prince of Wales in the perfection of the Museum is shown by his recent donation of three skulls of the Indian rhinoceros from Nepaul, presented to his Royal Highness by the late Sir Jung Bahadoor; the skeleton of a sloth bear, and the skull of another. The Zoological Society and the Westminster Aquarium figure as valuable contributors. Professor Gervais, of Paris, again appears as a liberal donor. Dr. Junker presents eight very curious and interesting Japanese obstetrical instruments, and printed and illustrated works on the subject are deposited in the library of the College. The visitors, especially those engaged in teaching anatomy, particularly observed the physiological series, all of which have been dissected by Mr. William Pearson, one of the assistants. Their instructive value has been much increased by the addition of a printed label affixed to each muscle, bearing its name. If the experiment succeeds —of which there seems no doubt—the same system may be largely extended, both to the new and old specimens in the Museum. It is worthy of note that Mr. Pearson's father and grandfather have spent their lives in the Museum under the fostering care of Clift, Owen, Quekett, and Flower. In response to an invitation from the Commissioners of the "Exposition Internationale des Sciences Anthropologiques," now being held in Paris in connexion with the Universal Exhibition, the Council authorised Professor Flower to select specimens from the Museum, which, by their presence in Paris, might further the objects for which the Exhibition is brought together. As the osseous remains of the extinct race of Tasmanians are naturally of great interest to anthropologists, and as they are rare in continental museums, the College series (the most complete in existence), consisting of two skeletons and thirteen crania, seemed appropriate for the purpose. These, and eighteen other skulls of kindred races, chiefly from the Melanesian Islands, were accordingly forwarded, together with specimens of the diagrams used in illustration of Professor Flower's last course of lectures, and photographs of the interior of the Museum: so that the College is well represented at the Exhibition.

INFECTIOUS HOSPITALS IN LONDON FOR THE NON-PAUPER CLASSES.

A question of great public importance was last week brought forward at a public meeting held at the Cannon-street Hotel, composed of representatives from the different metropolitan vestries. The subject was the provision of hospital accommodation for persons of the non-pauper class suffering from infectious diseases; and the chairman, in opening the proceedings, explained the circumstances which have induced the Limehouse Board to call the present conference together. They found that in dealing with a local visitation of small-pox the present defective state of the law left them virtually powerless in providing for the due sequestration of patients belonging to the non-pauper class, and the Metropolitan Asylums Board were unable to help them. Section 37 of the Sanitary Act empowers the local sanitary authority to contract with proper medical institutions for the care of non-paupers suffering from infectious diseases; but apart from the impossibility of inducing the London hospitals to fill their beds with such cases, the Act makes no provision for recovering from the patients or their friends the outlay thus incurred. It was then moved—"That, in the opinion of this conference, many almost insurmountable obstacles present themselves to the carrying out by the vestries and the district boards of the metropolis of the powers conferred upon them by Section 37 of the Sanitary Act, 1866; and it is further of opinion that it is desirable that provision should be made by Act of Parliament for one authority acting for the whole metropolis to provide hospital accommodation for non-pauper persons suffering from contagious diseases." After further reviewing the clauses of the Sanitary Act, the instances of Lewisham and Poplar were cited as districts which had availed themselves of its permissive powers to establish hospitals of their own; but the cost was stated to have been so great as to deter other parishes from attempting a similar experiment. The seconder of the above motion dwelt on the importance of providing central hospital accommodation of this description on a large scale. The long discussion which followed was for the most part favourable to the resolution, but ultimately an adjournment of the conference for four weeks was carried, with the understanding that in the meantime the resolution should be communicated to the various metropolitan vestries.

DEATH OF PROF. CHARLES HENRI EHRMANN, OF STRASBURG.

This very distinguished ex-Professor of the former Medical Faculty of Strasburg has just died in that city in the eighty-sixth year of his age. Born in 1792, he served as a military surgeon during the campaigns of 1813 and 1814, and on the disembodying of the Imperial Army he repaired to Strasburg, where he had taken his degree. After filling various posts there, he was made Professor of Anatomy in 1826. At that time the Faculty had very few chairs, so that the Professor of Physiology and the Professor of Midwifery undertook by turns

the course of Clinical Surgery; but on Ehrmann's appointment (after a severe competition) to the anatomical chair, he also undertook Clinical Surgery. In 1837 he gave up this to Bégin, and succeeded to Zobstein's chair of Pathological Anatomy, to which he also added Normal Anatomy. The delivery of five lectures every week and a clinical one every morning still left him time to accept the direction of the Museum of Pathological Anatomy and Professor at the Ecole d'Accouchement. He only retired from his active career in 1867. Since operations have become so frequent on the larynx of late, it is right to state that in 1844 he was the first person who practised laryngotomy for the removal of a polypus of the larynx. The section of the thyroid cartilage performed after a preliminary tracheotomy enabled him to relieve with facility a disease then deemed incurable—an operation which has been rendered, by means of the laryngoscope, so easy in modern times. This operation and his classic work on "Polypi of the Larynx" provided him admission to the Institute.

THE BROWN INSTITUTION.

We regret to learn that Dr. Burdon Sanderson has resigned his post as Brown Professor. The work he has done in this position has been of a kind that is above praise. It has been mainly directed to the investigation of the phenomena of contagion, and, coupled with that of Dr. Klein, also connected with the Brown Institution, has done much to instruct us in the structure, functions, and characteristics of the lymphatic system—to mention only one series of researches. We sincerely hope that the post will be filled by one who will continue and expand the work already commenced in this invaluable Institution.

SOCIAL SCIENCE CONGRESS.

The Committee of the Health Department of the Social Science Association has met and decided on the following as special questions for discussion at the forthcoming Cheltenham Congress:—1. The importance of Complete Disinfection, and the best means of providing for it by sanitary authorities. 2. On the better regulation of House-Building generally, and the best mode of improving the sanitary condition of existing houses. 3. How best to overcome the difficulties of Overcrowding amongst the necessitous classes? In addition to the above, papers volunteered on other subjects coming within the range of the Department will be read and discussed.

MEDICAL PARLIAMENTARY AFFAIRS.

Irish Medical Testimony.—Mr. R. Smyth asked if it was true that a circular had been issued signed by the Under-Secretary for Ireland, directing that medical gentlemen should not be summoned to give evidence in cases of assault, except where life had been endangered; and if it was the intention of her Majesty's Government to withdraw the circular, and leave the production of medical testimony in future to the discretion of the Solicitors to the Crown. Mr. J. Lowther admitted that such a circular had been issued on authority, but it does not go to the extent of confining evidence to cases in which life has been actually endangered. He thought that some modification of the circular might be found necessary.

Contagious Diseases (Animals) Bill.—The concluding debate on this measure in the House of Commons, on Monday, resulted in a division highly favourable to the Government, giving a majority of 157 in favour of the Bill as against Mr. Forster's amendment. The Bill was then read a second time.

Small-pox in London.—Mr. Sclater-Booth, replying to Sir C. Dilke, said that 1816 deaths from small-pox occurred during the year ending March 25 in "Lesser London," which number might roughly represent 18,000 attacks. He remarked that the local authorities had power to apply to a magistrate on a certificate of a medical officer for an order to enforce removal of persons suffering from infectious diseases where no efficient means of isolation existed in their dwellings. Compulsory registration of all cases of infectious disease would be necessary before this method of checking the spread of such diseases could be efficiently carried out. He had no doubt that before long the public and the medical profession would consent to some mutual arrangement for notifying the existence of such disease. Before that could be done, increased hospital accommodation must be provided, especially for the middle classes, who were prepared to pay for additional accommodation to that afforded in the Poor-law hospitals. He regretted that the vestries and district boards had opposed the Public Health Bill for the metropolis last session, as by it arrangements could have been made with the Asylums Board to put an end to the present anomalous state of things.

ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

The forty-sixth annual meeting of the British Medical Association will be held at Bath from Tuesday till Friday, August 6, 7, 8, and 9. The officers of the Association are:—*President:* M. A. Eason Wilkinson, M.D., F.R.C.P., Senior Physician to Manchester Royal Infirmary; *President-elect:* R. W. Falconer, M.D., F.R.C.P., D.C.L., Consulting Physician to Royal United Hospital, Bath; *President of the Council:* R. W. Falconer, M.D., F.R.C.P., D.C.L., etc.; *Treasurer:* W. D. Husband, Esq., F.R.C.S., Senior Surgeon to the York County Hospital; *Editor of the Society's Journal:*—Ernest Hart, Esq., London; *General Secretary:* Francis Fowke, Esq., 36, Great Queen-street, London, W.

The readers of Addresses are—*Medicine:* Henry F. A. Goodridge, M.D., F.R.C.P., Bath. *Surgery:* C. G. Wheelhouse F.R.C.S., Leeds. *Forensic Medicine:* Douglas Maclagan M.D., F.R.C.P. Edin., Edinburgh.

The officers of Sections are as follows:—*Medicine:* President, T. Grainger Stewart, M.D., F.R.C.P. Edin.; Vice-Presidents, B. Foster, M.D., F.R.C.P., and Thos. Clifford Allbutt, M.D.; Secretaries, Thomas Cole, M.D. (17, Paragon, Bath), and Chas. Albert Hingston, M.D. (3, Sussex-terrace, Plymouth). *Surgery:* President, G. W. Callender, F.R.C.S., F.R.S.; Vice-Presidents, Furneaux Jordan, F.R.C.S. Eng., and W. Stokes, M.D.; Secretaries, J. H. Morgan, F.R.C.S., 12, Chapel-street Park-lane, London, and J. F. Parsons, Esq., Frome. *Obstetric Medicine:* President, A. H. McClintock, M.D.; Vice-Presidents, James Watt Black, M.D., and H. Macnaughton Jones, M.D.; Secretaries, Heywood Smith, M.D. (2, Portugal-st., Grosvenor-square, London), and A. E. A. Lawrence, M.D. (Richmond-hill, Clifton, Bristol). *Public Medicine:* President, J. T. Arlidge, M.D., F.R.C.P.; Vice-Presidents, D. Davies, Esq., and Francis Thos. Bond, M.D.; Secretaries, F. Vacher, Esq. (35, Hamilton-square, Birkenhead), and W. Harling Sissons, Esq. (3, Priestgate, Barton-on-Humber). *Physiology:* President, John G. McKendrick, M.D., F.R.C.P. Edin.; Vice-Presidents, Henry Power, F.R.C.S., and P. H. Pye-Smith, M.D., F.R.C.P.; Secretaries, R. Shingleton Smith, M.D. (Clifton, Bristol), and A. E. W. Fox, M.B. (16, Gay-street, Bath). The Honorary Local Secretary is R. S. Fowler, Esq., 6, Belmont, Bath.

The programme of public business has been arranged as under:—

Tuesday, August 6.—11 a.m.: Service at the Abbey; sermon by the Bishop of Bath and Wells. 2 p.m.: Meeting of Committee of Council. 4 p.m.: Meeting of the Council, 1877-78. 8 p.m.: General Meeting—President's Address—Annual Report of Council and other business.

Wednesday, August 7.—9.30 a.m.: Meeting of Council, 1878-9. 11 a.m.: Second General Meeting. 11.30 a.m.: Address in Medicine. 2 to 5 p.m.: Sectional Meetings. 9 p.m.: *Soirée* at the Assembly Rooms by the Mayor and Citizens of Bath.

Thursday, August 8.—9 a.m: Meeting of the Committee of Council. 10 a.m.: Third General Meeting. Reports of Committees. 11 a.m.: Address in Surgery. 2 to 5 p.m.: Sectional Meetings. 6.30 p.m.: Public Dinner at the Assembly Rooms.

Friday, August 9.—10 a.m.: Address in Forensic Medicine. 11 a.m.: Sectional Meetings. 2 p.m.: Concluding General Meeting.

Excursions, etc.—On Friday evening there will be a *Soirée* at the Colston Hall, Bristol, by the Bristol members of the Branch. On Saturday there will be Excursions to Longleat, Bowood, Wells and Cheddar, Malmesbury, Berkeley Castle, and, if a sufficient number of excursionists, to the valley of the Wye. The Honorary Secretary will endeavour to arrange for

gentlemen well acquainted with the locality to accompany the parties on each excursion. Any information will be given by the Secretary to the Excursion Committee, 6, Belmont, Bath. Members of the Association will receive cards for the above proceedings, evening meetings, etc., at the Assembly Rooms, Bath.

ANNUAL MUSEUM.

The tenth annual Museum of the British Medical Association will be held at the Assembly Rooms, Bath, and will be open daily from 10 a.m. till 6 p.m., on August 6, 7, 8, 9, for the exhibition of the following objects:—1. Latest inventions in medical and surgical instruments and appliances of all kinds. 2. New chemicals and apparatus; new drugs and their preparations; and new articles of diet for invalids. 3. Drawings, diagrams, or models illustrating the ventilation of hospitals and private dwellings. 4. General pathological specimens; with photographic models, drawings, etc., illustrating disease; and microscopic pathological specimens.

The following is a list of the Museum Committee, to any member of which communications, etc., may be addressed:—Sections 1, 2, and 3—Dr. Spender, 17, Circus, Bath, and F. K. Green, Esq., 3, Gay-street, Bath. Section 4—Dr. Cole, 17, Paragon, Bath, and G. E. Lawrence, Esq., Claverton-street, Bath.

Notice to Exhibitors.—Application to be made as soon as possible, at the same time giving a list of objects, and mentioning the space required. Each object to be accompanied by a printed or written description attached to the article exhibited. All parcels to be delivered on or after July 27, and not later than August 3, and to be removed within three days after August 12. They must be addressed to Drs. Spender and Cole respectively, at the Assembly Rooms, Bath. All expenses of carriage and all risk to be borne by the exhibitors. A card bearing the name and address of the exhibitor to be enclosed in each package, ready to be fixed on the outside. (*N.B.—Specimens and instruments which have been exhibited at former meetings cannot be received on this occasion.*) All communications are to be addressed to Drs. Spender and Cole, as above.

MEDICAL NEWS.

UNIVERSITY OF DUBLIN.—SCHOOL OF PHYSIC IN IRELAND.—At the Trinity Term Examination for the degree of Bachelor of Medicine, held on Monday and Tuesday, June 10 and 11, 1878, the following candidates were successful. The names are arranged in the order of merit:—

Nugent, Guy P. Le S.
Gabbett, H. S.
Carson, Walter P.
Hayes, Richard A.
Dawson, Yelverton.
Buchanan, L.
Jacob, James B.
O'Neill, John G.
Berry, Frederick C.
Gibson, J.
Daly, Francis A. B.
Ross, Frederick Ogilby.
Johnston, Robert H.
Campbell, Arthur J.
Hetherington, Reynolds P.
Poole, Walter C.
Thompson, Croasdaile M.

At the Examination for the degree of Bachelor of Surgery, held on Monday and Tuesday, June 17 and 18, the following were the successful candidates:—

Neville, William C.
Nugent, Guy P. Le S.
Cowen, Edward J.
Daly, Frank.
Thompson, Croasdaile M.
O'Neill, John G.
Wilkinson, William C.
Inman, Arthur.
Thompson, Norman.
Cox, Henry L.
Lambert, William F.
Crofts, James G. W.
Day, James D.

At the Examination for the degree in Midwifery (Magister in Arte Obstetriciâ), held on Monday, July 1, the following candidate was successful:—

Neville, William C.

APOTHECARIES' HALL, LONDON.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, June 27:—

Curd, Charles, Combe Devon, Somerset.
Huntington, Homer Austin, Liverpool.
Hoskyns, Edward John Hadderton, Duffield House, Derby.
Jones, Frederick Felix, Llanfyllin, Montgomery.
Morgan, Augustus Kensey, Greenfield, Newport, Mon.
Warren, Edwin Charles, Malpas-road, New Cross.

At the recent examination for the prizes in Botany, the successful candidates were—

1. Eminson, Thomas B. F., St. Mary's Hospital.
2. Starling, Wm. Egerton, Guy's Hospital.

NAVAL, MILITARY, &c., APPOINTMENTS.

WAR OFFICE.—Surgeon-Major Alexander Fisher Bartley to have the honorary rank of Deputy Surgeon-General upon retiring on half-pay.

MILITIA MEDICAL DEPARTMENT.—Surgeon-Major John Briscoe (Oxford) resigns his commission; Surgeon Decimus Curme (Dorset) to be Surgeon-Major.

BIRTHS.

CROZIER.—On June 24, at Ordnance-road, St. John's-wood, the wife of John Beattie Crozier, M.B., of a daughter.

CHESSALL.—On June 25, at Horley, Surrey, the wife of William Chessall, M.D., of a son.

DOVE.—On June 24, at Stowmarket, the wife of Harry Dove, M.R.C.S. Eng., of a daughter.

GORDON.—On June 24, at 10, Amersham-road, New Cross, the wife of John Gordon, M.D., of a daughter.

PRANKERD.—On June 21, at Victoria park, E., the wife of O. R. Prankerd, M.D., of a daughter.

RICHARDS.—On June 28, at the Middlesex County Asylum, Hanwell, the wife of J. Peeke Richards, M.R.C.S. Eng., of a son.

STREETEN.—On June 30, at Ivy House, Marske-by-the-Sea, Yorks, the wife of Friend Edward Streeten, M.R.C.S.E., of a daughter.

TURNBULL.—On June 23, at Kelso, N.B., the wife of G. H. Turnbull, M.D. of a daughter.

WALKER.—On June 28, at 17, King Edward-road, Hackney, the wife of William Newman Walker, M.R.C.S.E., of a son.

WHITMARSH.—On June 27, at 1, Clapton-square, Lower Clapton, the wife of Lloyd Whitmarsh, L.R.C.P. Edin., of a daughter.

MARRIAGES.

BEVERIDGE—STIDWORTHY.—On June 19, at Croydon, Staff-Surgeon H. J. S. Beveridge, R.N., M.D. Edin., youngest son of the late Thomas Beveridge, D.C.S., to Sarah, second daughter of the late Richard Stidworthy, of South Pool, Devon.

HAYWARD—PURDIE.—On June 25, at Lewisham, Henry Warre Hayward, son of the late John Hayward, H.E.I.C.S., to Isabella Treloar, daughter of Robert Purdie, M.D.

NEWLAND—MURRELL.—On June 29, at All Saints', Margaret-street, Surgeon-Major Peter Frederick Newland, M.R.C.S. Eng., to Alice Cureton, only daughter of Henry Edward Murrell, Esq., Regent's-park.

POOLEY—SINCLAIR.—On June 25, at Bath, Walter Moritz, only surviving son of Charles Pooley, F.R.C.S., L.S.A., F.G.S., of Weston-super-Mare, to Isabelle Jessie, youngest daughter of the late Archibald Sinclair, formerly of Glen Mohr, Argyleshire.

STROVER—MATHEW.—On June 25, at Hendon Church, Walter Strover, M.R.C.S., third son of the late Surgeon-Major Strover, F.R.C.S., to Emily Jane, eldest daughter of Charles Mathew, Esq., of Hornsey.

VERDON—BAINES.—On June 26, at Naburn Church, Walter Verdon, F.R.C.S., of Boxton, to Mary Frances, eldest daughter of W. M. Baines, Esq., of Bell Hall, York.

DEATHS.

BULLOCK, HENRY, M.R.C.S.E., L.S.A., on June 23, at 61, Cumberland-place, Hyde-park, W., in his 67th year.

FIRTH, ELIZABETH, wife of G. W. W. Firth, F.R.C.S. Eng., of Norwich, at Norwich, on June 25, aged 63.

MACSWINEY, JOHN BRISCO EUGÈNE, son of Surgeon E. V. Macswiney, M.D., A.M.D., on June 10, aged 11 months.

SHEDDEN, ARTHUR WILLIAM, M.D., late of the 92nd Sutherland Highlanders, in London, on June 29.

SPENCE, JOHN, F.R.C.S., at Bedale, Yorks, on June 16, in his 74th year.

STUBBS, HENRY, F.R.C.S., Consulting Surgeon to the Liverpool Royal Infirmary, at 23, Canning-street, Liverpool, on July 1, aged 69.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BURTON INFIRMARY.—House-Surgeon. Applications, stating age, previous experience, and accompanied by testimonials, to the Hon. Secretary, Mr. J. C. Grinling, Burton-on-Trent, on or before July 25.

BODMIN UNION, CORNWALL.—District Medical Officer. Candidates must be duly registered, and must be qualified by law to practise both medicine and surgery. Applications, accompanied by diploma, certificate or licence, and testimonials as to character and ability, to Preston J. Wallis, Clerk to the Guardians, on or before July 18.

GENERAL HOSPITAL AND DISPENSARY FOR SICK CHILDREN, PENDLEBURY AND MANCHESTER.—Physician. Candidates must possess either a university diploma or the membership of the College of Physicians of London, or the fellowship of the College of Physicians of Edinburgh. Applications to the Chairman of the Medical Committee at the Hospital, Pendlebury, from whom further information may be obtained on or before July 29.

HULL GENERAL INFIRMARY.—Assistant House-Surgeon. Candidates must be fully qualified. Applications addressed "Chairman, House Committee," to be sent in not later than 11 a.m., July 8.

LEICESTER BOROUGH LUNATIC ASYLUM.—Assistant Medical Officer. Candidates must be qualified and registered, should not exceeed thirty years of age, and must be unmarried. Applications, with copies of recent testimonials, to Dr. Finch, at the Asylum, not later than July 18.

ROYAL ALBERT EDWARD INFIRMARY, WIGAN.—Junior House-Surgeon. Applications, with recent testimonials, to Wm. Heaton, Hon. Secretary, on or before July 29.

SOUTHPORT CONVALESCENT HOSPITAL.—Resident Medical Officer. Candidates must possess a medical and surgical qualification recognised by the Medical Act of 1858. Testimonials and qualifications to the Chairman, William Froane, Esq., on or before July 20.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population in computed according to the census of 1871.

RESIGNATIONS.

Barnsley Union.—Mr. Stewart has resigned the Workhouse; salary £70 per annum.

Carmarthen Union.—Mr. V. Rees has resigned the St. Clear's District; area 33,947; population 6334; salary £60 per annum. Also the Mydrim District; area 6409; population 951; salary £14 12s. 4d. per annum.

Chailey Union.—Mr. P. Leslie has resigned the Third District; area 15,023; population 4105; salary £76 per annum.

Lunesdale Union.—The Second District is vacant; area 6789; population 555; salary £5 per annum.

Pickering Union.—The Lastingham District is vacant; population 3768; salary £20 per annum.

Yeovil Union.—Mr. W. A. Harvey has resigned the Fifth District; area 4617; population 3490; salary £54 per annum.

APPOINTMENTS.

Bedminster Union.—Michael Hodgson, M.B. and C M. Edin., to the Third District.

Kingston (Surrey) Union.—Wm. H. Vipan, M.R.C.S. Eng, L.S.A. to the Thames Ditton District.

Shardlow Union.—Walter Mackern, M.D., M.R.C.S., to the Stapleford District.

THE PRUSSIAN UNIVERSITIES.—During the session 1877-78 there have been 258 professors and docenten at work in the medical faculties of the nine Prussian Universities, and the matriculations amounted to 1394.—*Deutsche Med. Woch.*, June 15.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Henry Marais.—Received with thanks.

Dr. Williams.—The address to the Fellows of the College by Mr. R. Quain, a former President, may no doubt be obtained on application to that gentleman.

*** The following appeal has been put forth to the medical profession and members of the press:—"The favour of your aid is earnestly solicited on behalf of Sydney Hunt (son of the late Mr. F. Knight Hunt, M.R.C.S.E., etc., for some years editor of the *Daily News*, and originator and editor of the *Medical Times*), who has lost his sight through glaucoma, and is in consequence, together with a wife and child, left entirely without the means of support. Some friends of his and of his late father are anxious to raise a subscription to enable him to purchase a small business, that his wife may have a chance of obtaining a livelihood for them. The case is strongly recommended by T. Spencer Wells, Esq., F.R.C.S., 3, Upper Grosvenor-street, W.; J. H. Paul, Esq., M.D., Camberwell House, Camberwell; G. A. Ibbetson, Esq., F.R.C.S., 19A, Hanover-square; L. Weaver, Esq., M.R.C.S., 14, Stockwell-common; Dr. Wilkinson, M.R.C S., Battle Cottage, Sydenham-park; T. M. Stone, Esq., Royal College of Surgeons, Lincoln's-inn-fields; and F. Carter, Esq., solicitor, 9, Old Jewry-chambers, E.C. Subscriptions will be received and acknowledged by F. Carter, Esq., Douglas House, Tollington-place, Tollington-park, N.; and T. M. Stone, Esq., Royal College of Surgeons, Lincoln's-inn-fields, W.C."

A Sanitary Necessity.—Dr. Covernton, the Medical Officer of Health, having more than once reported that the parish churchyard—the only burying-ground in the Borough of Knighton—was very much overcrowded, and in a sanitary point of view decidedly injurious to health, a vestry meeting was held last week for the purpose of determining whether a public cemetery should be provided for that town. After a prolonged discussion it was resolved to provide a public cemetery for the parish, under the provisions of the Acts of Parliament. A burial board was at the same time appointed.

Forest Culture.—In India much importance has been attached in recent times to plantations as preventives of cholera. It has been always observed that the villages in wooded districts suffer less than those in treeless plains. Many instances of this are given in the reports of Dr. Bryden, President of the Statistical Office in Calcutta, and Dr. Murray, Inspector of Hospitals. The Bavarian Forest Department has established meteorological stations, with special reference to forest culture, under the superintendence of Professor Ebermayer, of Aschaffenburg. He has published his first year's observations, which may be recommended to any one wishing to study the subject.

Swansea: Visiting Out-patients of the Hospital.—At the annual meeting of the General Hospital, to be held next month, a proposal will be made to discontinue the visiting of the out-patients at their homes, the Committee of the Swansea Provident Dispensary being anxious to offer to relieve the Hospital of this work. A meeting of the supporters of the latter institution is already called to discuss the subject, and, if approved by the subscribers, the Dispensary will forthwith commence the work.

Small Hospitals.—The utility of hospitals on a smaller scale than the usual county institutions was again exemplified at a meeting held last week at Crewkerne, on the occasion of the anniversary of the hospital founded in that town by Mr. Robert Bird twelve years ago. According to the report of the Medical Officer, sixty-four in-patients had been treated during the past year, including several cases of severe illness, and of these forty-two had been discharged cured, sixteen were greatly benefited, one was incurable, two had died, and three remained in the hospital. The benefits offered by this charity are not confined to persons residing in the town and the immediate neighbourhood, but are extended to parishes some considerable distance from it. The Hospital may be regarded, therefore, as doing a large amount of work. It is doing it satisfactorily, and receives generous public support. The report of the Committee of Management contains a recommendation which is worthy of notice—namely, that the Committee shall decide from time to time whether patients be admitted free or at a weekly payment. There can be no doubt that in many cases the friends of patients are quite capable of making such payments, and would willingly make them, as long as the patients were receiving the benefits of the institution, and that they would consider such a claim upon them just and reasonable. Another feature in connexion with this institution is that a ladies' committee has been formed, which has proved a valuable auxiliary, their kindness and visits having been greatly appreciated by the sick patients.

More Pay.—It appears from a letter addressed to the Burnham Local Board of Health by the Local Government Board, that in consequence of the inadequacy of the salaries paid to the Medical Officer of Health and Inspector of Nuisances, they decline, in future, to pay any portion of such salaries. The Clerk to the Local Authority seems to have expected this, "as the remuneration to these officers was very inadequate, in his opinion." He advised the Board to make such an increase as would secure payment of a moiety from the Local Board; but he was asked if they could not do without a medical officer, and the parsimonious inquirer was so far enlightened (but his ignorance of the fact is scarcely credible) that the Public Health Act required such an officer to be appointed. The Clerk has been directed to inform the Local Government Board that the subject of these officers' salaries was under consideration.

Taunton Board of Guardians.—The Committee appointed to consider the question of the consumption of stimulants by those who laboured in the workhouse, recommend that the practice of giving beer and porter should be discontinued, and, in lieu thereof, an allowance of coffee, milk, sugar, and bread and butter, beyond the ordinary diet. The recommendation was adopted, and is to be put into execution forthwith.

Vaccination at York.—With reference to the proposed arrangements by the York Board of Guardians for public vaccination in that city, the Local Government Board take strong objection to the suggestion that the city should be divided into two districts for vaccination purposes, as the present number of public infantile vaccinations performed in the city was below that which was necessary for the maintenance of two efficient stations. The Local Government Board therefore desired that the Guardians would make further search for a station which should fully accommodate the present number of applicants, that must be taken to average nearly forty per week. The Board further objected to the system of the duties of the vaccinating officers being delegated to a substitute, and again requested that steps might be taken to give the objection effect.

The Abergavenny Union Workhouse.—A Committee of the Abergavenny Board of Guardians was recently appointed to investigate the charges made by Mrs. Fielder (one of the Guardians) as to the treatment of the sick inmates of the workhouse by certain of its officers, including the medical officer. An investigation of the subject has also been made by Mr. Bircham, a Local Government Board inspector. The reports of these inquiries have been laid before the latter Board, and their reply, just received by the Guardians, contains remarks and instructions worthy of notice. With regard to the charge—the chief one—that the late John Hill was ill-treated by a pauper wardsman, it does not appear to the Board that any credible evidence was produced to substantiate it. But they state that it was the duty of the medical officer of the workhouse, having regard to Hill's critical condition, to give directions that he should have especial care, and that some capable person should sleep in the ward with him. The Board are, however, informed by their inspector that the medical officer seldom attends to the workhouse himself, but deputes his duties to his assistant. Upon a review of all the circumstances of the case, the Board draw the especial attention of the Guardians, *inter alia*, to the following instructions:—The medical officer should be required to discharge his duties *personally*, in accordance with the regulations. It should also be pointed out to the medical officer that it is his duty to give proper directions for attendance on and the nursing of the sick in any special cases. It was clear that sufficient care was not taken by the master or nurse that John Hill should receive the special attention which he required. Furthermore, the Board requests that the Guardians will give strict instructions, both to the medical officer and the master, immediately to report upon all occasions on which extra help may be wanted for the nursing of the sick inmates.

A Londoner.—According to the Registrar-General, the aggregate length of sewers in London is not less than 2000 miles, and there are something like 500,000 inhabited houses.

Typhus Fever and Will-making.—A novel will case was recently brought before Judge Warren, in Dublin. The testator was lying ill with typhus fever. He sent for two persons whom he intended to name as his executors. They, however, objected to go into an infected house. A table and chairs were placed outside the window of the sick man's room in such a position that he was enabled to see the persons sitting at the table. As a means of communication between those outside and the fever-stricken man, a boy who had already gone through the typhus ordeal, and is now considered fever proof, was selected for carrying instructions to the will-maker. The testator executed his will by making his mark, under the observation of the witnesses, who attested the execution in the sight of the testator. This done, he was removed to the hospital and died. The validity of the will was called in question, on the grounds, *inter alia*, that it was not duly executed. The judgment of the Court was that the will was valid, the Judge remarking that he saw no reason for requiring executors to expose their lives to needless risk.

COMMUNICATIONS have been received from—

Dr. William Johnston, Leicester; Mr. F. Carter, London; Mr. Maunder, London; Mr. W. D. Hemming, London; Mr. Henry S. Norris, London; The Registrar of Apothecaries' Hall, London; Mr. W. A. Frost, North Staffordshire Infirmary; Mr. R. B. Taylor, Santilland; Messrs. Baildon and Sons, Edinburgh; Mr. Talfourd Ely, London; The Registrar-General, Edinburgh; Mr. Francis James, Swansea; Dr. J. W. Moore, Dublin; Mr. D. J. Fox, Stepney; Mr. Henry Greenwood, Liverpool; Mr. John Chatto, London; Dr. Frederick Churchill, London; Mr. T. M. Stone, London.

BOOKS AND PAMPHLETS RECEIVED—

M. Durand Fardel, Vichy—Stephen S. Alford, F.R.C.S., Dipsomania: its Prevalence, Causes, and Treatment.—Dr. H. Kühne, Die Bedentung des Anpassungsgesetzes für die Therapie—Dr. Gustav Jäger, Leuchenfestigkeit und Constitutionskraft und ihre Beziehung zum spezifischen Gewicht des Lebenden—W. Braithwaite, M.D., and James Braithwaite, M.D. Lond., The Retrospect of Medicine.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médicale—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—The Louisville Medical News—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Cincinnati Clinic—Leisure Hour—Social Notes—Sunday at Home—Edinburgh Medical Journal—Hardwicke's Science Gossip—National Anti-Compulsory Vaccination Reporter—Birmingham Medical Review—Obstetrical Journal—Veterinarian—Gazeta Medica de Bahia—Toronto Sanitary Journal.

APPOINTMENTS FOR THE WEEK.

July 6. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

8. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

9. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

10. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 1½ p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

11. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; St. Thomas's (ophthalmic operations), 4 p.m.; London, 2 p.m.

12. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, June 29, 1878.

BIRTHS.

Births of Boys, 1167; Girls, 1099; Total, 2266.
Average of 10 corresponding years 1868-77, 2185·0.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	778	792	1570
Average of the ten years 1868-77	666·9	606·1	1273·0
Average corrected to increased population ...	...	...	1362
Deaths of people aged 80 and upwards ...	...	...	58

Note.—The births and deaths registered last week may be compared with the average numbers in the corresponding weeks of the ten years 1868-77 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	4	5	2	3	14	...	3	...	15
North ...	751729	8	8	10	1	25	1	3	...	12
Central ...	334369	...	5	2	1	17	...	...	...	8
East	639111	7	...	7	...	14	...	1	2	13
South	967692	19	6	2	2	27	4	3	2	29
Total	3254260	38	24	23	7	97	5	10	4	72

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·881 in.
Mean temperature	70·7°
Highest point of thermometer	85·8°
Lowest point of thermometer	54·5°
Mean dew-point temperature	57·2°
General direction of wind	Variable.
Whole amount of rain in the week	0·61 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, June 29, 1878, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1878.*	Persons to an Acre. (1878.)	Births Registered during the week ending June 29.	Deaths Registered during the week ending June 29.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3577304	47·5	2266	1570	85·8	54·5	70·7	21·50	0·61	1·55
Brighton	103923	44·1	56	36	81·0	56·1	67·7	19·83	0·42	1·07
Portsmouth ...	129461	28·9	82	68	...	...	...	...	...	...
Norwich	84620	11·3	41	36	87·0	56·0	69·1	20·62	0·04	0·10
Plymouth	73599	52·8	44	17	82·0	53·5	64·5	18·06	0·05	0·13
Bristol	206419	46·4	126	83	92·4	54·0	69·7	20·95	0·11	0·28
Wolverhampton ...	74240	21·9	62	29	87·0	54·1	68·0	20·00	0·67	1·70
Birmingham ...	383117	45·6	270	166	...	...	...	...	...	...
Leicester	121473	38·0	75	58	87·8	54·0	69·6	20·90	0·14	0·36
Nottingham ...	165267	16·6	121	66	88·5	53·2	69·4	20·78	0·31	0·79
Liverpool	532681	102·2	392	297	85·0	54·8	66·0	18·89	0·01	0·03
Manchester ...	360514	84·0	289	200	...	...	...	...	...	...
Salford	170251	32·9	141	73	89·1	52·1	68·5	20·28	0·03	0·08
Oldham	107366	23·0	79	44	...	...	...	...	...	...
Bradford	185088	25·6	128	78	87·8	54·0	67·5	19·72	0·00	0·00
Leeds	304948	14·1	225	148	88·0	55·0	68·2	20·11	0·72	1·83
Sheffield	289537	14·7	210	141	87·0	53·0	67·5	19·72	0·00	0·00
Hull	143139	39·4	128	69	...	...	...	...	...	...
Sunderland ...	112459	34·0	110	68	...	...	...	...	...	...
Newcastle-on-Tyne	144570	26·9	92	71	...	...	...	...	...	...
Edinburgh	222371	53·1	149	84	...	...	...	..	...	...
Glasgow	566940	94·0	403	290	...	...	...	...	...	...
Dublin	314666	31·3	250	178	79·4	49·0	64·0	17·78	0·80	2·09
Total of 23 Towns in United Kingdom	8373953	37·9	5739	3870	92·4	49·0	67·9	19·94	0·28	0·71

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·88 in. The highest reading was 30·03 in. on Wednesday morning, and the lowest 29·62 in. at the end of the week.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1878 by the addition of seven years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. Nottingham, Salford, and Oldham, however, form exceptions to this rule, as the estimates for these three towns have been revised with the aid of local information as to the rate of increase of inhabited houses. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

SPECIAL MEETING OF THE GENERAL MEDICAL COUNCIL.

HELD AT THEIR HOUSE, OXFORD-STREET, W.

FIFTH DAY—WEDNESDAY, JULY 3.

AFTER some formal business, the Council went into Committee on the Medical Act Amendment Bill.

Dr. AQUILLA SMITH moved a resolution to amend the Bill, so as to impose a penalty on any unqualified man "practising on his own account or as the paid or hired assistant of a registered practitioner for the gain of his employer." He said the evil aimed at by this clause was admitted on all hands to exist to a very large extent in England. He had had the opportunity of mentioning the matter to the Duke of Richmond on one occasion, when his Grace admitted that the evil was very great, but said that he felt a difficulty in dealing with it. He believed that the words he proposed to introduce would be effectual for that purpose. The penalties already inflicted under the clause he proposed to amend were against a person assuming to be a practitioner, or taking the title or designation of a qualified practitioner, and these words would include the case of unqualified paid assistants; while he had so worded it as to meet the objection which had been raised that any such clause might interfere with a practitioner employing his apprentice. It was well known that although the abuse did not exist in Ireland or Scotland, it was a common practice in England; and there were registered practitioners who kept as many as three unqualified assistants. A glance at the advertising columns of the *Lancet* would be enough to prove this; for it appeared to be a recommendation in the eyes of these gentlemen that they were able to advertise themselves as being, as they called it, *sine diploma*. It was a remarkable fact that these unpaid assistants were largely employed in midwifery—a branch of medicine which required more knowledge and skill than perhaps any other, and one in which more serious emergencies were liable to occur, in which life was imperilled, than any other of the ordinary branches of general practice. A very flagrant case of maltreatment was recorded in the *British Medical Journal* of last Saturday, where the coroner's jury, in finding their verdict, made a presentment that they were of opinion that it was highly improper for one James Andrew, who was a chemist and unqualified, to be allowed to attend patients, and to procure a certificate of death signed by a medical practitioner. It appeared that this chemist had been paying the practitioner, who signed him the certificate of death in blank, 9s. a week for coaching him in medical education; and this case disclosed, therefore, the existence of two very serious evils.

The motion was seconded by Dr. PETTIGREW.

Sir JAMES PAGET was of opinion that the penal clauses of the Bill being directed against the assumption of titles by unqualified medical men, the words which Dr. A. Smith proposed to add would introduce an entirely new element, which would not be accepted by the Government without further discussion.

Dr. ANDREW WOOD also called attention to the fact that the very object of the Medical Act of 1858 was by its preamble declared to be an Act to enable the public to distinguish between qualified and unqualified practitioners. It was never meant to say that a man who was not qualified was not to practise, but that he was not to hold himself out as a qualified man. He quite agreed that the system was vicious in the extreme, but it was the fault of the public to employ such people, and the Medical Council would be going beyond their province to attempt to deal with it in the way suggested.

The motion was put to the vote, and, only two hands having been held up in support of it, was declared to be lost.

A notice of motion by Dr. Storrar—"That it is necessary in any fresh legislation to provide for the admission of women to the profession on the same legal footing as men, except in regard to their admission to the governing body of the medical authorities"—was, by permission of the Council, withdrawn, on the ground that the subject had been thoroughly discussed yesterday.

The Council then resumed, and took up the subject of the reform of its own constitution.

Dr. PYLE, in pursuance of notice, brought forward the following motion in favour of obtaining a representation of the profession on the General Medical Council:—"That, as a mode of granting a larger representation of the profession in the General Medical Council, every graduate of a University, or licentiate or member of any Corporation, shall have the privilege of voting for the representative of the University or Corporation of which he is a graduate, member, or licentiate." He said that he brought forward this motion as a more practicable scheme than that of direct representation. He believed that if the whole profession had been canvassed upon the subject, instead of the members of the British Medical Association only, a much larger number of adherents would have been obtained. The result of the circular sent out was that 5000 members supported it.

Sir WILLIAM GULL: Then there was a negative result with regard to 17,000.

Dr. PYLE said he was not aware that the circular had been sent to every member. He considered that it was very desirable that the link between the Corporations and their licentiates should be drawn as close as it could be, and that the scheme foreshadowed in his resolution would have the tendency to keep up the *esprit de corps* of the profession. Citing his own case in illustration, when he entered the profession, twenty-five years ago, he became fully qualified by graduating as Member of the College of Surgeons and as Licentiate of the Apothecaries' Company; but, not having been made a Fellow of the College, he had never had a vote either for the representatives of that body or of the Apothecaries' Company. He did not in the least complain of the result, because both those Corporations had always been very well represented on the Council; but he knew that this absence of representation was considered a grievance by many members of the College. If the election which he proposed were carried out in the way in which it is by the Scotch Universities,—namely, voting by ballot papers—every member of the profession would have a vote. It might be urged that this would in certain cases lead to a plurality of votes, but for his part he did not consider it a great injustice if a man who took the trouble to qualify himself as a member of the College of Surgeons and of the College of Physicians should get, in return for all his work and expense, an extra vote. The same thing would apply to a man who graduated at both Universities—he had the privilege of voting for the representatives of both in Parliament. However, if there were any difficulty raised on that score, it could be met by adopting the course followed in the municipal elections, where, if a man had premises entitling him to vote in three wards of a town, he was bound to make his selection. In conclusion, he urged that there was a general feeling in the profession that the constitution of the Council should be changed in the direction of giving a representative voice to the practitioners of the country; and that the Council was bound to take cognisance of this want, and to make some provisions to meet it.

Dr. LEET, in the unavoidable absence of Dr. Hudson, seconded the motion.

Dr. AQUILLA SMITH said this meeting of the Council had been specially summoned for the purpose of considering the Bill now in Parliament, and it was the duty of the Council to dispose of everything connected with that immediate business before commencing the consideration of a subject which was not mentioned or alluded to in the Medical Bill. For that reason, and without objecting to Dr. Pyle's motion *per se*, he wished to move an amendment—"That the Council now proceed with the consideration of the Medical Bill."

Dr. PITMAN: I second that.

Sir WILLIAM GULL urged that the Council should grapple with the question raised by Dr. Pyle. For one reason, there were in the House of Commons at this moment other Bills which would greatly militate against the Duke of Richmond's unless some guarantee were given that this question would be fairly considered. But, apart from that, he thought it a matter of the greatest importance that the Council should not show itself in any way averse to considering this question of its own constitution. Whether it should be altered or not was another question, but the Council owed it to the profession and to themselves to show that they were quite ready to give the most liberal consideration to all suggestions connected with it.

In accordance with the general feeling of the Council the question was postponed until a later period of the day; and

Mr. BRADFORD proceeded to call attention to a notice of motion which he had given to remove an ambiguity of the Bill, which, in the opinion of their legal adviser, tended to

interfere with the power of the Society of Apothecaries to prosecute unqualified practitioners.

After some discussion, this motion was amended by Dr. PITMAN, and carried unanimously in this form—"That the attention of the draftsman be drawn to an opinion entertained by the legal advisers of the Society of Apothecaries as to the effect which the proposed repeal of certain portions of the Act of 1815 will have upon certain powers which the Society think they should retain."

The debate upon Dr. Pyle's motion was then continued by

Mr. SIMON, who said they had a couple of hours left to discuss this important question, which he believed could not be exhausted if they sat for as many weeks. The amendment of which he had given notice was—"That it be respectfully submitted to the Lord President, as the opinion of this Council, that in the event of the Medical Bill becoming law in the present session of Parliament, it will be desirable that, as soon as then may be, the question of the constitution of this Council be thoroughly considered by her Majesty's Government with reference to the new state of the law, and particularly with the object of determining what (if any) changes of constitution the Council will require, in order that it may possess the best qualifications which can be got for the duties which it will then have to discharge." What the country required was that the Council should be a true representative of the profession for a particular and specific purpose, that purpose being educational. The instance cited by Dr. Pyle of his own case appeared to answer itself; for he confessed that in the result no better men could have been chosen by the College of Surgeons than had sat at the Medical Council. (Applause.) But besides this, looking at the mode of election in the College of Surgeons, it was truly representative; for every member of the College could if he chose become a Fellow; every Fellow had a voice in the selection of the Council, and the Council of the College chose the representative to sit upon the Medical Council. (Applause.) He believed that that choice should be a deliberative choice, and could be better made by a Council so constituted than by a large body of constituents. Beyond all this, however, he ventured to say that he had very great doubt whether this Council could usefully discuss the question of the reform of its constitution. He doubted whether—speaking with such reserve as every gentleman would wish to speak with of what concerns his neighbour—members would feel themselves quite able to discuss at ease the arrangement of other institutions than those with which they were connected themselves; and in speaking of the institution with which he himself was connected, each member would feel a certain embarrassment. But whether that were so or not, he thought it would be something like impertinence for the Council to discuss it without an invitation from the Government to do so. If they were invited to go into it, it would certainly be a very long discussion, because it would give rise to all sorts of questions, such as those which hindered medical legislation upon the subject of medical education and registration for pretty nearly thirty years. Again, as suggested by this amendment, the discussion of this question now would be tantamount to the postponement of the present Bill in Parliament; and, moreover, it really was a question which ought to be investigated by the Government. If the Government went into the subject, whether *in camera* or by a Royal Commission or a Select Committee of either House, it would take care to hear all that could be said on both sides of the question, and would, in accordance with the wording of his amendment, inquire what, if any, changes of constitution the Council requires in order that it may best possess qualifications for the duties which it will have to discharge. At the same time he felt that, in view of the widespread opinion that this subject required considcration, it was a proper thing to recommend to the Government in the way in which the amendment he now proposed suggested.

Sir JAMES PAGET seconded the amendment.

Sir WILLIAM GULL, referring to a motion of which he had given notice, asserting that the constitution of the Council needed revision, said that he must oppose the amendment of Mr. Simon. In the first place, it made any action on the part of the Conncil contingent upon the passing of the Medical Bill. He, on the contrary, felt that if the Bill were not passed, it became more imperative that the constitution of the Council should be revised. Neither could he agree with Mr. Simon that this was a matter which ought to be left to the Government. It was in accordance with the traditions of this great country that representative bodies should reform themselves. They had a very high authority for that in the House of Commons. (Applause.) But when it was said that this was a question of representation he objected to the term; because it might imply that the members of this Council were bound to represent all the prejudices, and all the ignorance, and all the indolence of prejudiced, ignorant, or indolent people. It was a much larger question than representation, because their duty as a Council was to consider in the largest way the best course to follow in order to advance the science and practice of medicine. He wished, therefore, that they would drop the word "representation" in discussing the subject. On these grounds he must vote against Mr. Simon's motion; and he would urge upon them, later, to pledge themselves as a Council to the opinion that their constitution needed revision.

Sir DOMINIC CORRIGAN also spoke against the amendment.

Dr. ANDREW WOOD utterly repudiated the notion that because the Council had not been invited by the Government they must not discuss this most important question to the country and to the whole medical profession. He claimed for the Council an independence of the Government, and he claimed for it the right and title to discuss all matters affecting its constitution and within the scope of the reasons for which it was appointed. (Applause.) But more, he would go so far as to say that the Council was bound to discuss this question, which had been agitated for years, and which had been shown to be of the greatest interest to large numbers of the profession. When the Medical Act was framed there was a very good reason for having no direct representation of the profession—because registered practitioners had then no existence. At the present time there were npwards of 20,000 on the Register, many of whom felt that they were not properly represented in the Council, and that, being called upon to contribute to the expenses connected with it, they were entitled to some voice in the representation. He believed that the suggested admission of six members directly representing the profession would make no very great change in the constitution of the Council; but it might have one effect—it might remove a grievance. Perhaps even it might have the effect of soothing the feelings of those gentlemen who, in the medical Press, had been abusing the Council with so much pertinacity during the whole of its existence. (Laughter.) There were various ways in which the profession might be represented; but the one suggested by Dr. Pyle was the most unequal and unsatisfactory that could be conceived, because the result of it would be that, whereas the Royal College of Surgeons of London would have 12,000 constituents for one member, Durham, with a constituency which bore no comparison, would have an equal voice in the Council; and the same inequality would exist with regard to other Corporations and Universities. He must say that he doubted very much whether any change in the constitution of the Council in the direction of direct representation of the profession would give satisfaction to those who were loudest in the agitation in favour of it; and he was quite satisfied that the gentlemen who had been sent to the Council by the different bodies had, on the whole, been the best men men that could be selected. At the same time he saw no reason why, if any plan could be arranged for admitting additional members to the Council who would directly represent the practitioners of the country, such a measure should not be adopted. He saw some difficulty in the way of arranging the divisions, because it would never do to say that the practitioners of England should vote for four members, whereas Scotland and Ireland should have only one each; and upon the whole he thought that they would have to resort to a very radical course, and a course which he never believed he would live to see himself recommending—namely, the division into equal electoral districts. (Loud laughter.) He had, however, lived to see a Tory Government bringing in a revolutionary Medical Act, and after that he would not be surprised at anything. (Laughter.) In conclusion, the learned Doctor said that although there would be some difficulties in the way of expense, and as to collecting the votes, he was one of those who thought that a case had been made out for the consideration of this question, and that it was a duty which the Council owed to the registered practitioners of the country, that they should consider it respectfully, calmly, and deliberately. He did not say that this could be done in the present session, but an indication ought to be given that the Council was prepared to consider the question, and prepared to give a decisive "yes" or "no" in

regard to it. They had been told, "Oh! if you now raise up this question of the representation of the general practitioners, you will imperil the Government Bill." Well, that consideration did not affect him very much—he was not in the least appalled by it. (Laughter.) But if they wished to make the Bill *totus teres atque rotundus*, and then left out that which the medical practitioners of the country considered the most important thing of all, that would indeed imperil the Bill. (Applause.) On these grounds he could not agree with Mr. Simon's amendment, because it gave the go-by to the consideration at present of this important question, and, further, because it suggested that the Council were not entitled to take it up because the Government had not suggested it to them. (Applause.)

Mr. Macnamara said the objections to Dr. Pyle's motion had been so fully gone into that it would be a work of supererogation on his part to do more than state one more which should be brought prominently forward as a subject of importance. If the Bill became law, and a Conjoint Scheme were instituted, the effect would be to reduce the minimum qualification, not perhaps to a very low, but to a tolerable level, and every inducement should be held out to those passing the examinations to advance to the higher grades in connexion with the corporate bodies. They should also be afforded one of the most valuable rights of corporate bodies—the right of voting for a representative in the Council. Furthermore (though this consideration would not weigh greatly in a deliberative assembly), the question would not at once be set at rest by what was proposed, as the profession generally would not consider it a satisfactory solution. He was very much pleased indeed that this question had come under the consideration of the Council—it would have been insufferable to the profession at large had they not discussed it, and would have been an evidence on their part of the greatest pusillanimity. A great deal of good work had been done by them in the past, and they need not be afraid to submit that work to scrutiny. Two methods of procedure had been suggested: while Mr. Simon thought the reform should come from without, Sir William Gull was of opinion it should come from within, and had supported his view by a fallacy. In instancing the example of the House of Commons having done so, he had forgotten that that body was the only one which could act for its own reformation; whereas, were the Council to pass never so many resolutions, they would not, as active measures, be worth the paper they were written upon. Another matter he had forgotten was that representatives had been sent to the House of Commons by the outside general voters, pledged to effect the reform that was carried out, while not one of the members of the Council had been delegated under pledge to reform themselves. On the other hand, Mr. Simon's motion was for a request by the Council that the Lord President should be asked to take the matter into his consideration; but they should pledge themselves to the profession at large that something would be done directly without any contingency at all, and therefore he would not countenance the proviso "if the Bill should become law." He thoroughly admitted that Mr. Simon was actuated by the best of motives—viz., that they should not do anything that would endanger the passing of the Bill if amended as had been recommended by the Council. If so amended the Bill would be a great boon to the public at large; and certainly some doubt might be excited by the fact that so staunch a Conservative as Dr. Andrew Wood should have expressed himself in favour of direct representation, probably because it would be the means of wrecking the Bill. (Laughter.)

Dr. Andrew Wood: No, no!

Mr. Macnamara thought the Council were quite able to read between the lines sufficiently to see that, and he found no difficulty in gathering the diplomatic motive which was actuating the mind of Dr. Wood. He earnestly deprecated the postponement of this question, and would have preferred that the words of the motion should read—"That it be respectfully submitted to the Lord President, as the opinion of this Council, that it is desirable that as soon as possible the question of the constitution of this Council should be thoroughly considered by her Majesty's Government, with the object of determining what (if any) change of constitution was required."

Sir Dominic Corrigan objected that three amendments could not be brought in this way before the Council.

Mr. Macnamara replied that if Sir Dominic Corrigan would pay him the compliment of listening for a moment, he would learn that he was only suggesting, and not moving. It might be found that there were other faults in the representation of the Council, and, as Mr. Simon had well said, they all naturally hesitated in exposing their innermost heart round that table. What real power did they possess? They might talk and gossip about this and that being beneficial, but they had no power to call before them, as Parliament would, persons who could represent their different views. They could not go to the great body of the profession, or even call before them that important body the British Medical Association They could only talk among themselves without calling witnesses, and might in consequence put forward a very inefficient scheme—a result which would be entirely obviated if the question were entrusted to the Lord President. He thought the best way to deal with it would be for a Royal Commission to issue, to take evidence and make a report on the subject; and he had not the slightest doubt that the result would then be satisfactory, which would not be the case if either Dr. Pyle's motion or Mr. Simon's were carried, conditional as the latter was on the Bill becoming law. Sir William Gull's motion went more directly to the point he was contending for, because it positively stated that the Council "needs revision"—a direct, manly expression which afforded something tangible to proceed upon; but at the same time it would be very undesirable that the question should be referred to themselves, and they really had not the power to do it. Let them convey their expression of opinion on the matter to the Lord President, and he felt convinced that the British Medical Association would then be satisfied with what they had done, and more than probably withdraw all opposition to the Bill as the Council desired it to be amended. It was most important that the Bill on which so many days had been spent, not only in Council but in the council-rooms of the various bodies they represented, should be forwarded, and that they should not have to recommence these discussions *de novo* next year. They should recall what took place eight years ago when a Bill was framed; and although it had passed the House of Lords, and had come on for second reading in the Commons, it was wrecked on this very question of reform and representation in the Medical Council. In all probability the same result would again occur if they took the course proposed, and that could not be desired by anyone who had at heart the honour and best interests of the profession and the benefit of the community at large.

Mr. Teale could not support Dr. Pyle's proposal. In the first place, he did not think it desirable to make any alteration in the constitution of the Medical Council at the present time, and it would be further undesirable, as the effect might be to deprive them of some of their most valuable members. Representatives in the Council were not now elected because they had received the greatest number of votes, but because they were considered most fit by those bodies who, having experience of what had been done in the Council year after year, were best qualified to judge. When the time arrived for discussing the matter, very large questions would have to be considered. They could not ignore the fact that there was a very wide-spread feeling that the practitioners in the kingdom should be represented in the Council. How that representation was to be obtained he would not venture to say, but there could be no doubt that the 5000 votes recorded manifested a very wide-spread feeling in its favour, and it was inevitable that the grievance so laid before the Council should be considered. Among other things, they would have to consider whether the Council should be large or small; and if it were a large Council, Government would feel there ought to be represented in it every medical interest that could be represented. If they were to have charge of the midwives and of their organisation throughout the country, they must have obstetricians in the Council. Then possibly, too, there would have to be a representative of the ladies, and representatives also from the Army and Navy. It would, in addition, be a great advantage to have on the Council a statesman, whether a member of the House of Lords or of the House of Commons. Then if the Council were to become a very large one, the question of funds would be involved in considering whether the members should be paid or unpaid; and no doubt a great amount of work would have to be done in the visitation of examinations and so on, which would require that the payment should be real, and not nominal. What they received at present was not a remuneration, but a make-believe, and he would himself infinitely prefer to receive no remuneration at all. It had been said that the course taken by the Council would have been different if it had included six representatives

tives unconnected with the Corporations and teaching bodies, but the Council had voted by a considerable majority in favour of the Conjoint Scheme, and he did not think the introduction of half a dozen such representatives would have had much effect. A good deal had been said about the benefit of having the general practitioners represented in the Council. It might be no disadvantage to have them certainly in some respects; but of what advantage would it be to have them *quâ* general practitioners, since their knowledge in that character must be small compared with that gained by consulting medical men who were in the habit daily of meeting general practitioners all over their districts?

Professor Rolleston said a very large issue had been raised in a statesmanlike manner by Mr. Teale, who had conclusively shown the wisdom of postponing the question. They could not at this time set to work to discuss such cardinal principles as were involved in this question of direct representation, so as to get into the Council representatives of particular branches of the profession—obstetricians, medical men in the Army and Navy, and so on. Dr. Wood had intimated that certain things should be done because there was a cry for them, but he would go upon the higher principle of doing what was right and just, and not merely acting in response to any cry in the newspapers or coming from other sources. The mass of the general practitioners of the country ought certainly to be represented. They must not endeavour to secure simply the best ideal representatives, for if they went upon that basis they would get no representatives at all. Among the various suggestions before the Council, he disapproved most heartily of what Mr. Simon and Sir James Paget had said. They ought to shrink from telling the Government, who had been trusting and consulting them on these matters, that they were not fit to be trusted, and wished to throw everything on the Government because the Council was one of the barriers to a great danger of the day, and should endeavour to prevent the profession from being sucked into the Maelström of centralisation. The one thing he would urge upon the Corporations was that they should not shirk the labour of working these things out for themselves, and, like the Germans, have everything done for them by the Government. He would reply to Dr. Andrew Wood, "*Timeo Danaos et dona ferentes.*" Dr. Pyle had included in his motion that graduates and members of Universities and Corporations should be allowed to vote for their representatives; but that was at present the case.

Dr. Pyle believed that was not so as regarded some of the Universities.

Mr. Macnamara inquired if Dr. Rolleston was the representative of the Bachelors or only of the Masters of Arts and Doctors of Medicine of his University.

Professor Rolleston considered he was the representative of all the members of his University.

Dr. Humphry said it was a most urgent question both for the Government and for themselves, how to secure the election of proper persons to do the work before them. The true position of the Council in the matter had not yet been properly stated by any of the members who had spoken, because they had treated the matter too much as a question merely of the representation of the views and desires of different persons, instead of, as it was, a question of obtaining a body adapted for carrying out the work before them. They were not really representatives at all, but had been appointed by certain bodies to regulate the medical profession under the provisions of the Medical Act. He strongly objected to their giving up their own independence, and throwing themselves entirely into the hands of Government, and they should resist any such idea to the utmost. If reforms were needed, let the Council suggest them, and the manner in which they should be carried out. With regard to the question of payment, it would be in many respects better if the amount were reduced to a merely nominal sum, as that would remove the possibility of pecuniary motives being attributed to them in attending the Council.

Mr. Simon explained that he was unwilling to omit from his motion the condition of the Bill being passed, as it would act as a reason for not putting off the question to another session.

Sir James Paget agreed that the proviso for the event of the Bill being passed should be retained. If the Bill became law, and they were to have charge of the midwives and dentists, the Council would have to be enlarged, as the work to be done, especially for tho next two or three years, would be such as the present Council could not possibly perform. Should the Bill not become law, the work of the Council would be little altered, and it was therefore essential to retain the proviso. The constitution of the Council did not depend upon its own will, but on the will of Government, but, as they had the power of proposing to the Government, it would be much better for them to suggest an inquiry in which they would themselves be the chief advisers. The election of twenty-four members chosen from the profession would make no practical difference, and those new members would find there was no question affecting their interests which the Council had not been always ready to consider. Nevertheless, the claim ought to be granted, as it was very plainly demanded. A feeling of community and mutual trust throughout the profession must be obtained, and it could not be said to exist in the absence of direct representation. Mr. Simon's motion appeared to be the best on the paper, not only as to time, but with regard to the manner in which what was to be done should be effected. There should be direct representation of the profession in some shape or other, and it was necessary to consider how far the Council should include within itself persons who could speak with authority upon the affairs of the various branches.

Mr. Simon's amendment—"That it be respectfully submitted to the Lord President, as the opinion of this Council, that in the event of the Medical Bill becoming law in the present session of Parliament, it will be desirable that, as soon as then may be, the question of the constitution of this Council be thoroughly considered by her Majesty's Government with reference to the new state of the law, and particularly with the object of determining what (if any) changes of constitution the Council will require, in order that it may possess the best qualifications which can be got for the duties which it will then have to discharge,"—was then put to the Council and lost; 7 members voting in its favour, 8 against, 7 not voting, and 2 being absent.

Mr. Macnamara proposed as an amendment to Dr. Pyle's motion—"That it be respectfully submitted to the Lord President as the opinion of this Council that it is desirable that as soon as possible the question of the constitution of the Council be thoroughly considered by her Majesty's Government, with the object of determining what, if any, changes are required."

Dr. Andrew Wood said that amounted to the same thing.

Mr. Macnamara pointed out that it would prevent the postponement of the question, and would refer it directly to the Lord President, independently of the passing of the Bill.

The proposition was not seconded.

Sir William Gull proposed the following amendment:—"That the constitution of this Council needs revision; and that the Council do affirm that it is desirable that, at its first meeting after the present session of Parliament, it should consider what modifications of its constitution are demanded and are required, and should report to the Government accordingly." His object was to facilitate legislation during the present session. A Bill had been promoted in Parliament by Mr. Mills, dealing principally with the modification of the Council, and they should not separate without expressing a clear and definite opinion that there should be a revision of its constitution. That Bill would certainly be pressed on unless its promoters received an assurance from the Government and from the Council that the question would receive consideration, and would not be shelved. Until they received that assurance they intended to oppose any medical legislation in the lower House. The Council should therefore lay their views before Government, and ask for a Royal Commission, and that was the only way to prevent the opposition to the Duke of Richmond's Bill being persevered in.

Mr. Teale seconded the motion.

Dr. Andrew Wood agreed with the motion as a manful assertion of the Council's intention to consider this great question, and as calculated to give the profession confidence in them.

Mr. Macnamara concurred in saying that every effort would be made to impede the present Bill if the promoters of the other measure were not assured that the question of direct representation would be at once taken into consideration. Otherwise there would be no guarantee to them that the question would not drag on for, perhaps, eight or nine years, when some succeeding Council might repudiate their present action in the matter. The present Bill should not be jeopardised.

Mr. Simon suggested that, instead of saying that the

question should be taken into consideration at the first meeting of the Council after the present session of Parliament, they should state "that the Council do now proceed to consider the question."

Dr. AQUILLA SMITH: Impossible.

Dr. ANDREW WOOD: How long are we going to sit if we do that?

Dr. QUAIN: For three months at the least.

Mr. MACNAMARA would substitute "will" for "should," as giving a better assurance.

Dr. ROLLESTON said the word of the Council was as good as its bond.

Mr. SIMON'S intention was to enable Government to give an assurance in the House of Commons that the question would be dealt with next session.

Dr. AQUILLA SMITH preferred Sir William Gull's plan, for the Council to take on itself the duty of pointing out deficiencies, to Mr. Simon's proposal for throwing the whole onus on the Government.

Dr. PYLE was then allowed to withdraw his motion in favour of Sir William Gull's.

Sir DOMINIC CORRIGAN cordially supported that motion, while totally disagreeing with the reasons given for it by Sir William Gull.

Sir JAMES PAGET said it was certain that a strenuous opposition to the present Bill by the promoters of Mr. Mill's measure would prevent it being passed. He proposed the addition to the motion of the words, "that the Council shall represent to the Government that it will consider the question, and shall report to the Government accordingly."

Sir WILLIAM GULL accepted the alteration.

Sir JAMES PAGET said this would pledge the Council, and prevent the threatened hindrance to legislation.

The motion was put, and carried by eighteen votes.

Dr. HUMPHRY moved—"That the Council is of opinion that the consideration of the question of the revision of the Council should not prevent the passing of the Medical Act Amendment Bill now before Parliament, with such alterations as the Council has suggested."

Sir DOMINIC CORRIGAN begged the Council in pity to itself not to pass such a resolution. Translated into plain English, it meant that the Council, notwithstanding all they had said before, asked each member of the House of Commons to sacrifice his own judgment and opinion, and bow to the further opinion of the Council that, right or wrong, the House of Commons should proceed in accordance with it. They should not make greater fools of themselves than they had already done. (Laughter.)

Dr. ANDREW WOOD urged that they had no right to dictate to the House of Commons, and that it would be undignified, after the resolutions they had passed, to pass another to the effect that the they did not mean to interfere with the passing of the Bill.

Professor TURNER regretted that this matter should have been mixed up with the question at all, so as to associate the revision of the Council with the passing of the Bill. The former should stand on its own merits as a question of the greatest importance.

Dr. HUMPHRY said it was for that very reason that the Bill should be forwarded irrespective of the other question, that the motion had been framed. They were not dictating to the House of Commons, but simply expressing their opinion to the Government.

The motion was put and carried.

Mr. MACNAMARA said that the two very important questions of local registration and the registration of foreign and colonial practitioners still remained for consideration, and it would not be doing justice to them to go on that day. Legislating in haste meant repenting at leisure, and he would propose the postponement of the discussion of those questions upon the reports of the committees.

Dr. ANDREW WOOD proposed to proceed, but several members considered it would be unreasonable to prolong the sitting, and the Council adjourned.

SIXTH DAY—THURSDAY, JULY 4.

The final meeting was held on Thursday last, when, the Council having resolved itself into committee for the consideration of the Medical Act Amendment Bill, a motion of which notice had been given by Dr. Apjohn was considered. It was to this effect: "That lists of the persons who are entitled to registration shall be forwarded to the three Branch Councils, and when the registration fees are paid to the local registrars, these registrars shall furnish the General Medical Registrar with the names and addresses of the said several persons, and the General Medical Registrar shall insert these in the Medical Register."

Dr. QUAIN said the evil sought to be remedied by Dr. Apjohn's motion would best be removed by the duties of the local registrars being left in the discretion of the Council. He would therefore move to insert, in place of the words now standing in the Act in relation to their duties, these words: "The local registrars shall keep the local registers in such form and manner, and shall perform such duties in relation to registration under this Act, as the General Medical Council shall from time to time order."

This was seconded by Dr. ANDREW WOOD; and

Dr. APJOHN having expressed himself satisfied with this amendment of the Act, it was put in the form of a substantive motion, and unanimously adopted.

The following report of the Registration Committee was then brought up and read:—

"The Committee beg leave to report that they would recommend as follows:—(1.) That the invested funds of the several Branch Councils should be consolidated into one capital fund, vested in trustees on behalf of the General Medical Council. (2.) That the local registrars should continue, as at present, to register and receive registration fees in their respective localities, but should, without loss of time, transmit such fees to the Medical Registrar when they amount to ( ). (3.) That the Treasurers of the General Medical Council should transmit from time to time to the Registrar for Scotland or Ireland such sums as may be necessary to defray the current expenses of the local offices. (4.) That the salaries of the Registrars of the Branch Councils for Scotland and Ireland should be paid by the Treasurers of the General Medical Council. (5.) That fees for attendance on Branch Councils should also be paid by the Treasurers of the General Council at the end of each current year."

On the motion of Mr. MACNAMARA, seconded by Dr. HALDANE, for the adoption of this report,

Dr. ANDREW WOOD attacked the report of the Registration Committee as having an evil tendency towards centralisation in its worst form. He maintained that it was important to preserve the great principle of self-government with regard to finance as it existed at present. It was a good thing for each branch to be kept under the stimulus of not spending more money than they could afford. He believed that the recommendations in this report were supposed to have a tendency towards economy; but, in his opinion, they would be an encouragement to extravagance. (Applause.)

Dr. QUAIN then read certain proceedings at the last meeting of the Irish Branch Council, in which a resolution was passed to sell out £100 Three per Cent. stock in order to meet the expenses of the Branch. This he said showed that the Irish Branch Council was encroaching upon its capital. The question might be asked how it was that the Irish Branch Council dispensed money so fast. He had before him a record of the fees and salaries paid in the various Branch Councils in proportion to the receipts for the last twenty years. The English Branch Council during that time had expended 16 per cent. of the whole sum in fees and salaries, and there were twelve members of the Branch Council to be paid, whereas there were only six in Scotland and six in Ireland. But in Scotland, with six members, the expenses had been 28½ per cent.; while in Ireland, with its six members, and all resident on the spot, they had amounted to 35 per cent. Nor was this to be wondered at when he found a meeting of the Branch summoned by requisition signed by Sir Dominic Corrigan and Mr. Macnamara, the business for which they were summoned being shown in this resolution: "That this Branch of the Council beg leave to draw attention to the following passage of a speech by Mr. Bourke in the House of Commons." (Laughter.) What in the world had they to do with the speech of Mr. Bourke in the House of Commons?

Dr. ANDREW WOOD: Was that all the business?

Dr. QUAIN: That is the whole of the business excepting this—that the fees were paid. (Loud laughter.) Again, at a meeting called on the requisition of Sir Dominic Corrigan and Mr. Macnamara, to discuss some equally unimportant matter, Dr. Aquilla Smith was so struck with the extravagance of the thing that he actually moved that the standing order in relation to summoning meetings be altered by

substituting the word "three" instead of "two" with regard to the number of members required to sign the requisitions. His motion, however, was not carried, and the eight guineas were paid as usual. He must, therefore, object to the recommendation of Mr. Macnamara to throw all the Branch funds into one common purse.

Dr. AQUILLA SMITH said that the number of meetings that had been called in Ireland was owing to the action of the Executive Committee, which had obliged them to take legal proceedings and to go into a good deal of discussion with regard to midwifery qualifications and other matters. Dr. Quain's figures were not worth anything excepting to show that he understood very little about the matter. The first thing that struck him with regard to the report of the Registration Committee was the ingenuity they had shown in avoiding the question referred to them. (Laughter.) He objected to the report, because it had not answered any of the questions that had been referred to the Committee, and because it did not touch at all upon the question of registration. At the same time he must object to the aspersion that was attempted to be thrown upon the Irish Branch.

Sir DOMINIC CORRIGAN said it was evident that the Irish and Scotch Branches must take care of their own interests and independence, or they would be absorbed by the English. He was surprised to find that Dr. Quain's speech had shown so hostile a spirit towards the Irish Registry. He had proclaimed with a flourish of trumpets that the expenses of the English Branch had been only 25 per cent.; but he carefully kept out of view what were the actual sums expended—he talked only of "percentages," which had a wonderful charm for the English mind. (Laughter.) Turning, however, to the actual figures, it would be found that the expenses of the Local Registry for England were £39, whereas those of the Irish Branch Council were £45, so that there was only a difference of £6 in expenditure. Considering the work the Irish Branch had gone through, it was very cheaply done. But then Dr. Quain made a great point of there being twelve members in England, and only six in Ireland. This was an additional reason for the Irish protecting themselves; and in his humble opinion the six Irish members were certainly worth more than the twelve English. (Loud laughter.) Dr. Quain next showed a very touching sympathy for the Irish Branch, because it was spending its money so fast; and he urged that it was necessary for the English Branch to take care of it for them. It put him in mind of the tactics of the men who in England—for this form of fraud was not practised in Ireland—(laughter)—played off upon unsuspecting strangers what was known as the "confidence trick." The *modus operandi*, as disclosed by the numerous cases now passing through the criminal courts, was that the operators approach an unsuspecting stranger with the philanthropic proposal that he should show his confidence by transferring his money into the pocket of the thief, where he was always assured it would be much safer. (Laughter.) He believed the English law had found it necessary to interfere, and to show these gentry that a man's money was safer in his own pocket. But the Committee appeared to be anxious for the Council to practise this trick upon the Irish and Scotch Branches. (Laughter.)

Dr. HUMPHRY then moved the following amendment:—"That the moneys be paid and applied in accordance with Clause 13 of the existing Medical Act of 1858."

Sir WILLIAM GULL said that all those who did not wish to see the time spent upon the last motion wasted would agree with what he was about to propose—viz., that in any future changes in the constitution of this Council it be enacted that the members receive no fees for attendance either at the Branch Councils or at the Medical Council, beyond reasonable travelling expenses. What they had just heard supplied quite sufficient argument in favour of this motion, without saying a word more upon it. He was quite sure that it had a direct bearing on this question of the registration fees. (Interruption, and cries of "Question.") He meant to bring forward a motion upon this subject, and the arguments in favour of it had been most effectually supplied by the revelations they had just heard.

Dr. QUAIN having seconded Dr. Humphry's amendment, it was carried; and on being put as a substantive motion, was agreed to.

The following report was then read:—

Report of Committee on the Clauses of the Medical Act (1858) *Amendment Bill which relate to Indian, Colonial, and Foreign Qualifications.*

The Committee finds that in the Bill (as ordered by the House of Commons to be printed on June 13) Clauses 5 to 7 do not entirely correspond to the intentions of the Council, as hitherto expressed, and recommends that alterations to the following effect be made in them:—

In Clause 5, page 2, lines 39 to 44, omit from "either is" to "Kingdom or elsewhere," inclusive, and let the clause only provide that the person must have been *bonâ fide* domiciled in the British possession where his diploma was obtained.

In Clause 6, page 3, lines 6 to 11, after "British subject or who," omit words from "has" in line 6 to "or elsewhere" in line 11 inclusive, and substitute "if a British subject has practised medicine and surgery for more than ten years elsewhere than in the United Kingdom or a British possession."

In Clause 7, page 3, line 34, after "above defined," insert "or was not obtained by him under the conditions which this Act prescribes."

The Committee observes that a former clause which the Council had approved, and which was intended to enable the Council in certain very exceptional cases regarding foreign and colonial practitioners to dispense with the production of a recognised medical diploma, has been removed from the Bill; and the Committee has reason to believe that this removal was due to objections which were taken to the clause.

The Committee, in reporting on the present clauses, and adverting particularly to Clause 6, which has for its object to provide in the United Kingdom the most liberal treatment which can be deemed right for all trustworthy foreign diplomas, thinks it would not be fulfilling its duty if it did not advert to a measure of opposite tendency which is now under the consideration of the French Legislature with a view to its adoption in France. (See Minutes of Executive Committee, June 27, 1878.) The Committee, both in justice to the registered practitioners of this country, and in solicitude for social interests which are common to both countries, would deprecate that kind of legislation as inadmissible between England and France; and the Committee suggests to the Council that it should move her Majesty's Government to bring under notice of the Government of the French Republic the legislation which this country is proposing in the same international matter.

Clauses, 5, 6, 7, amended as the Committee recommend, might stand as subjoined:—

"5. Where a person who has been *bonâ fide* domiciled in a British possession shows that he holds some recognised medical diploma or diplomas (as hereinafter defined) granted in a British possession, and that he is of good character, such person shall, upon payment of the registration fee, be entitled, without examination in the United Kingdom, to be registered as a colonial practitioner in the Medical Register.

"6. Where a person, who is not a British subject, or who, if a British subject, has practised medicine and surgery for more than ten years elsewhere than in the United Kingdom or a British possession, shows that he has obtained some recognised medical diploma or diplomas (as hereinafter defined) granted in a foreign country, and that he is of good character, and either continues to hold such diploma or diplomas, or has not been deprived thereof for any cause which disqualifies him for being registered under this Act, such person shall, upon payment of the registration fee, be entitled, without examination in the United Kingdom, to be registered as a foreign practitioner in the Medical Register.

"7. The medical diploma or diplomas granted in a British possession or in a foreign country, which are to be deemed such recognised medical diploma or diplomas as are required for the purposes of this Act, shall be such medical diploma or diplomas as may be recognised for the time being by the General Medical Council as entitling the holder thereof to practise medicine and surgery, including therein midwifery, in such possession or country, and as furnishing sufficient guarantees of the possession of the requisite knowledge and skill for the efficient practice of both medicine and surgery, including therein midwifery.

"If a person is refused registration as a colonial practitioner or as a foreign practitioner, the Medical Registrar shall, if required by him, state in writing the reason for such refusal, and if such reason be that the medical diploma or diplomas held or obtained by him is or are not such recognised medical diploma or diplomas as above defined, or was or were not obtained by him under the conditions which the Act prescribes, such person may appeal to the Privy Council, and the Privy Council, after hearing the General Medical Council, may dismiss the appeal, or may order the General Medical Council to recognise such medical diploma or diplomas or any of them, and such order shall be duly obeyed.

"JOHN SIMON, Chairman."

On the motion of Mr. SIMON, seconded by Dr. STORRAR, the report, subject to certain trifling verbal alterations, was adopted.

Dr. QUAIN, in moving "That with reference to the Lord President's Bill, entitled Medical Act (1858) Amendment Bill, as ordered by the House of Commons to be printed on June 13, 1878, the Council desires to express its wish that the Bill entitled the Dental Practitioners Bill be brought into conformity with the dental clauses of the Lord President's Bill," said that the object of this resolution was that these clauses, in a Bill of which the Council knew nothing, might be brought into conformity with the parallel clauses in the Medical Act Amendment Bill, which the Council was now perfectly familiar with.

Mr. SIMON said there was a little difficulty in doing that.

The motion was seconded by Dr. PITMAN and unanimously adopted.

The Council then resumed, and

Dr. HUMPHRY moved that the resolutions passed by the Council in committee be now brought up for adoption by the whole Council.

The motion was seconded by Dr. ANDREW WOOD, and carried unanimously.

Dr. HUMPHRY then further moved, in accordance with the custom of the Council—"That these resolutions be in substance adopted, and that they be remitted to the Executive to be arranged in order and transmitted by the Committee to the Lord President of Her Majesty's Privy Council."

The motion was seconded by Dr. ROLLESTON.

Mr. SIMON said that in the clauses relating to the admission of women there had been confusion in the voting, which he wished to have cleared up, because as the votes at present appeared there was an utter inconsistency, in consequence of there being no record on the Minutes of some of the incidents that occurred between the resolution and the amendment.

Dr. ROLLESTON protested against this question being again brought up for discussion. The resolutions must be either adopted as a whole or they must be discussed *de novo* before the Council.

Mr. SIMON said he could put himself in order by moving that the resolutions should be discussed *seriatim*, but he really only rose for the purpose of making an explanation. The amendment which settled that women equally with men should have the right to receive diplomas and registration was carried on the motion of Dr. Humphry, seconded by Mr. Teale; and, as anybody could see, twenty members voted for it, among whom were Sir James Paget and Dr. Humphry. He (Mr. Simon) was one of the four who did not vote. Turning to the following page of the Minutes, however, it would be found that, although that had been carried, it was moved by Dr. Rolleston and seconded by Sir William Gull that in Clause 19 sub-sections 1 and 2 should be omitted, and the following words substituted:—"Any woman who shall pass the examinations. . . . shall have the right to obtain the diploma of any one or more of the co-operating authorities." But it was particularly explained that the principle had already been carried in the former resolution, and that this was simply making it more explicit. On that motion, as he quite felt it was desirable there should be no mistake as to the meaning of the Council, he (Mr. Simon) voted, not having voted on the previous question. But there appeared to have been some misunderstanding on the part of the Council, because he found that seven members did not vote, among whom were Dr. Humphry and Sir James Paget, who had voted for the former resolution. His object in drawing attention to this matter was to correct the ambiguity which would thus arise from a perusal of their Minutes; because it looked as if some of the members of the Council were playing fast and loose with their opinions, and as if it were, to use a common expression, "a toss up" how they voted.

Dr. ROLLESTON protested against recorded decisions being in any way altered.

Dr. Humphry's motion having been put to the vote, it was carried unanimously.

The following recommendation to the General Medical Council by the Executive Committee was then read:—"That the Executive Committee are of opinion that changes in the arrangements and conduct of the business of the office are necessary; and suggest that the Council give to the Executive Committee power to make such changes as the Committee may think desirable."

On the motion of Dr. ANDREW WOOD, seconded by Dr. HUMPHRY, it was resolved—"That the Council give to the Executive Committee power to make such changes as the Committee may think desirable."

It was then moved by Mr. SIMON—"That the Council, referring to its resolution of July 3, remits to the Executive Committee to prepare for it, before its next meeting, a report on the present constitution and working of the Council, and on the changes (if any) of constitution by which, in the opinion of the Executive Committee, the Council might be rendered more efficient for the duties which it has or will have to discharge; and that the Executive Committee be requested to let the report be in circulation among members of the Council at least one month before the meeting at which it shall be discussed."

Sir WILLIAM GULL: I have much pleasure in seconding that.

Dr. AQUILLA SMITH then moved the customary resolutions —"That the powers and duties heretofore delegated to the Executive Committee be vested in the said Committee until the next meeting of the General Medical Council." "That the cordial thanks of the Council are due, and are hereby tendered, to the Treasurers, Dr. Quain and Dr. Pitman, for their services."

It was then moved by Sir WILLIAM GULL, seconded by Dr. ROLLESTON, and agreed to—"That the Council cannot separate without expressing its thanks to the Lord President of the Council for the amount of time and trouble his Grace has bestowed upon his Medical Act (1858) Amendment Bill."

Dr. ANDREW WOOD, in conclusion, moved a vote of thanks to the President. He said that the amount of labour, industry, and attention bestowed upon the affairs of the Council by its President was nothing short of marvellous. In season and out of season, he might almost say day and night, he was always ready, not only to perform his duties, but to create duties for himself. He had no hesitation in saying that it was of the very greatest benefit to have at their head such a President as Dr. Acland. (Loud applause.)

The compliment having been duly acknowledged, the Council adjourned *sine die*.

ORIGINAL LECTURES.

LECTURES ON THE DIAGNOSIS AND SURGICAL TREATMENT OF ABDOMINAL TUMOURS.

Delivered at the Royal College of Surgeons of England.

By T. SPENCER WELLS, F.R.C.S.,
Consulting Surgeon to the Samaritan Hospital, etc.

LECTURE V.

Results of the Operation—History of Recovered Patients—Proportion of Incomplete Operations, and the Results—Cases of Recurrence and Second Operation—Successive Changes in the Mode of Operating and After-Treatment.

SINCE I came into the College to-day, I have been asked to fill up some omissions in the last lecture. Three particularly were mentioned to me: in the first place, I was asked to say something about the relative advantages of the clamp and ligature in the treatment of the pedicle; next, about the treatment of adhesions, if they bleed after they are torn; and thirdly, something more about the accidents which may occur in the course of an operation.

Before speaking about the clamp and the ligature, and their relative advantages, I will just show two clamps which I omitted to show amongst others at the last lecture. This one is what is called the "Leeds" clamp, devised by a very ingenious clergyman, the chaplain to the Leeds Infirmary, who, seeing the difficulties met with by operators with other forms of clamp, thought he could devise a better one. It really is a very simple and ingenious form of parallel clamp. I think it wants a screw on both, instead of only on one arc. I tried it, but found it not quite so convenient as my own, inasmuch as when there was a pull upon the clamp from inside, the arcs were tilted upwards and the corners pressed into the abdomen of the patient, and it did not seem to lie so comfortably as my ordinary clamp. I doubted also whether it was quite secure without a second screw. This one is an American clamp, invented by Dr. Dawson of New York, and I tried it in three cases. It seemed to answer the purpose of compressing the pedicle into a very small space extremely well. The pedicle was placed in this open space; then the side was closed and fixed by a screw; and then, by gradually turning this screw, the pedicle is very securely fixed in a moderate compass; but the long crossbars were found inconvenient when pressed against the abdomen of a patient under a tight bandage; and, on the whole, I prefer very much the curved instrument I showed at the last lecture.

I will now ask you to look at these two preparations, which show what becomes of the ligature if left in some time after the operation. They have been extremely well figured in a very interesting paper by Mr. Doran, one of the assistants in the museum, a junior worker with me at the Samaritan Hospital, well known at St. Bartholomew's—a son of Dr. Doran, the well-known author. The son has already given us good grounds for believing that he is well worthy of the honourable name he bears, and that he will obtain as good a position in our profession as his father did in literature. In his paper, in the thirteenth volume of the *St. Bartholomew's Hospital Reports*, he gives two drawings of these two preparations. Here is one showing the pedicle of an ovarian tumour the sixth day after operation. The other preparation is one taken some few months after operation. The operation was performed by my colleague Dr. Bantock, and you see here the uterus and the remnant of the pedicle. No remains of the ligature could be found. Above is a shred of omentum, which formed an accidental attachment with the fundus of the uterus. Vegetable thread was employed

in this case, hemp or twine, which one would think less likely to disappear than a ligature formed of some animal tissue such as silk or catgut; yet this vegetable substance completely disappeared. In this paper of Mr. Doran's there is a very able review of what he calls the "complete intra-peritoneal ligature" of the pedicle in ovariotomy; the "complete" being when the ligature is cut off short and returned with the pedicle into the abdomen, as distinguished from what he would call the "incomplete," when the ends of it are brought out, as they used to be formerly, through the opening in the abdominal wall. There is a very good account of the history of these ligatures, the way they were introduced by Dr. Smith, of Connecticut, who made his ligature of strips of leather from a kid glove. Dr. David Rogers, of New York, also tied several vessels separately with leather.

I do not think I need trouble you with anything further about the materials used for ligature than to say, with regard to any supposed advantage of wire, that I have never used it in women, because some experiments which were made for me by Professor Gamgee at the Veterinary College upon sheep seemed to prove that there was no advantage in the wire over silk, whereas it did set up a good deal more irritation in the parts surrounding it than silk did. The relative advantages of the clamp and ligature may possibly be best learned from the results of actual work. There is no doubt a very great advantage in the clamp at the time of performing the operation. It is put on quickly, and bleeding is suppressed with complete security. In all the cases I have done, I have never known a single instance of dangerous bleeding in consequence of the slipping of the clamp; whereas after the use of the ligature I have known that occur. I myself have lost two patients from primary hæmorrhage a few hours after the operation, simply from the slipping away of the broad ligament from the grip of the ligature, internal bleeding taking place, and the patient actually dying of primary hæmorrhage. But after the use of a good clamp, I have never had a case of serious bleeding. I know also that this accident has happened to other surgeons of my acquaintance, and has proved fatal; therefore in estimating the advantages and disadvantages of the two methods, one must allow that, so far as regards security from primary hæmorrhage, the advantage is altogether on the side of the clamp. The advantage of the ligature is that it allows the wound to heal with less interference, less frequent dressing is necessary, and the patient is certainly, in the first few days after the operation, in a more comfortable state than occasionally happens after the clamp. Very often the patient is quite unaware of a clamp being there. It does not cause the slightest inconvenience. But occasionally there is a certain amount of unpleasant discharge around it, and some redness and swelling where the lips of the wound are brought round the pedicle, which one does not meet with in the wound when the ligature is used. In this respect, the balance of advantage is in favour of the ligature; but the main question is, of course, what is the proportion of recoveries? I will not attempt to calculate what this may be in the hands of other surgeons, but I can compare the results of the clamp and ligature in my own practice. I have here a table of the results of 900 cases. I completed the 900th operation last week; and I have gone into the result of the treatment by the clamp and by the complete intra-peritoneal ligature, or what we call the ligature returned. I find there were 627 cases treated with the clamp, of which 130 died; that is a mortality of 20·73. With the ligature 157 cases were treated, with sixty deaths, or a mortality of 38·2. Speaking simply, the mortality is nearly doubled; the mortality of the same operation in the hands of the same operator is 18 per cent. more with the ligature than with the clamp. Now, whatever may be said about inconvenience, about the necessity for frequent dressings, about the possibility of some erysipelatous or inflammatory condition around the lips of the wound in the abdominal wall, the evident reply is that it is not to be compared in importance with the result to the patient. It does not much matter to her whether she be a few days more or less in bed or suffering more or less inconvenience; the great point to her is whether she dies or gets well; and if, out of a large number of cases, the mortality be nearly double with the ligature, it would be a very strong reason indeed that would induce one to use the ligature in preference to the clamp, supposing the case to be one where the clamp could be applied. Supposing one is driven to something else than the clamp, then probably the ligature is the best alternative; but if it be a case in which one has a free choice between clamp and ligature, we must take these facts into consideration, and adopt the method which seems to be most likely to lead to the recovery of the patient.

I must ask you to allow me to read what I said in my book on "Diseases of the Ovaries," which I have often referred to before in these lectures, about these two methods:—"But no surgeon who has had much experience of ovariotomy would bind himself to adopt in all cases either the extra-peritoneal or the intra-peritoneal method, or any of the modifications by which either principle is carried out in practice. Every surgeon should go to an operation prepared to carry out the particular method which appears to be best adapted to the peculiar circumstances of the case which present themselves as he proceeds. If the pedicle be small enough to be securely held in a clamp of moderate size, and long enough to permit the clamp being fixed outside the closed wound, without much pull on the uterus or broad ligament, no more ready or more successful method than the clamp can be desired. When the pedicle is so short, broad, or thick that a very large clamp would be necessary to secure it, that the wound could not be closed around it, and the traction upon the uterus when the clamp was fixed outside the abdominal wall excessive, either the ligature or the cautery should be preferred to the clamp. Or if, after applying a clamp, it be found that it cannot be fixed outside without undue strain upon the uterus, either the cautery may be used, or the pedicle may be transfixed and tied, and the clamp removed after it has served its temporary purpose." To that I have now very little to add. I do believe surgeons should be prepared to adopt one or other method as it seems to be most advisable when the operation is approaching its completion. I may have a little more to say about this when we come to consider the question of antiseptics in ovariotomy, because it has been supposed that the antiseptic system will interfere with the use of the clamp; that if we attempt to carry out the antiseptic system the clamp will be so serious a hindrance it would be better to give it up altogether, and adopt the ligature as the most consonant with the requirements of the antiseptic system.

I did not show at the last lecture, as I intended to do, this instrument for tearing off an ovarian tumour. It was introduced by Dr. MacLeod, of Glasgow, who, in one case at least, adopted it successfully; and his example has been followed in Leeds, where I have been told the result has also been good. I have never yet employed it, but I thought you would like to see the instrument. The pedicle is seized, and by the screw in the handle it is securely fixed, and then by means of this other instrument the cyst is forcibly torn or twisted off. The idea is borrowed from the practice of veterinary surgeons in the castration of colts. I can imagine there may be some cases in which it might be adopted with good result. It has been proved by Dr. MacLeod's experience, and that of others, that it can be done, but I can say nothing of it from my own experience.

With regard to the treatment of torn adhesions, supposing they go on bleeding, which they do not very often if they are only torn, I should say by tearing them one adopts the most certain means of preventing bleeding. As a rule, if adhesions be torn and the tumour removed, the abdominal wall contracts, and this contraction stops the bleeding; but if the adhesions be cut by scissors or knife, they do sometimes bleed, and in a troublesome way. There are two or three different modes of dealing with them. The torsion forceps I showed here the other day may be left on for a few minutes, and very often their compression will be sufficient to stop the bleeding. Occasionally it may be necessary to put a ligature on some bleeding point. I have met with very troublesome bleeding from a large mass of varicose veins on the inside of an abdominal wall. In that case, I passed two needles from within outwards, and tied a silk suture over a pad placed outside. Professor Simpson passed a thick needle in one or two cases through the abdominal wall, and stopped bleeding by the acupressure. But in the only two cases in which I have myself seen much trouble from oozing of blood from separated adhesions, I managed it in a very simple way. There was plenty of lax abdominal wall to deal with, so I simply held the two loose folds of the abdominal wall firmly together while the sutures were being introduced, sponged out the cavity, kept up the pressure,

and doubled or folded the two bleeding surfaces against each other, and doing as Dr. Kimball of Lowell had done before me, though without my knowledge, I passed a couple of needles through the whole thickness of the abdominal wall. Suppose the inner surface of the abdominal wall is bleeding, the two sides are pressed together, and a long strong needle is passed above and another below, and then by a pad on either side—I used cork—the two surfaces are pressed together. Very firm pressure is made of the two oozing surfaces one against the other. In my case there was no bleeding whatever; and after two days, when the lax abdominal wall had contracted, and the needles were removed, it really would have been quite impossible to discover that anything unusual had been done.

With regard to other accidents that may happen during the operation, I need not mention more than one. I spoke the other day about a sponge being left in the abdomen; and I have another confession to make, showing the necessity for counting forceps as well as sponges. Not very long ago, I removed both ovaries from a young married lady, and a great many forceps were used. After removing one ovary and securing the pedicle, the other ovary had to be removed. It was a very short pedicle, and five or six of my torsion forceps were put on in order to secure the bleeding vessels while I was tying them separately. I took off, as I thought, every pair of forceps, closed the wound up, and everything seemed quite as it should be. But, about two hours after the operation, I received a message from a friend who was putting up the instruments for me to say there was a pair of forceps missing. We knew exactly the number of forceps; if we had not known that, one pair would not have been missed. This shows how necessary it is always to know how many forceps are taken. It was about five in the afternoon when I had this message: "There was a pair of forceps missing, probably they might be in the patient." Imagine the sort of feeling with which one would receive that intimation. I at once went to the patient. She seemed so well I did not like to disturb her; there was some doubt where the forceps might be, so I thought I would wait a little longer. I waited till night; she still seemed pretty well, and I thought I would wait till the morning; but in the morning the nurse told me the lady had been very restless. I then made a careful examination, by the vagina and rectum and abdominal wall, to see if I could feel the forceps, but there was nothing to be felt at all. Still I was uneasy, and I thought I had better open the wound. So I asked Mr. Thornton to come with me and throw some carbolic spray over the abdomen, and making some excuse to the patient, just saying I thought it necessary to change the dressing, and it would be as well that she should not feel it, I gave her methylene, removed the dressing, and took out two stitches. I put one finger in, but at first could not feel the forceps. At last I found something hard, put another finger in, and found the forceps wrapped up in the omentum. From the way in which the omentum had insinuated itself into the ring-handles of the forceps and between the blades, it was easy to understand how difficult it was to find and remove the instrument: but I did it; returned the omentum; closed the wound, and the patient was none the worse. She got perfectly well, and to this day does not know that anything unusual occurred. Pray let me use this confession to impress upon you the necessity, not only of counting sponges, but of counting instruments also, that you may avoid any such painful experience.

I did not show at the last lecture, as I intended, the sort of tube we use when it is thought necessary to drain the peritoneal cavity. I will not trouble you with any discussion as to the necessity of performing drainage, or the indications when it should or should not be done, because in the paper published in the last volume of the *Transactions of the Medico-Chirurgical Society* anyone may read what I thought of the way the system of drainage originated, how it was carried on, and in what exceptional cases we may now carry it out with advantage, but discarding it altogether as a common or usual mode of treatment. But, supposing it is thought necessary to employ it, we use one of these glass tubes (with a little shoulder to prevent it slipping into the abdominal cavity), with some small openings, so that no omentum can be drawn inwards. It is passed in at the lower angle of the wound, and two stitches are put round the shoulder. The tube serves quite well for the introduction of an elastic catheter, or piece of indiarubber tubing attached to a syringe, by which fluid may be drawn out, and anything may pass through the tube into a sponge, placed over the opening, saturated with carbolic acid or some other antiseptic.

I think I may now pass on to say something about the treatment of patients after ovariotomy; and, first, I will allude to warmth and diet, and to the amount of alcohol that should be given. Years ago, when I first began to perform ovariotomy, the operation was done in a room which was heated to 70° or 75° Fahr., and it was made moist by steam from a kettle. The kettle was placed on the fire, a long spout brought from the kettle, and the room filled with the steam of boiling water. The room in which the patient was kept after the operation was also heated in the same way with moistened air, and the patient was kept in a continual bath of perspiration by an abundance of bedclothes. A great deal of opium was given, as a rule, whether the patient was in pain or not, with the intention of keeping the bowels quiet several days; and also, as a rule, stimulants were given very freely. The first innovation I made in this routine practice was to operate in a room of comfortable temperature, the air being as pure as I could obtain it, without any admixture of steam, making no attempt to maintain excessive perspiration; only giving enough opium to moderate pain, and only giving stimulants when the failing power of the patient appeared to call for their use. As an article of ordinary diet, when a patient is recovering after any operation, alcohol in any form has become less and less in use; and as a medicine, although it is occasionally given freely, I may say almost without limit when the failing powers of the patient seem to demand it, still of late years I have gradually fallen into the habit rather of prescribing it as a medicine in stated doses, and at regular intervals, or with special directions to the nurse to watch its effects, as if it were a drug, giving none as an article of ordinary diet; on the contrary, giving directions that none should be taken unless specially ordered. In my book, published in 1872, I have said that, instead of giving opium in large doses at stated intervals under medical prescription, the nurse is directed to give small opiates, and only enough to keep the patient free from severe pain; and I add: "Stimulants, such as brandy or champagne, must also be left to the nurse, but with explicit directions that they are only to be used when called for by fainting or chilliness, or some sign of exhaustion." Of late years, I have noticed a less frequent necessity for stimulants, as a rule, and they have certainly been used in smaller quantities; but I cannot agree with those who say that they never administer alcoholic stimulants after surgical operations. One of my colleagues at the Samaritan Hospital has lately published a valuable little practical essay, in which he says he has never seen stimulants do any good, that he never administers them, and that he believes "all cases of operation are better without them." I, on the contrary, believe that I have more than once seen a dying woman called back to life by the free administration of brandy; that I have seen her powers maintained by a combination of food and stimulants when food alone would not be digested; and I trust that members of this College, or of any other profession, however warmly they may feel on this subject, however anxious they may be to check the terrible evils of intemperance, however great may be their desire to see the experiment tried of the comparative efficiency of a hospital where stimulants are never used, and other hospitals where they are used in moderation or even in excess, will not suppose that, because any of us feel it to be our duty occasionally to administer alcohol very freely, we are less anxious than the most enthusiastic total abstainer can be to lessen the evils of intemperance in this country.

As a means of lowering temperature, supposing it rises after ovariotomy, as it often does, sometimes we have tried aconite in small doses, quinine in large doses, salicylic acid in the form of salicylate of soda—in fact, almost every medicine that has been suggested as a means of lowering temperature; but all these trials have ended in disappointment. We have, however, succeeded distinctly in lowering temperature, and in keeping it low, by the application of ice or iced-water to the head. The first trials were made after a suggestion of Dr. Richardson, by putting an ice-bag round the neck. Dr. Richardson believed that, by icing blood that went through the carotids to the brain, and blood that came back through the jugulars, we should directly lower the

temperature of the brain itself; and probably it may have been done experimentally, but in practice it was not found easy to do. It was difficult to keep any sort of cravat or collar that we tried filled with ice round the neck of the patient; it slipped off, and so we were reduced to the old indiarubber bag, or the ice-helmet, which is so well known in lunatic asylums. But that was inefficient; it did some good, but it was not enough, and, after a time, Mr. Thornton contrived this form of cap, which answers the purpose extremely well. A pail of water, with a large lump of ice in it, is placed by the bedside of the patient, and the stream of iced-water runs through the cap, which is formed of a series of tubes of indiarubber, lined with linen. This is placed upon the patient's head. It is made of different sizes to fit different shaped and sized heads; and this other tube is put into a second pail on the other side of the bed, and by this means the head is iced. The effect in lowering temperature is very marked. It is very seldom that within an hour the effect upon the patient cannot be distinctly proved by the thermometer, and I believe in many cases it has been of very signal service. If the temperature be rising, the rise is checked; and if it be very high it can be lowered. A great many of the evil results of ovariotomy seem to be due to the fact that the temperature of the body for a time is too high. The brain receiving blood of a temperature five or six degrees higher than it has been accustomed to, does not give its orders to the secreting organs as it should do, and they all suffer in consequence. The kidneys do not act; there is no action of the bowels; all the processes of nutrition and secretion suffer, because the brain is overheated. If we can keep the brain cool, all the functions of the body go on much better, and we gain time for the recovery of the patient.

Before leaving the subject of the general condition of the patient after ovariotomy, I would say, if, in spite of all our care, bad symptoms do set in, if the patient's temperature rise and she get swelling of the abdomen and rapid pulse, with pain and sickness, one should never be content without examining carefully to see if there be any fluid accumulating in the abdominal cavity, supposing there is no drainage-tube there to carry off the fluid, whatever it may be. It is not at all uncommon to find, when one does make an examination by the vagina or the rectum, the evidence of fluid having formed in the peritoneal cavity and gravitated to its most depending part. The swelling is found between the vagina and the rectum; and in several cases I have found, on puncturing the swelling through the vagina with the trocar, that the escape of fetid fluid has been followed by immediate amendment of the patient; and by keeping a canula in the opening, so that it does not close until all the fluid has escaped, the recovery has been completed.

I should have said that one of the objections to the ligature is that, in many cases, after its use it has been found that sooner or later a pelvic abscess may form. There is not only this collection of fluid soon after the operation, but weeks or months afterwards an abscess forms, and discharges either through the vagina or rectum, or elsewhere, and then there may come away shreds of tissue enclosed in the ligature, or, as has been observed in several cases, when, many months after operation, a fæcal fistula has formed. In a recent paper by Hegar a photograph is given of a large piece of membrane from a patient who did recover eventually, but who passed through the rectum from a pelvic abscess a large shred of broad ligament with the ligature. The ligature is shown tied round the remnant of the pedicle, and a large portion of the broad ligament which came away with it. This does not look encouraging, but still the patient recovered, and Hegar does not seem to look upon it as a kind of objection to the use of the ligature.

I have now to refer to the proportion of incomplete and exploratory operations. In my book on "Diseases of the Ovaries," published in 1872, I gave full particulars of 500 cases of completed ovariotomy, including twenty-five cases where both ovaries were removed at one operation. In the nineteenth chapter of that work, in addition to the 500 completed cases, separate tables are given of twenty-eight cases of incomplete ovariotomy, and of twenty-four cases in which an exploratory incision was made, making together fifty-two cases of incomplete or exploratory operations occurring during the progress of 500 cases of complete ovariotomy, or rather more than 10 per cent. Since the completion of the 500 cases, I have completed ovariotomy upon 400 other women, and during that time I have had twenty-nine exploratory incisions or incomplete operations, a proportion of 7·25 per cent.; so that my hope of diminishing the number of these incomplete operations by increased experience has not proved groundless. Out of the twenty-nine cases, death was probably accelerated in eight. In four others, whose death occurred at various periods from fourteen to fifty-two days, the incision probably had not much effect either in lengthening or shortening life. In some of those who are still alive, the effect was neither more nor less than that of tapping. Four patients, from whom in 1873, 1874, and 1875 part of an extra-ovarian cyst was removed, appear to have been completely cured. In two of these cases the remaining part of the cyst was drained. Thirteen recovered from the immediate effects of the operation, and, excepting the four just alluded to, whose recovery seems to have been complete, one died five months after, one a year after, and others who were well in 1877 had been tapped again.

I have arranged here a table, which will probably be printed in the journals which will publish these lectures, giving the particulars of all these twenty-nine cases, just as the particulars are given of the cases of completed ovariotomy in the book: the name of the medical attendant, date of operation, age of patient, condition as to being married or single, the nature of the operation done, and the result. I should say about these incomplete operations that, when I began to publish every case of completed ovariotomy, and published in a separate series the cases where the operation was commenced but not completed, a good many objections were made, and it was said that, instead of putting complete cases in one list and incomplete in another, all the operations ought to be put together. But the obvious answer to this is, What is to be done when a patient has recovered who has been little more than tapped? She has recovered from the tapping, but the disease has not been cured; and it appeared to me to be a much more fair and just way of appreciating the results of an operation if we tabulated the cases exactly as they occurred. There were a certain number of cases in which the operation was completed, and a certain number in which it was commenced and not completed; and then the results of each were made known. This was also satisfactory as showing exactly what could be done with cases when it was found impossible to complete the operation.

It has been said that it is a great objection to the principle of any operation to admit that, say anything like 10 per cent., or 7 per cent., of cases cannot be completed by a surgeon who has a certain amount of experience in that operation. You could forgive an inexperienced man for beginning an operation which he could not complete; but if a man who has had a considerable experience in an operation cannot tell before he begins whether he can complete it or not, that is an objection to the principle of the operation. If that were a fair representation of the state of the case it would have some weight; but it really is not. I can scarcely call to mind a case in which, before the operation began, something more than doubt had not been expressed to the patient or her medical attendant. I have felt, after a careful examination of the case, doubtful either what the tumour might be, or whether it could be removed without unusual difficulty; and I have said to the medical man in attendance, or the patient, or her friends, "It is impossible to be quite certain what this tumour is"; or, "It is impossible to tell whether it can be entirely removed. We must make an incision, and deal with the case accordingly. Supposing we find the tumour cannot be removed without extraordinary danger, we must be content with simply emptying it." In many of the cases in this table, all that actually occurred in the consultation with the patient or her friends, before the operation was begun. I think there have been very few cases out of the fifty-two in the book, or the twenty-nine in this table, in which that sort of caution had not been expressed beforehand. No doubt there are some cases in which difficulties arise at the time of the operation, or during its performance, which had not been foreseen; but that, I suppose, must occur in every surgical operation. In performing lithotomy, in operating for hernia, unexpected difficulties may arise; but that is not thought to be a valid objection to the principle of the operation. I do not think I need say more about incomplete operations than to repeat that, among the patients on this list, there are some still alive and well, although at the time of the operation all I could do was to empty the cyst and sometimes drain it.

With regard to the results of the operation and the

TABLE.—*Cases of Exploratory Incision and Incomplete Ovariotomy.*

No.	Medical attendant.	Date.	Age.	Condition.	History, etc.	Result.
1	Dr. Jackson, Southsea ...	1872, November	45	Married	Incision and tapping; 13 pints of fluid removed	Recovered.
2	Sir William Gull, Bart. ...	1873, January...	38	Married	Incision and removal of ascitic fluid	Death third day; cancer of peritoneum.
3	Dr. Brandis, Aix-la-Chapelle	1873, January...	54	Widow	Incision; cyst emptied	Died third day.
4	Dr. Richardson, Torquay ...	1873, August ...	43	Married	Part of extra-ovarian cyst excised; rest drained	Recovered.
5	Dr. Churchill, Dublin ...	1873, August ...	40	Married	Part of cyst removed	Died fourth day.
6	Mr. Cross, Clifton	1874, April	30	Single	Incision; cyst emptied; drained; antiseptic injections	Died fifty-second day.
7	———, Eastbourne ...	1874	...	Married	Part of extra-ovarian cyst excised	Recovering; well in 1877.
8	Dr. Evans, Hertford	1874	...	Married	Incision; peritoneal colloid	Died next day.
9	Dr. Ridley, Canada	1874, July ...	29	Single	Part of cyst removed; drainage of remainder...	Recovered after long suppuration; well in 1877.
10	Dr. Wood, New York ...	...	48	Married	Incision; ascitic fluid removed; cancer of peritoneum	Died seventh day.
11	Dr. Harding, Southsea ...	1874, November	52	Single	Cyst incised and drained	Died twenty-second day.
12	Mr. Perks, Portsea	1875, March ...	37	Married	Part of extra-ovarian cyst incised	Recovered; well in Oct. 1876.
13	Dr. Broster, Southampton ...	1875, April ...	27	Married	Cyst opened; masses of papilloma removed; drained	Went to Southampton on the twenty-fourth day.
14	Dr. Hemmings, Abingdon ...	1875, July ...	24	Single	Peritoneal fluid removed	Recovered.
15	Dr. Brandos, Hanover ...	1875, July ...	48	Married	Cyst of broad ligament opened and drained ...	Died thirteenth day.
16	Prof. Simon Thomas, Leyden	1875, October...	36	Married	Cyst incised and drained	Recovered; well in 1877.
17	Dr. Mayor, Geneva	1875, October...	31	Married	Ascitic fluid removed; solid tumour undisturbed	Recovered; well in 1877, but had been tapped several times.
18	Mr. Goodchild, Ealing ...	1875, December	48	Married	Ascitic fluid only removed	Recovered.
19	Mr. Bowman, Ripon... ...	1875, December	40	Married	Cyst incised and drained	Recovered; but died a year after; cancer.
20	Mr. Pearce, Haverstock-hill	1876, January...	45	Married	Cyst and part of spleen removed; another cyst tapped	Died in an hour.
21	Sir George Burrows, Bart. ...	1877	...	Single	Incision five inches; ascitic fluid removed; peritoneal cancer	Died fourth day.
22	Dr. Howell, St. John's-wood	1877, May ...	44	Single	Ascitic fluid removed; cancer of omentum undisturbed	Recovered from operation; died October, 1877.
23	Mr. Bury, Wisbech	1877, May ...	17	Single	Adherent cyst drained	Recovered after long suppuration; well in June, 1878.
24	Dr. Pollock, Black Rock ...	1877, November	53	Married	Five-inch incision; colloid matter only removed; 19 pints	Died fourteen days; obstruction of intestine.
25	Mr. Swain, Long Clawson ...	1877, November	33	Single	Adherent cyst, with papilloma emptied... ...	Died eighth day.
26	Mr. Maurice, Reading ...	1877, November	27	Married	Part of adherent cyst removed; rest drained ...	Went home Jan. 7, 1878; still weak in March, 1878.
27	Dr. Bryan, Northampton ...	1878, March ...	43	Married	Colloid contents of ruptured cyst removed ...	Died second day.
28	Mr. Calthorp, Holloway ...	1878, March ...	35	Married	Incision four inches; solid tumour incised, and serum evacuated	Died fifth day.
29	Mr. Ceely, Aylesbury ...	1878, May ...	23	Single	Incision four inches; ovarian fluid removed from peritoneal cavity: ruptured cyst undisturbed	Recovered.

number of patients who recovered, I should say that some years ago I made every patient who recovered promise to write to me at the end of a year, and to write every year on the anniversary of her operation, telling me, if single, whether she had married; if she were married, whether she had had children; and so on. Some few did write, but very few, and, when I was preparing the book published in 1872, I had a circular printed and sent to every patient who had recovered. I put on the circular the "name of the patient"; the "date of the operation"; "present state of health"; if married since, when she was married; if the husband were still alive; births and sexes of children; if there were anything unusual in pregnancy and labour; and then, if the patient were dead, if any friend or relation would fill up the cause and date of death, or add any other information in connexion with the operation which to the patient might seem important. A great number of these circulars were returned; and the information I got was quite sufficient to show that a number of women who were unmarried at the time of the operation had married since; and many of these, and of those married when operated on, had had children; some had one, some two, some three, some four, and two had had twins. There was no reason for supposing that the number or the sex of the children was affected by the operation. There was nothing, either, in the result after removal of both ovaries which seemed remarkable, except that in three cases there was what appeared to be something like a return to normal menstruation. In most of the cases, when both ovaries were removed, there has been nothing like any return to menstruation even in young women. Many of these double operations have been performed in women past the age of menstruation; but in several cases young women have had both ovaries removed, and in them there has been no return to menstruation as a rule. In three young women there has been a periodical return of something like menstruation, if not true menstruation. Beyond this cessation of menstruation, I do not think there is anything special to notice in the condition of the women even if both ovaries have been removed.

Now we come to the questions, What are the results of ovariotomy? how many of the women operated upon are killed by the operation? how many recover from it, and what becomes of those who recover; are they invalids or healthy women? how many of them bear children? is pregnancy or labour, or the sex or the health of the children, affected in any way by the operation? and how far do the lessons taught by ovariotomy influence other operations involving the peritoneum? First, with regard to the proportion of deaths to recoveries, taking my own cases only as a starting-point, of the 500 cases published in my book, 373 recovered and 127 died: a mortality of 25·4 per cent. Of the 300 subsequent cases published in 1873 in the paper at the Royal Medical and Chirurgical Society, 223 recovered and 77 died: a mortality of 25·6 per cent. Since the 800 cases, I have now operated on exactly 100 more, making a total of 900 complete operations. Of the last 100, 83 recovered and 17 died: a mortality of 17 per cent. Adding the whole 900 cases together, we have 679 recoveries and 221 deaths: a mortality of 24·5 per cent. It is satisfactory that in the last series of 100 cases the mortality is the least. This includes every case in which I have completed the operation of ovariotomy either in private practice or in hospital, or in any of the nursing institutions which partake of the character of a hospital or a private house.

I have already told you the number of cases in which I have commenced the operation and not completed it, and I will now simply refer to this fact as a proof of the proposition that ovariotomy more certainly saves life from threatened death, restores a woman more certainly to perfect health, renders her more fit for all the requirements of daily life, than almost any other surgical operation. She can scarcely be said to be mutilated; she may menstruate regularly, and bear children of either sex, or twins, without any unusual suffering either during pregnancy or labour. Lord Selborne, in opening the new branch of the Samaritan Hospital, entered into a curious calculation, and showed the total gain of life of the 373 survivors of my first 500 operations to be "10,817 years of average healthy life, instead of the 1492 years of miserable endurance which they might have passed before death without operation." Of the 400 patients operated on since the 500, 306 are cured, making the total recoveries 679. Multiplying this number by twenty-nine years, the average estimated gain of each patient, the total gain amounts to 19,691 years. I submitted

the basis of Lord Selborne's calculation to Dr. William Farr, thinking possibly there might be some fallacy which I had not detected. Dr. Farr confirmed its complete accuracy, and it is a very simple piece of multiplication. The average age of the patients was as nearly as possible thirty-eight years. At this period the Carlisle tables assign, as the expectation of life for a healthy woman in this country, twenty-nine years; so that one has simply to multiply the number of survivors by twenty-nine. Had the women not been operated upon, it would be a very liberal allowance to estimate their average expectation at four years; and Lord Selborne, speaking of the addition to life to each of the women successfully operated upon, has calculated twenty-five years as clear or absolute gain. He said: "Instead of the four years of declining health and hopeless misery which these women would have had to anticipate, not only those four years, but twenty-five years, which upon the average had been wholly saved to them, were years of restored health, usefulness, and happiness."

ORIGINAL COMMUNICATIONS.

UNSUCCESSFUL OVARIOTOMY, WITH CASES.(a)

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(*Concluded from page 676 of last volume.*)

Case 7 was a pure enucleation of a dermoid ovarian cyst from the pelvis of a woman of fifty-six, sent to me by Dr. Phillips, of Bromley. The case was interesting, as having been tapped and drained per vaginam by Mr. Stanley and Dr. West at St. Bartholomew's Hospital twenty-five years before. During more than twenty years the tumour remained dormant, and then began to enlarge, causing her much pain. The enucleation was very difficult, and a large sac passing to the bottom of the pelvis was left. No ligatures were used, and the sponges came out so dry just before I closed the wound that I did not use a tube, to my great regret; for in a very few hours dark serum began to escape, and she died of rapid septicæmia in thirty-seven hours. She was a fat woman, and not a very good subject; but the operation was performed in Bromley, and I thought with country air the case would probably do well. I learnt afterwards that the back premises of the house where I operated were used as slaughter-houses, and that there was a tallow-boiler's next door. More unfortunate atmospheric conditions for an ovariotomy by enucleation can hardly be imagined. Still, I believe if I had put in a Keith's glass drainage-tube I should have saved her life, or at any rate given her a much better chance.

Case 8 was that of a young girl of nineteen, with an inflamed cyst, adherent by firm adhesions to everything it touched—liver, spleen, stomach, intestines, bladder, uterus, and parietes. It was full of pus and lymph, with a disagreeable odour, and, I think, must be distinctly put down as a death due to tapping. She had been tapped a year before in one of the large hospitals, and the fluid was then bright and clear. There can be no doubt that inflammation and suppuration of the sac followed, and probably at the same time the causes of putrefaction were introduced into the cyst. The remarkable feature of the case is that she had never been conscious of fever, and had never suffered any pain. Her sallow, unhealthy appearance rather suggested malignant disease. I managed to get the whole tumour away, but in so doing broke the lower margin of the liver, and partially peeled off the splenic capsule. The broken edge of the liver began to bleed alarmingly, and I caught it and pinched it together with a pair of uterine polypus forceps. When I took them off there was no hæmorrhage, and at the autopsy I found the separated portions firmly united and well glazed over with lymph; the spleen also had not bled after the abdomen was closed. These are points of very great importance, as showing that injuries to these organs are not so dangerous from after-hæmorrhage as one might fear. She seemed likely to do pretty well at first with the aid of the drainage-tube and ice-water cap. The urine, scanty and dark from the first, ceased to be secreted altogether thirty-six hours after the operation, and I failed to excite the kidneys to action after this; and she died comatose, thirty-six hours later, and seventy-two after the operation. Here, again, looking to her condition during the first thirty-six hours, I am inclined to think the septic element stepped in to finish what might have ended differently without it. The post-mortem showed very extensive peritonitis, and there were small partial collections of fluid which the drainage-tube had failed to carry off. These cases of suppression of urine are very curious and interesting. I suppose it must be due in some way to the shock to the sympathetic system, which must of course be very severe after such an operation as this; in some measure also to tearing and exposure of nerve-filaments to the poisonous fluid in the peritoneum—and this might explain its late onset in the case under consideration. Still, grant it to be a paralysis of the sympathetic leading to extreme congestion: I do not quite see why the kidneys should especially suffer. The extreme distension of intestine with gas is probably due to paralysis of the muscular coat from a similar cause.

I have had one other case, where, after a very severe operation, an almost total suppression of urine occurred, coming on immediately after the operation, and lasting for twenty-four hours, the patient being quite unconscious for fifty-two hours. She, however, made a good recovery and is now in perfect health.

Case 9 is that of a girl of nineteen. There was nothing in the operation to call for special remark; it was a simple case and should have done very well, but she died in nine hours of hæmorrhage. This is the one case of the whole which I feel was lost entirely through my fault, for though it is an accident that has happened not unfrequently, and to the most experienced surgeons as well as to others, it is one against which it is possible to guard if due care be taken. At the same time I would warn those who are inexperienced in ovariotomy and the treatment of the pedicle by transfixion and ligature that it is an accident very likely to happen in any case in which the pedicle is broad and expanded towards the pelvic brim. In such pedicles there are always a number of large vessels, chiefly veins, ramifying in the outer thin part. When the whole pedicle is ligatured, and thus drawn into a comparatively narrow space, the weight of the uterus and other ovary drags the pedicle away towards the middle line, and the outer edge being fixed by its attachment to the brim of the pelvis, the outer loop of the ligature is gradually loosened and slips off; this is sometimes rendered still more likely by the occurrence of hæmorrhage into the cellular tissue on the proximal side of the ligatures, due to puncture of some vessel in one of the transfixions. In my case the pedicle was short, broad, and thin, and I was satisfied with a single transfixion and two loops. I noticed a slight oozing before closing the abdomen, and also that the outer edge of the broad ligament felt very tight and stretched, but after carefully examining it thought it was safe.

The operation was performed at 3 p.m.; at 5 p.m. pulse was 110; temperature 99·2°. She was very pale, but, being a delicate girl, I thought it was only the shock of the operation. At 8 p.m. I went to her again, feeling a little uneasy, and saw directly I entered the ward that she was bleeding rapidly to death: she was ashy pale; pulse hardly perceptible, 150; drenched with perspiration. I at once prepared to open the wound, and fortunately Mr. Wells came into the hospital while I was getting my things ready, and kindly gave methylene for me. I found the whole peritoneum full of dark venous blood; clearing out handful after handful of clot besides the fluid blood, I found and secured the bleeding point, and after thoroughly sponging the peritoneum reclosed the wound; but she was too far gone, and never rallied from the shock of this second operation.

The very first time I mentioned this case in public, after an operation at the Samaritan, a provincial surgeon told me the same accident had happened in his hands, and as I know of several other cases, I think it right that the possibility of such an accident should be placed prominently before the profession. In some cases it is not very easy to guard against it; the most effectual way of doing so is to separate the veins as much as possible by gradually pressing them to the outer part of the pedicle, and then transfix behind them with a fine needle and silk, entering the former on the distal

(a) Read before the Harveian Society of London, February 21, 1878.

side of the main transfixing ligatures, and tying this silk altogether independent of the other ligatures.

This is the last of my septic cases. The next, No. 10, is the only case I have lost since I began real antiseptic ovariotomy—the only one out of five-and-twenty operations—and it was a sore disappointment to me. At the time I lost it I had had a run of twenty-three cases without a death, and had I not lost this one I should now have had thirty-three cases without a death. The patient was a delicate married woman of thirty-eight, with no children. She had only married sixteen months back, and the tumour had commenced to grow at once, and had grown very rapidly, so that when she came under my care she was very large, with much distension of the veins in the parietes, œdema of lower extremities, etc., and great difficulty in breathing. I tapped her under the spray on January 3, and removed thirty-two pints of ovarian fluid, leaving a large multilocular tumour with much solid matter. She had been tapped of exactly the same quantity of fluid by Dr. Reed, of Pool, Cornwall, on November 14, so that reaccumulation had been rapid. She improved very much after this tapping, and seemed quite well six days later on (January 9), when I performed ovariotomy. The operation was one of average difficulty, with pretty extensive adhesions to deal with. The fluid and solid tumour weighed fifteen pounds. At 10 p.m. I saw her, and thought her doing very well. Temperature 98·8°; pulse 104; respirations 24.

At nine o'clock the next morning when I went into the room I saw that she was evidently dying, though the nurse did not seem aware how ill she was. The temperature had slowly mounted to 99·6°; the pulse was very feeble, 140; respirations 40; face pallid and anxious; lips blue; complaining of much pain in back and upper part of abdomen. Looking at her general condition, and knowing there must be a good deal of bloody serum in the peritoneum, I jumped to the conclusion that it was an ordinary case of septicæmia. My antiseptics then had failed; and I was bitterly disappointed. I determined to open the wound, and Mr. Meredith giving methylene, I did so: found less bloody serum than I had expected, and everything perfectly sweet. I was puzzled, but still only thought of some odd form of blood-poisoning. She got rapidly worse, in spite of free stimulation with mustard and warm poultices over the chest, as she began to complain of much oppression and difficulty of breathing. At 2.30 the pulse could hardly be counted at 164; respirations 60; temperature 100·8°—the highest point it reached. She died at seven, twenty-eight hours after operation. Great was my surprise to hear from my colleague Mr. Doran, who kindly made the post-mortem, that death was due to acute pleurisy, with complete collapse of the left lung; nothing wrong in the abdomen.

I cannot but blame myself greatly for not more thoroughly examining the chest before the operation, for it is quite evident there must have been some mischief at work. I remembered afterwards that she complained of chill when I tapped her, and I think it is quite possible that the left chest was full of fluid compressing the lung at that time, and that the chill set up the pleurisy; but it is very remarkable that during the six days she seemed perfectly well, and the morning and evening temperature was normal the day before the operation.

It is not uncommon to find some fluid in the pleura, and some compression of lung, when a patient is very large; but usually tapping or ovariotomy at once relieves this condition. And I think it quite possible that, had I known the state of matters accurately, I should still have thought it better to operate, as she had no active mischief. Considering the short time she lived after the operation, I do not think it remarkable that attention was not more directed to the chest, as we have so commonly as a symptom of septicæmia the quick small pulse and rapid breathing, with sense of oppression, from which she suffered. The lesson is, to be as careful in examining every organ before a great operation as one is in examining the organ actually the seat of the disease for which we operate.

I have endeavoured to point out what seem to me to be the special features of interest in each case, not hiding anything in the way of mistake or fault on my part which appeared to help the fatal issue. The first case, the hæmorrhage case, and possibly this last, are the only three in which I see any possibility of my power to alter the result—*i.e.*, without the antiseptic method.

It will be seen that septic mischief, in some form or other, plays an important, an all-important part in the fatal issue of at least seven of the cases, and certainly three of these would have been likely to do well under antiseptic treatment. Septicæmia is so varied in its forms that it is impossible fully to estimate the amount of discredit which is its due, because we do not thoroughly understand or recognise all its offspring.

Two of these cases I consider to belong to the mortality of tapping, viz., Cases 4 and 8. How much of the fatal termination of Case 3 was also due to tapping it would be impossible to say, but during those many tappings the patient must have got weaker and weaker, while the adhesions got stronger and stronger, and probably multiplied.

In conclusion, I have only to say that the great lessons I have learnt from these cases are—

1. To avoid tapping whenever it is possible to do so. If it does not directly lead to increase of ovarian mortality, it certainly does indirectly.
2. To operate early rather than wait till the patient's strength is weakened, and adhesions have formed or had time to become strong and difficult to deal with.
3. To examine every organ of the body as carefully as one does the tumour itself.
4. And this is the crowning lesson of all. *Never operate without perfect antiseptic precautions.* And when I thus speak of perfect antiseptic precautions, I mean perfect in the sense that Professor Lister would accept it. The old saying of "Whatever is worth doing is worth doing well," is too much neglected by those who take up antiseptic surgery, as if it were a thing requiring no thought, no training, no study. It is, unfortunately, too common to see operations performed under a cloud of spray, without the parts operated upon, the hands of the operator and his assistants, or the instruments, being properly carbolised; or after getting well through an operation with only some useless dippings of instruments which have never been out of the spray, that only serve to show how little the operator knows of the theory of what he professes to practise, things are finished up by an application of the protective and gauze in such a way that a corner of the former peeps out invitingly at the most dangerous part, and offers a ready passage for the putrefaction, which clouds of spray and all sorts of precautions have been laboriously used to exorcise. I trust the time will come when every student of medicine will be compelled to study the theory and practice of antiseptic surgery; and I believe fully that the time will come, and is not very far distant, when the general voice of the profession will demand that this special operation shall not be undertaken without antiseptic precautions.

The annual *conversazione* of the Royal College of Physicians was held last week in Pall-mall, and was very numerously attended, over 400 visitors responding to the invitations sent out, in addition to most of the leading members of the profession in the metropolis. Several objects of scientific interest had been got together for the occasion, amongst which a collection of Oriental gems and precious stones, contributed by Professor Tennant, attracted universal attention. The walls of the library were, in addition, decorated for the occasion by numerous paintings by well-known artists.

Mortality Rates among Physicians in Massachusetts.—At a meeting of the Boston Society for Medical Observation, Dr. Draper exhibited a chart which he had drawn up from recent investigations; his attention having been drawn to the subject by an obituary notice on Dr. Crosby by the late Dr. Peaslee, in which the age of forty-two is stated as a specially fatal one among physicians. Dr. Draper arrived at the following results:—Of 677 deaths of members of the Massachusetts Medical Society during the last twenty-five years, the earliest occurred at the age of 21, and the latest at 95; the average age of deaths having been 58·84 years. The greatest number died at the age of 72, and the next largest number at 69. Among 1260 deaths of physicians recorded in the registration reports for Massachusetts for the past thirty-four years, the average age at death was 53·27. Dr. Fisher added that he had recently made similar investigations, taking the mortality rate of all the deaths in the Massachusetts Medical Society since its formation. These were 850 in number, the average age at death being 58·55.—*Boston Journal*, May 30.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

ST. MARY'S HOSPITAL.

STRANGULATED INGUINAL HERNIA—VIOLENT TAXIS—GANGRENE OF INTESTINE.

(Under the care of Mr. HERBERT W. PAGE.)

The evil effects of violent and ill-directed taxis for the reduction of hernia are not often seen. That great harm may, however, happen therefrom is shown by the clinical and pathological features of the present case, which it is well perhaps to record when the dangers of taxis may from their fortunate rarity be forgotten. The very gentle manipulation which was alone necessary to reduce this rupture when the patient was fully under the influence of ether, sufficiently shows that strangulation was not the cause of subsequent mortification of the gut, and confirms the view of the case here put forward, and which may be summed up in the words of Mr. Birkett ("Holmes' System"), that "more irreparable damage may be inflicted on the bowel in a few minutes by coarse, careless, impetuous, brute force, than the natural means of constriction could produce in several days."

G. D., a farrier, aged fifty-six, admitted on March 6, had had a double inguinal rupture and worn a truss for fifteen years. He had always been able to reduce the rupture when it came down except on one occasion, two years ago, when he came to the hospital, and it was put back without difficulty by the House-Surgeon. For a few days before admission he had not been very well—had a bad cough and some constipation; and at 2 a.m. on the morning of the 6th the right hernia descended in a fit of coughing. He tried to reduce it, but failed after exerting considerable force and giving himself a warm bath. He sent for a doctor, and he (so the patient stated) used great force, working at it for a long time, and causing him much pain. The man was sick once, and suffered great pain during the night; and he therefore, at nine in the morning, came to St. Mary's Hospital. Ice was applied and a warm bath ordered; but Mr. Manders, the House-Surgeon, found the scrotal tumour so tender, that he did not use any force, or make more than a momentary effort to put back the bowel. When seen by Mr. Page at 11 a.m., the man's expression and condition gave evidence of much distress, and the right half of the scrotum, distended to the size of a small cocoa-nut, was exquisitely tender. Ether having been given, the entire contents of the hernial sac were almost immediately, and with the smallest amount of force, returned into the abdomen. Although easier throughout the rest of the day, he vomited once in the evening, when his temperature was 100·2° Fahr.

On March 7 he was in many respects improved, though he was much troubled by profuse muco-purulent expectoration and cough, which made him retch and twice was apparently the cause of his vomiting. His abdomen, though slightly tympanitic, was not tender, except in the right iliac fossa. His temperature was normal.

On March 8 his bowels acted without medicine; but, notwithstanding this tone of general improvement, the patient was restless and looked ill. There was something manifestly wrong with the man, and great anxiety was felt about him. This state continued during the next three days, with occasional nausea and retching, and pain referred to the umbilicus and the lumbar region of the spine.

On March 12 he complained of much more pain in the abdomen and back; he said he had felt more nausea during the last twenty-four hours, and he vomited once a copious amount of sour, offensive, greenish liquid. His bowels acted naturally both on this day and the day before. He himself attributed his being worse to the fact of the rupture having slipped down again under the bandage on the previous evening, causing great pain, and making him pass "a dreadful night." He, however, did not mention it until the House-Surgeon went round in the morning. Mr. Manders found the right hernia partially down; he at once easily returned it, and reapplied the bandage. From this date (March 12) the temperature began gradually to fall. The bowels acted naturally, but vomiting continued off and on, and on March 15 it became distinctly fæcal. The abdomen was tympanitic and tender. The temperature was 96·6° Fahr.; and after being collapsed for several hours, the man died somewhat suddenly in the afternoon.

It is thus noticeable that throughout, from the day when the hernia was reduced in the hospital, the patient had never completely rallied from the state of shock in which he then was. Pain in the loins and abdomen, vomiting occasional and fitful, the unrest of partial collapse, and a gradually declining temperature, were the prominent symptoms; while natural action of the bowels up to within twenty-four hours of his death pointed to a state of things which no operation, had such ever been entertained, could possibly have relieved.

The post-mortem examination was made by Mr. Duncan, whose report was as follows:—The viscera were generally normal, and not materially altered. Nothing was found in the spine to account for the pain in the lumbar region. On opening the abdomen, dilated coils of small intestine were exposed to view. They were somewhat vividly injected, especially along the opposed surfaces, where they were slightly adherent to one another. The great omentum proceeded downwards into, and reached to the bottom of, the left hernial sac, but it could be drawn out easily. At the internal ring the neck of this sac showed well-marked thickening, whilst about midway between the abdominal ring and the bottom of the scrotum a prominent crescentic fold of the peritoneum existed, but not such as would apparently constrict a hernia to any great degree, the horns of the crescent being gradually lost on the anterior wall of the sac. No such condition was found about the neck of the right sac. At the lower half of the abdomen the coils of intestine had slipped behind the descending part of the omentum; they were not, however, constricted by it, as the finger could be passed easily behind, and the small portion of intestine lying behind was nearly as much dilated as the rest. Below this part the intestines ended in a mass of coils, to be now described. Ninety-seven inches from the cæcum the small intestine became suddenly of a slaty hue, and continued of this colour for forty inches, when the colour suddenly ceased. This portion felt very sodden to the finger, and the interior had the same colour as the exterior. In this portion was a spot that had become actually gangrenous, at a point 113 inches from the cæcum, extending, more or less, over about nine inches of the bowel. Whilst manipulating this part a dirty yellow fluid escaped, but this was not seen on first opening the abdomen, so that it is probable there was no actual perforation during life, although the bowel must have been on the point of giving way. Nearly all these slaty-coloured coils were matted together; the adhesions were somewhat strong, and with difficulty separable at the sloughing part, which was of a dirty yellow colour. Gangrene had also seized the corresponding part of the mesentery. There was no parietal peritonitis, and no peritonitis of the large bowel. The latter was empty. At the sigmoid flexure a portion of the coats of the bowel showed signs of commencing sloughing, being abruptly dark and sodden over a circular area about the size of a half-crown.

CLEVELAND-STREET SICK ASYLUM.

CASE OF ADDISON'S DISEASE.

(Under care of Dr. LEDIARD.)

T. M., aged forty-six, labourer, was admitted into the Central London Sick Asylum in Cleveland-street, September 28, 1877, complaining of rheumatism.

History: Parents English; father died before patient was born; his mother is living and well; has a daughter seventeen years old, of fair complexion; his wife died under my care, a few months since, of cancer of the uterus. He went to India in 1853, served the East India Company for ten years, and then claimed his discharge. Had fever and ague when abroad, but denies syphilis; has had good health since his return from India up to a few months before admission here, but has had rheumatic pains about him for twelve months. Has been labouring in the sun for the last few years, and this, he insists, accounts for the dark condition of the skin, although last summer he was working underground. Two or three months ago he began to feel weak; and he has had an attack of ague

lately. Patient is rather above the average height; hair brown, eyes grey; face is thin and dark, except the cheeks, which have a somewhat fresh colour; the expression is sad and depressed. He does not volunteer any information, but is hopeful about himself; complains of rheumatism in his joints and loins. There is some muscular wasting; the arms, for instance, are not those of a strong labouring man. The lungs and heart are healthy; pulse small and weak. Has had some cough lately, but there is no sputum; liver and spleen appear healthy; there is no albumen in the urine. The whole surface of the body is remarkably dark and bronzed, and uniformly so, except the penis and scrotum, which are almost black. The dorsa of the hands and fingers are very dark, the palmar surfaces less so; the nails are dark blue. There is a line of pigmentation running round the lips at the junction of the skin and mucous membrane; the mucous membrane of the interior of the mouth is also stained, as are the palate and uvula. The tongue is apparently unaffected, and is clean and moist. Has not drunk to excess, but has generally smoked half an ounce of tobacco daily. Ophthalmoscopic examination shows the discs to be perfectly healthy, and the sight is good. Patient is languid, listless, and has a poor appetite and spirits. The bowels act regularly. He has no vomiting or sickness, but suffers from dyspnœa on exertion. After a few weeks' tonic treatment he seemed to improve, being up all day, and declaring that he would be "all right in a bit." I allowed him a pass to go out, and he found he was not so strong as he imagined, for walking tired him very much. Then, towards the end of November, he took to his bed again, the symptoms being unchanged except that he was quiet and uncomplaining, taking little food. Finally he had an attack of faintness when crossing the ward to go to the lavatory, and complained of feverishness, cold shivering, and præcordial pain, but the temperature never exceeded 99·3° or the pulse 96°. He died from syncope on November 20, the dark colouration of the skin undergoing no alteration during the time he was under observation. There was no delirium from first to last.

Post-mortem Examination.—The body looked spare, but I was astonished to find so much fat present: there was a fair covering on the chest, and the abdominal wall was nearly an inch thick with fat in the middle line; there was certainly muscular atrophy. The lungs were congested and adherent, and presented some old nodules of consolidation at either apex, of gritty consistence. The heart was somewhat small, but quite healthy. The spleen was natural in all respects. The pancreas seemed small. The intestines were quite healthy, as also were the kidneys. The omentum was fat. The brain and spinal cord were not touched, there being no evidence at all of disease during life. Up to this point, then, all the organs appeared remarkably healthy; but when I carefully removed the supra-renal capsules, I found them in a most unusual condition. They were embedded in fat, in the first instance, and on section showed no trace at all of their natural structure. They were of unusual thickness, but not otherwise enlarged. There were adhesions all round them, the right one being closely connected with the inferior vena cava. There was no trace of either cortex or medulla, and when the left one was cut, some creamy yellow fluid exuded in small quantity, the section showing a cheesy appearance, with gritty particles here and there. The right supra-renal capsule presented much the same appearances.

The Sanitary Institute of Great Britain held its anniversary meeting last week at the Royal Institute, under the presidency of the Duke of Northumberland. Mr. Frank Buckland read a paper on the Pollution of Rivers, especially with regard to fisheries and water-supply. Mr. Buckland adduced experimental proof of injury done by the Thames sewage, in the fact that though for many years he had reared young salmon in the Upper Thames, none of them as yet appeared to have returned. He was afraid they could hardly get through the pollutions at Barking. The whitebait fisheries were also greatly affected, being gradually driven farther and farther from the Thames. Incidentally, Mr. Buckland expressed doubts as to the extent of the impurities recently attributed to the Regent's Canal by Dr. Collins. Dr. Bartlett, however, insisted that the statements had not been overdrawn. After the annual meeting the members and their friends attended a *conversazione* held at the Grosvenor Gallery.

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Medical Times and Gazette.

SATURDAY, JULY 13, 1878.

THE GENERAL MEDICAL COUNCIL.

On Tuesday, the fourth day of the session of the Medical Council, after the resolution providing that any woman who passes the examination of a Joint Board "shall have the right to obtain a diploma of any one or more of the co-operating Corporations" had been agreed to, the Council appointed committees to take into consideration and to report upon Clauses 5, 6, and 7 of the Bill, in regard to the registration of foreign and colonial practitioners, and upon the clause which has regard to the duties and rights of the Scotch and Irish Local Registers. The Council then agreed to a resolution providing for the registration of honorary degrees and diplomas "which the Council sees fit to accept as testimonials of special distinction recognised by the medical authority which grants them," and for giving to the medical authorities a right of appeal to the Privy Council, should the General Medical Council refuse to register any such honorary diplomas or testimonials of distinction. Sub-clause 4 of Clause 13 was altered by omitting the words providing "alternative questions," and the substitution thereof of the words, "and may make such distinctions (if any) as shall be judged proper between the cases of men and women, so, however, that the examinations of men and women be in all general respects equal." An amendment was also agreed to, in Sub-clause 3 of the same clause, giving power to make regulations in the examination-rules in favour of medical students who shall have commenced their professional studies before the passing of the Act; and Clause 14 was amended so as to enact that any Conjoint Scheme which shall have been agreed to by the medical authorities, with the sanction of the Medical Council and the approval of the Privy Council, before the "commencement," instead of before the "passing" of the Act, shall come into operation without any further confirmation.

On Wednesday, the fifth day of the session, after some

other business, the Council proceeded to consider various proposals with regard to the constitution of the Council itself. Dr. Pyle proposed—"That, as a mode of granting a larger representation of the profession in the General Medical Council, every graduate of a University, or licentiate or member of any Corporation, shall have the privilege of voting for the representative of the University or Corporation of which he is a graduate, member, or licentiate." Dr. Pyle said that he brought forward his motion as an alternative scheme to that of direct representation. He thought that the link connecting the members of the various Corporations should be drawn as close as possible, with the view of maintaining the *esprit de corps* that ought to exist amongst them. He pointed out that at present a man who was only a Member of the Royal College of Surgeons had no vote for the election of the representative of that body; and it was the same with regard to a licentiate of the Apothecaries' Company. He did not complain of this himself, because both of those bodies had always been well represented on the Council; but he knew that by many persons this had been considered a grievance. He met the objection, which might be made, that the scheme would give a plurality of votes to those who had several qualifications, by suggesting that, as by the Municipal Corporations Act, a practitioner might be obliged to select the particular Corporation in respect of which he wished to vote. By his proposal the whole profession would be represented. Dr. Leet seconded the motion; and, in the somewhat lengthy debate that followed, the matter discussed was not whether the constitution of the Council needed reform, but how and when the question of its alteration should be taken into consideration. Mr. Simon said that the Council would need weeks rather than two or three hours—which was all the time then at their disposal—to exhaust the subject brought before them; and he proposed an amendment, to the effect that in the event of the Medical Bill becoming law in the present session of Parliament, it would be desirable that, "as soon as then may be, the question of the constitution of the Council be thoroughly considered by her Majesty's Government," particularly with the object of determining what (if any) changes of constitution the Council will require, "in order that it may possess the best qualifications which can be got for the duties it will then have to discharge." He observed that the work of the Council was a matter which concerned not only the profession, but the country at large; and what the country wanted, irrespectively of the mode of election, was that the Council should be a true representative of the profession and of its best capacity for a particular purpose. Dr. Pyle had really answered himself, and had deservedly praised the result that had been obtained under the present method. Mr. Simon did not know of any other method that could have produced better results than that which had given the Council as representatives of the College of Surgeons such men as Mr. Green, Mr. Arnott, Mr. Cæsar Hawkins, Mr. Quain, and Sir James Paget. The Fellows elected the Council of the College, and were themselves eligible into it; and the Council chose their representatives. How could the Members of the College meet and deliberate on the choice of a representative? How, he further asked, could they themselves at present usefully discuss the constitution of the Council? If the Bill passed, the Government could, by means of a Royal Commission or a Select Committee of either House, take up the question of the constitution of the Council, and then the whole subject would be open. Sir James Paget seconded the amendment, speaking on it later in the debate. Sir William Gull objected to it because it made the question of considering the constitution of the Council contingent on the passing of the Government Bill, while, in his opinion, if the Bill did not pass, it would be more imperative than ever that the constitution of the Council should be revised. He objected also to the proposal for a Royal Commission, or any similar machinery. He disliked the word representation, because they might represent prejudiced and ignorant people, or people who were satisfied with what is. They were met to consider the best course that could be adopted to advance the science, practice, and representation of their profession. Sir Dominic Corrigan would vote against Mr. Simon's amendment. He should like to know what "as soon as may be" meant? He could not translate it into intelligible English, and was reminded by it of an Irish society, called the Society of May-bes, one of the rules of which was that any member who proposed anything intelligible should be fined. Dr. Andrew Wood utterly repudiated the opinion, which apparently Mr. Simon held, that the Council could not discuss the question of their own constitution because they had not been invited by the Government to do so. If there was any one question that the Council were bound to discuss more than any other, it was that. It had been agitated for years, and was considered of great importance by a large number of the profession. He did not suppose that the sending into the Council of six additional representatives, by direct representation, would make any great change in the action of the Council; but they might get rid of a grievance by it, and that would be an advantage. There were various ways in which the profession could be represented; but that proposed by Dr. Pyle was most unsatisfactory. He saw no difficulty in accepting the principle of six additional members to represent the profession; but there might be difficulties in selecting any plan for carrying it out. He should object to having four members for England, and only one for Scotland and one for Ireland. The only proper course, though it seemed a very radical one, would be a division into electoral districts—a proposal which he certainly never thought he should be advocating. Then there would arise difficulties as to expense and as to the collection of the votes. But on the whole he thought a case had been made out for the consideration of the question. It was due to the registered practitioners of the country that the subject should be calmly and carefully deliberated; and he thought that they should show that the Council were prepared to take up the matter (not perhaps in the present session), and come to a decision upon it. Mr. Macnamara, who spoke at considerable length, objected to both the motion and the amendment. He did not think that the Council could undertake the difficult business of reforming themselves. Nor would it be desirable to go "to the great body of the profession, or to the British Medical Association, which had excited all this turmoil; they could only talk to themselves, and therefore might bring forward a very inefficient scheme." The matter might be entrusted to the Lord President, who might apply to the Council for assistance. Or a Royal Commission, or a House of Commons Committee might produce a satisfactory result. But the Council ought to pass a resolution that reform is desirable, and impress the importance of it upon the Lord President. Then the British Medical Association might be satisfied, and withdraw their opposition to the Bill. Without that he thought the Bill would certainly be wrecked—surely a most deplorable result after all the time that had been spent upon it. Mr. Teale, who made a very able speech, did not think it desirable at the present time to make any specific alterations in the Council, and thought it would be objectionable to enlarge the constituencies which send members to the Council, as the effect might be to deprive them of the assistance of some of their most valuable members. The elections

of the representatives of the English Colleges of Physicians and of Surgeons were made by those who conducted the business of those great constituencies, and who were most likely to understand what was required. He noticed some of the many points that will have to be considered when the revision of the constitution of the Council is discussed. If they take charge of dentists and of midwives, must some leading dentist be on the Council, and must they have among them an obstetrician? Ought not the Army and Navy also to be represented? Should the Council be enlarged in number? Were the members to be paid or unpaid? It had been said that the action of the Council would have been much altered if there had been in it six direct representatives not connected with the Corporations or the teaching bodies. He very much doubted it. Much had been said about the advantage of having general practitioners on the Council, and men unconnected with the examining bodies and the schools; but he would ask, what was the knowledge of a general practitioner, compared with the knowledge of a consultant who was daily meeting general practitioners, all over the district? And if the members of the profession, throughout the country, connected with examining bodies, with teaching, and with hospitals, were to be rejected, where were to be found men with a sufficiently prominent position to be selected by twenty thousand voters as their representatives? Sir James Paget, in closing the debate, said that if the Bill became law the Council would have a great deal more work to do, and work of more varied character, requiring much more consideration; it was unquestionable, therefore, that the constitution of the Council would have to be altered to fit it for its new duties. As to the kind of change to be made, the addition of six representatives by direct representation would, he believed, make no practical difference at all in the working of the Council; they would find that there was no question in their interest which the Council had not already considered or were not quite ready to consider as soon as presented; but he, nevertheless, felt the cry for direct representation ought to be granted, and he was prepared to recommend it to the Government. Mr. Simon's amendment was then put and negatived by eight votes to seven; seven members declining to vote, and two being absent.

Sir William Gull then proposed another amendment—viz., "That the Constitution of this Council needs revision; and that the Council do affirm that it is desirable that, at its first meeting after the present session of Parliament, it should consider what modifications of its constitution are demanded and are required, and should report to the Government accordingly." He observed that if any association or body went to the Government, and asked that their demands for the revision of the constitution of the Council should be considered, the Government would naturally ask, "What does the Medical Council think?" The Council was the responsible body to advise the Government, and ought to do it fearlessly in the interests of the profession. The amendment was seconded by Mr. Teale, and Dr. Pyle withdrew his motion in favour of it. Dr. Andrew Wood expressed great pleasure in being able to snpport it; but Mr. Macnamara declared that it would not satisfy the promoters of the Medical Bill No. 2, or prevent their opposing the Government Bill. Eventually Sir James Paget suggested that the motion should be altered so as to read, "That the constitution of the Council needs revision; and that the Council do affirm and represent to the Government that, at its first meeting after the present session of Parliament, it will consider," etc. This was accepted by Sir William Gull, and in this form the motion was carried without a dissentient voice, eighteen members voting for it, five declining to vote, and one being absent.

On the following day the Council empowered the Executive Committee to prepare for it before its next meeting a report on the present constitution and working of the Council, and on the changes, if any, of constitution by which, in the opinion of the Executive Committee, the Council might be rendered more efficient for the duties which it has or will have to discharge; and the Committee were requested to let the report be in circulation among the members of the Council at least one month before the meeting at which it will be discussed.

But little more of the business done on Thursday need be mentioned here. The Council went again into committee on the Government Bill. On the motion of Dr. Apjohn, a resolution was passed dissenting from the alterations introduced into the Bill with respect to the method of keeping the local registers, and recommending that "The local registrars shall keep the local registers in such form and manner, and shall perform such duties in relation to registration under this Act as the General Medical Council shall from time to time order." A report was received from the Registration Committee recommending certain changes in the financial arrangements of the Branch Councils; but the report was not adopted, and the Council resolved that the moneys be paid and applied in accordance with Clause 13 of the existing Medical Act of 1858. A report was also received from the Committee on the clauses of the Bill which relate to Indian, colonial, and foreign qualifications, recommending various amendments in the clauses. After a short discussion and with some verbal alterations the report was adopted. The Council passed a resolution expressing a wish "that the a Bill entitled the Dental Practitioners Bill be brought into conformity with the dental clauses of the Lord President's Bill," and, after some formal resolutions and votes of thanks, adjourned *sine die*.

MEDICAL LEGISLATION.

THAT important little word "not" unfortunately slipped out of the last sentence of the last paragraph but one of our third leading article last week. In speaking of the decision the Medical Council had finally arrived at respecting the question apparently placed before them by Government —viz., whether the qualifying certificate of a Joint Board shall alone admit to the Medical Register, or the medical authorities shall grant one or more of their qualifications to all successful candidates, female as well as male—we meant to say that of the two evils, both very bad and distasteful, "the one *not* avoided by the proposed compromise" offered by the Council "is the least bad of the two." But in print the negative does not appear, and we were thus made to seem to say the opposite of what we intended. The context, however, really shows perfectly clearly what our opinion is. We do not think that anything more can be usefully said on the subject now. It would be rash to predict what amendments the Government may propose or accept in the House of Commons; or even to expect seriously that the Bill will come on for discussion there during the present session. The late period of the session at which we have arrived, and the state of the business paper of the House, seem to make it highly probable that the Bill will have to be dropped; and should it come on for a second reading, a very little opposition would effectually wreck it. It appears most probable that the resolution come to by the Medical Council to fully discuss, at their next meeting, the question of the revision of the constitution of the Council, will lead to the withdrawal of the opposition threatened by the British Medical Association, especially as a considerable number of the members of the Council have given in their adhesion to the principle of the "direct representation" of the profession, though they are doubtful as to how it is to be effected. But opposition

may very easily arise on the question whether or not women candidates shall have separate examinations and a separate register; and, as we have said, a very little determined opposition will stop the Bill.

The medical profession have persisted in declaring that women are making a lamentable mistake in desiring to become practitioners of medicine. This opinion is held also by the most eminent of the few medical men who have been on what is called the woman's side of the question in all the late discussions on it, and was expressed in the plainest terms by Sir William Gull the other day, when he stated in the Medical Council that "he felt as strongly as any man there that it was a dreadful thing to ask women to study medicine or to practise it," though he was arguing that if women would enter the profession they should be brought into relation with the Medical Corporations. But though the Government has in its wisdom decided that women shall be at liberty to become registered medical practitioners, there is still time to endeavour to prevent their being treated precisely as if they were men. We believe that but few of the few medical women desire that they should be; and the ablest of them all, Mrs. Garrett-Anderson, has stated that women seek only a limited field of practice, and therefore require only a limited or qualified education and a limited examination; and all this we, the profession, are ready to yield to them, only adding the logical sequence of a separate Medical Register. But some of the medical women demand to be in every way the equal of, and treated as, medical *men*, and this unwise and unfeminine demand may yet lead to the loss of the Medical Bill. In dealing with this subject in our issue of June 29, we alluded to a report that at a recent examination in Dublin a woman candidate had sounded a man for stone in public. We have learnt since that we had been misinformed; that this exhibition of the woman's surgical dexterity was not a part of her examination for a qualification, but occurred at a hospital after the woman had passed and had got her licence. It was quite a voluntary display; but does that make it tell more in favour of the medical woman movement? A great deal may yet be said on this subject—on the grave evils that may be caused to women themselves by such teachings as the Cowper-Temple drawing-room lectures, and medical studies; and on the public evils that may follow should such women, for example, as the joint editor of "The Fruits of Philosophy" be able to teach the public, with the authority and the status of a medical practitioner, the doctrines she advocates. We suspect that were points such as these taken up with any ability or insistance in the House of Commons, there would be no chance of the Bill passing unless the woman-party at once gave way.

It is, however, for the medical authorities to consider most seriously whether they will take upon themselves the responsibility of thus wrecking a measure upon which such a vast amount of time, thought, and discussion has been bestowed. But we are not disposed to place much value on the threat that if the authorities do not accept the present measure, worse things will happen to them: for if so strong a Government as the present fails to carry its Bill, we doubt whether any other can force upon the medical authorities any measure decidedly distasteful to them.

Should the Bill pass, however, with the clauses for the compulsory formation of Joint Boards, and the provisions for the examination and registration of women as altered by the Medical Council, another question will arise—viz., whether the English Conjoint Scheme will be carried out or not—for at present nearly all the English authorities refuse, and they may still refuse, to give any of their licences to women. In the latter case the Medical Council would have to frame a Medical Board for England, and provide a registrable licence for women, and, of course, for men. Will the medical authorities in England prefer such a position as that would place them in, to yielding so far as to grant their minimum qualifications to medical women? It would be a question demanding the most careful and deliberate consideration.

It must be admitted that the recent session of the Medical Council has been one of singular importance; that the debates have, on the whole, been remarkably good, and fruitful of very important results. It is true that much time seemed to be consumed before the Council settled down to real work; but it may not have been wasted, for it probably was usefully employed in giving members the opportunity of letting off their superfluous talk, and ventilating their various opinions and differences; and when they did get to work, they did it in a positive and statesmanlike manner, with the result that a very creditable amount of work was achieved.

THE WEEK.

TOPICS OF THE DAY.

The important suit brought before the Master of the Rolls by the authorities of St. Bartholomew's Hospital against large owners of property in the Parish of Christ Church, Newgate, to recover payment of tithes, ended last week in a compromise. Under an old statute dated back to the reign of Henry VIII. the Hospital claims a payment from the whole parish at the rate of 2s. 9d. on the yearly rentals, and in the present session of Parliament the authorities have introduced a Bill enacting that from March, 1877, the parish shall pay fixed sums in lieu of tithe, increasing from £1200 a year in that year to £2400 in 1877, such sum to be thence perpetual. The Master of the Rolls expressed his entire concurrence with the compromise; he considered the Hospital would do very well if they got £2400 a year, instead of £200. If the case had gone on, he might have been compelled to decide in favour of the plaintiffs on technical grounds, but he should certainly have endeavoured, with the assistance of the defendants counsel, to find some loophole so as to have ruled in their favour, as, in his Lordship's words, he "thought that even charity scarcely justified such a claim." The result of the compromise is that the Bill will now pass unopposed, and the parishioners will pay, according to the new rates mentioned therein, from March, 1877, and according to the old rate up to that time.

At a recent meeting of the City Commission of Sewers, the Streets Committee reported, for the information of the public, that every thoroughfare, court, and alley in the City is swept at least once in every twenty-four hours, and in wet weather oftener. The street orderly system is applied, in addition, to the carriageways of nearly all the main thoroughfares; the footways are also swept once daily, or more often. Courts and alleys inhabited by the poorer classes are, in summer, washed twice a week by jet and hose, and sprinkled with a solution of carbolic acid. Most of the main streets are also swept at night, in addition to the daily cleansing they receive. The Medical Officer of Health, Dr. Sedgwick Saunders, after presenting his weekly report, informed the Commissioners that he was acquainted with a method of keeping fish fresh for fourteen or fifteen days by immersing it in an innocuous bath, the chemical contents of which did not affect its taste, and were comparatively costless. He suggested that by employing this system much of the loss caused by the seizure and destruction of unwholesome fish might be avoided. The City Commissioners of Sewers have doubtless seen fit to publish

this account of their method of street cleansing in anticipation of the notice given by Mr. Baillie Cochrane, that on the 23rd inst. he will call the attention of the House of Commons to the defective arrangements at present existing for street cleansing in the metropolis.

The West Kent Main Drainage System, which was commenced in 1876, is gradually approaching completion. The total length of sewers to be constructed is seventeen miles and three-quarters, and of this ten miles and three-quarters have up to the present time been completed. The sewer is being constructed in Portland cement concrete instead of in brickwork, by which arrangement a considerable saving in cost will be effected. Good progress has also been made at the outlet works at Long Reach, at a point about seven miles below the outfalls of the metropolitan sewers. Here the Board have purchased about sixteen acres of land, and are proceeding with a reservoir 500 feet long, subdivided so as to form filter beds, with a capacity of 3,500,000 gallons. From this reservoir two lines of iron pipes, each four feet in diameter, are to convey the sewage across the foreshore to the bed of the river below low water. The reservoir and outlet works are also in a forward state, and when the works have been completed the towns and villages in the whole of the West Kent district will possess a thorough system of drainage, and an effectual means of disposing of their sewage. An official inspection of the portion of the system up to this time completed was made last week by Colonel Lennard and other members of the Board connected with the scheme, and universal satisfaction was expressed at the progress which has already been made.

At a recent meeting of the Surrey magistrates the Finance and General Purposes Committee reported that the Queen had confirmed, by order in Council, the petition of the Court for dividing the county into two coroners' districts. The subject of the delay in holding inquests by Mr. Carter had from time to time come before the Court, and in reply to complaints that gentleman had invariably represented that he had so much to do that he could not help the delays, adding that he had only had three days' holiday in as many years. By the order just confirmed the districts of Mr. Hull and Mr. Carter will be as nearly as possible divided, instead of the great bulk of inquests falling on the latter, who will be entitled to compensation for the loss of fees and emoluments through the curtailment of his district.

It is rumoured that steps will probably soon be taken to procure the discharge of the Rev. H. J. Dodwell—who, it will be remembered, fired a pistol at the Master of the Rolls—from the Broadmoor Criminal Lunatic Asylum. The Kensington Guardians recently had the matter under their consideration, and as they have to pay fourteen shillings a week for his maintenance whilst in the Asylum, they resolved to write to the Home Secretary and express their opinion "that it was unjust that the ratepayers of the parish should be called upon to pay for the maintenance of a criminal who, in the opinion of high medical authority, is not a lunatic."

From Sydney, New South Wales, the death is reported of Mr. Thomas Mort, who has been working for so many years to perfect a system of sending frozen meat to England. He died at the age of sixty-two, without living to see his project realised; he, however, continued sanguine to the last, and was only checked in his endeavours by want of means. It is stated that he himself had spent £100,000 on this enterprise, and it is considered doubtful whether anyone else will now be found to take up the work where Mr. Mort has left it, as very few have the same faith in the ultimate success of the scheme.

At the meeting of the Metropolitan Board of Works held last week, a deputation from the Limehouse District Board was introduced to present a memorial on the subject of floodings in certain parts of the district. It was shown that the periodical floodings were the source of disease and pestilence to the whole neighbourhood, and caused serious visitations in what were considered to be the most healthy parts of the district. When the sewers became overcharged, sewage of the most offensive description made its way into the dwellings. On the motion of Mr. Nathan, the memorial was referred to the Works and General Purposes Committee. A deputation from the inhabitants of the northern part of St. Pancras was subsequently introduced, to present a memorial of a like nature, and this was also referred to the Works Committee for consideration.

The amount received at the Mansion House on account of the Hospital Sunday Fund up to the present time exceeds £18,000. So far the returns have, if anything, exceeded the total of former years, and, as the collections in the Roman Catholic places of worship are appointed to take place next Sunday, a considerable addition ought to be recorded next week. It still remains to be seen, however, whether the highest total ever achieved—£30,000—will be exceeded upon the present occasion. The former history of these collections has shown that the bulk of the money subscribed has been received in the first fortnight, after which time the sums paid in have not materially affected the total. We must still adhere to the opinion we have all along expressed, that Hospital Sunday is an institution more fitted for provincial cities and towns than for the metropolis, and that in the end it will be found that the hospitals of London have not benefited by its introduction.

At a meeting of the Charity Organisation Society, held on Monday last at the Society of Arts, a paper was read by Sir Charles Trevelyan, on the "Extension of Provident Dispensaries." He maintained that the task of providing for the entire medical wants of the community was beyond the power even of the most liberal charity, and that out-patient treatment had become not only a mockery and a scandal, but, owing to the overcrowding and the vitiation of the air, even the primary object for which hospitals were established was seriously threatened. Working-class families being in general unable to pay even the lowest scale of professional fees, the joint-stock or mutual assurance principle furnished the only means whereby the medical profession could be placed in effective relation with the body of the people. A resolution was eventually carried empowering the Committee of the Society to take an early opportunity of conferring with the leading representatives of the working classes, and especially with the sick and benefit clubs, for the purpose of arriving at some practical issue.

Another serious blow has been dealt to the Food Adulteration Act of 1875 by a recent decision of the Lord Chief Justice, which will be found in another column. An inspector under the Act appealed against a decision of the Derby magistrates, who declined to convict a publican for selling whisky adulterated with water, on the ground that he had conspicuously placed in his house a notice that "all spirits sold were mixed." The publican further pleaded that as the purchase in question was not for the benefit of the inspector, but only for analysis, the purchaser was not "prejudiced" within the meaning of the Act. The Lord Chief Justice concurred in this latter view, whereupon it was urged that, if that were so, Section 13 of the Act was entirely nugatory, as it applied only to purchases by officers and others for analysis. The Lord Chief Justice explained that it was the essence of the offence that the purchaser should be prejudiced, but how could he be "prejudiced" if

he purchased only for analysis? The appeal was consequently dismissed, and the magistrates' decision upheld, and unless steps are taken to amend the original Act it bids fair to become perfectly useless. Why should not all Acts of Parliament be submitted to the law officers of the Crown, so that their provisions might be made binding in law?

THE DENTAL PRACTITIONERS BILL.

In the House of Lords, on Friday, the 5th inst., the Dental Practitioners Bill was read the third time, and passed. We have not had an opportunity of seeing the Bill since, but it must be supposed that it has been amended so as to bring it "into conformity with the Government Medical Bill, and to place the dentists in the same position as they would be in if the Government Bill passed with the dentists' clause in it, the principles of which have been approved by the General Medical Council." For the President of the Medical Council received, on July 1, an official letter stating that the Government intended to propose, in the House of Lords, amendments to effect those objects; and that the chief points of the amendments would be to impose penalties on a person taking a title he does not possess; the right of prosecution for taking the name of dentist to be restricted in the same manner as in the Medical Bill; a provision for the registration of colonial and foreign practitioners similar to that in the Medical Bill; and other points.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

A special general meeting of the Association will be held at Bath on a day and hour hereafter to be fixed during the meeting of the British Medical Association in that city next month. The Council is desirous of obtaining well-authenticated cases of refusal on the part of boards of guardians to allow the extra fees they have contracted with their medical officers to pay. Particulars of all such should be sent either to Dr. Joseph Rogers, Chairman of the Council, 33, Dean-street, Soho, London; or to Mr. John W. Barnes, Hon. Secretary, 3, Bolt-court, Fleet-street, City. The Council will be further much obliged if gentlemen will forward any instances of obstruction or annoyance to which they may have been exposed in the performance of their duty, as it is resolved that at this meeting a vigorous remonstrance shall be drawn up, and forwarded to Mr. Sclater-Booth, President of the Local Government Board, calling his attention to the many disabilities and grievances which Poor-law medical officers labour under; and praying him to take such steps as may tend to their removal.

MORTALITY STATISTICS OF GLASGOW.

At page 683 of vol. i. for this year we gave some statistics, furnished by the Chamberlain of Glasgow, showing the rapid rate of increase in the population of that city. Since then we have received another series of elaborate statistics for the year 1877, compiled under the direction of Dr. Russell, the able Medical Officer of Health, some of the gross results of which must prove of general interest, inasmuch as they refer to a population of more than half a million of souls, and have evidently been prepared with great accuracy and care. The estimated population, at the middle of 1877, of the area to which Dr. Russell's statistics refer, was 546,921 of all ages. The number of registered births within the same area was, for the whole year, 21,179 or 38·72 per 1000 of the estimated population. The total number of deaths at all ages was 13,758—a mortality of 25·15 per 1000 for the year. Of the total mortality it is found that no fewer than 6253, or nearly one-half, were of children under five years of age. This gives the high death-rate of 82 per 1000 of children under that age, while the mortality of persons between five years and twenty years of age was only 8·10 per 1000. The deaths of persons between twenty and sixty years of age were 15·22 per 1000, a rate which increased rapidly at ages exceeding sixty. Analysing further the deaths under five years of age, we find that exactly one-half of the number, or 3126, died under one year, the other half (3127) having died between one and five years of age. It will thus be seen that about 23 per cent. of all deaths were of children under one year, and of all children born, about one in every seven died before reaching the first anniversary of its birth. As might have been suspected, the proportion of deaths amongst illegitimate children was much higher than among legitimate. Thus, while the number of deaths of the former class under one year of age was very nearly one-fourth the number of illegitimate births, in the latter class the corresponding mortality was less than one-seventh the number of legitimate births. In regard to the tabulated causes of death, one point seems worthy of note as re-affirming the fact that nervous affections constitute one of the most prevalent and fatal groups of diseases, especially among children. Of the 6253 deaths under five years of age, while the largest single group, comprising 1814 deaths, is that of acute lung affections, the second place in point of fatality is held by diseases of the nervous system, to which are assigned no fewer than 1066 deaths, or one-sixth of the total mortality under the limit of age mentioned.

PRIMARY AND PASS EXAMINATIONS.

The following is the report from the Court and the Board of Examiners of the Royal College of Surgeons of England, of the number of candidates who have presented themselves for the primary and pass examinations for the diploma of Member of the College during the collegiate year 1877-78, showing the number who have passed and have been rejected from each medical school during that period:—

Primary Examinations.

Medical School.	Totals.	Number passed.	Number rejected.
St. Bartholomew's	97·83	69	28·83
Guy's	90·50	63·50	27
University College	84·6	54·3	30·3
St. Thomas's	49	33·50	15·50
St. George's	44	34	10
King's College	36	14	22
St. Mary's	35·50	27·50	8
London	33·50	16·50	17
Middlesex	30·7	22	8·7
Charing-cross	23·50	16·50	7
Westminster	14	6·50	7·50
Manchester	37	22·50	14·50
Liverpool	21·3	12·50	8·83
Birmingham	18·83	12·3	6·50
Cambridge	17·50	12	5·50
Bristol	16	9	7
Leeds	15	7·50	7·50
Newcastle-on-Tyne	12	5	7
Sheffield	6	2	4
Dublin	6	4	2
Belfast	1	1	—
Cork	·50	·50	—
Edinburgh	33	20	13
Aberdeen	4·50	3·50	1
Glasgow	4·3	2·3	2
New York	1·7	1·50	·2
Toronto	2	1	1
Philadelphia	1	—	1
Kingston, Canada	·50	·50	—
Calcutta	2	·50	1·50
Madras	·50	·50	—
Melbourne	2	1	1
Berlin	2	—	·2
Vienna	·2	—	·2
Heidelberg	1	1	—
Paris	·2	—	·2
Harvard University	·50	—	·50
Totals	744	477	267

Pass Examinations.

Medical School.	Totals.	Number passed.	Number rejected.
Guy's	78·83	63·3	15·50
St. Bartholomew's	78·50	65·50	13
University College	66·50	50	16·50
King's College	43·50	32	11·50
St. Thomas's	39·6	28·83	10·83
London	27·6	25·6	2
St. George's	22·50	14·50	8
St. Mary's	19	11·50	7·50
Middlesex	16·83	13·83	3
Charing-cross	6·83	6·3	·50
Westminster	6·50	6·50	—
Manchester	21·83	14·83	7
Liverpool	15·3	11·3	4
Leeds	10·83	6·83	4
Newcastle-on-Tync	9	5	4
Birmingham	7	7	—
Bristol	5·50	5	·50
Cambridge	5·50	5	·50
Sheffield	4	4	—
Dublin	7	4·50	2·50
Belfast	3·3	3·3	—
Galway	·50	·50	—
Edinburgh	15·16	10·83	4·3
Aberdeen	4·50	3	1·50
Glasgow	2·50	1	1·50
Bombay	·50	·50	—
Calcutta	·50	—	·50
Madras	·50	·50	—
Toronto	3	2	1
Melbourne	1·50	1·50	—
New York	1	1	—
Montreal	·50	·50	—
Kingston, Canada	·50	·50	—
McGill	·3	—	·3
Laval	·3	·3	—
Berlin	1	1	—
Wurzburg	·50	·50	—
Heidelberg	·50	·50	—
Totals	529	409	120

In the above list candidates who are indicated by a fraction have received their education at more than one school of medicine. The report is signed by William Scovell Savory and John Birkett, as chairmen respectively of the Board and Court of Examiners.

ROYAL COLLEGE OF SURGEONS.

At a meeting of the Council on Thursday, the 11th inst., Mr. John Simon, C.B., F.R.S., Consulting Surgeon to St. Thomas's Hospital, was elected President, and Mr. Luther Holden, Surgeon to St. Bartholomew's Hospital, and Mr. John Eric Erichsen, F.R.S., Consulting Surgeon to University College Hospital, were elected Vice-Presidents of the College. At a special meeting of the Council, on the preceding day, Mr. John Marshall, F.R.S., of University College Hospital, and Mr. Timothy Holmes were re-elected members of the Court of Examiners. Mr. W. H. Flower, F.R.S., and Mr. W. K. Parker, F.R.S., were re-elected Professors of Comparative Anatomy and Physiology, and Mr. Jonathan Hutchinson, F.R.C.S., was elected Professor of Surgery and Pathology. The Professorship of Dermatology is at present in abeyance. At this special meeting of the Council the recently elected members were admitted as members of Council in due form, and took their seats—viz., Mr. Erasmus Wilson, F.R.S., re-elected on retirement by rotation this year; Mr. John Gay, Surgeon to the Great Northern Hospital, re-elected after an absence of one year from the Council; and Mr. Edward Lund, Surgeon to the Royal Infirmary, Manchester.

HARVEY TERCENTENARY MEMORIAL FUND.

The sum subscribed now exceeds £1750, and only £250 further is required in order to enable the Committee to close the subscription-list. Amongst the latest additions to the Fund are one of £25 from the Society of Apothecaries of London; one of £25 from the Warden and Fellows of Merton College, Oxford; and one of ten guineas from the South-Eastern Branch of the British Medical Association. The sub-committee recently appointed by the subscribers for the purpose of selecting a sculptor has already had one meeting, and will assemble again at the Royal College of Physicians on Wednesday next.

MEDICAL PARLIAMENTARY AFFAIRS.

Habitual Drunkards Bill.—Dr. Cameron moved the second reading of this Bill in the House of Commons, on Wednesday, July 3. He alluded to the introduction of a Bill on this subject by the late Dr. Dalrymple, and the refusal of the Home Secretary in 1875 to make the subject a Government measure. A Select Committee had reported favourably upon the measures suggested for controlling habitual drunkards. Two distinct questions were involved in the report of the Committee—first, the propriety of forming institutions to be maintained at private expense, but having sufficient powers of control to retain the drunkard the requisite time for his cure; and secondly, to establish reformatories at the public expense for the treatment of drunkards under police regulations. This latter proposal has been for the time abandoned, as it would necessitate a vote from the public exchequer for carrying it into effect. The Bill contains provisions for the licence, inspection, and control of these retreats for habitual drunkards, and to confer on the managers powers of detention for a reasonable time. The report of the Committee clearly showed that confirmed drunkenness soon passes into a disease uncontrollable by the individual, and that the craving for drink became so overwhelming that everything was sacrificed for its indulgence. The cures average 33 to 40 per cent., and are as permanent as those of any other form of disease, mental or physical. Of 6000 cases it appeared that 94 per cent. were voluntary patients. In their lucid moments they manifested such an abhorrence of the habit that they were willing to take measures for effecting a cure. Powers of appeal for liberation from control might be granted, to be heard before a judge of the county court where the retreat was situated. Dr. Cameron then alluded to the structural alterations taking place in the tissues, especially of the nervous system, of those who had been the victims of habitual intemperance. No doubt habitual drunkenness closely approximates to insanity. A large percentage of lunacy is attributed to drunkenness as a cause. All he asked was for power to apply a rational remedy to a diseased condition of the system. Sir H. Selwin-Ibbetson was of opinion that a practical measure on this subject would be very beneficial. On the part of the Treasury he thought the expenses of inspection might fairly be borne by the public funds, but the other expenses ought to fall on the districts benefited by the operation of this measure. Dr. Playfair spoke approvingly of the Bill and the proposal to omit the compulsory clauses. Sir M. W. Ridley promised that on the withdrawal of the compulsory clauses of the Bill the Government would make no objection to the passing of the Bill, believing that it might have some good effect. He thought some valuable amendments might be made in Committee. The Bill was read a second time without any division.

Vivisection.—In the House of Lords, on Thursday, July 4, Earl De la Warr moved for the names of hospitals or other places registered for experiments upon living animals, also for the number of such experiments for the year 1877, and for the reports of the inspectors appointed under the Act. Earl Beauchamp replied that certain returns relating to the Act had been presented to the House of Commons last year, and might be consulted in the library. Another return had been moved for this year, and more in detail. The Secretary of State could not give any further information. The reports of inspectors were confidential documents, and could not be laid on the table. He advised the noble Earl to wait until the return had been presented to the other House.

The Medical Bills.—Lord George Hamilton, in reply to Mr. Errington, said that the question of medical education and reform had been fully discussed. The objects of all the Bills on this subject now before Parliament may be covered by the Government Bill. Certainly it was desirable that the Medical Council should be reconstructed with a view to the direct representation of the medical profession, but he

thought it need not prevent the passing of the Government Bill this session. He declined to refer the matter to a Select Committee.

Cattle Plague.—Mr. Forster gave notice to move in Committee an amendment to Clause 33, referring to the introduction of foreign animals, the effect of which would be to leave to the Privy Council the discretion they now possess as to slaughtering animals at the ports or not.

Sanitary Condition of Ascot.—Mr. Sclater-Booth, replying to Mr. Walsh, said that the inquiry had been made by an engineer connected with the Local Government Board. It was commenced a year ago, but in consequence of the difficult nature of the inquiry the report had only just been presented.

Contagious Diseases (Animals) Bill.—On the motion for going into Committee on this Bill, Sir H. Selwin-Ibbetson, on behalf of the Government, alluded to the compromise which it was proposed to introduce into the Bill at the urgent solicitation of Mr. Forster and his party, giving to the Privy Council powers of veto or consent to the introduction of live cattle to this country from Norway, Sweden, Spain, or Portugal, provided it could be shown that no disease of an infectious nature prevailed amongst the cattle in the countries from which they were imported.

FESTIVAL OF THE FELLOWS OF THE ROYAL COLLEGE OF SURGEONS.

After the annual election into the Council of the Royal College of Surgeons (a notice of which appeared last week in this journal), the Fellows dined together at the Albion Tavern, under the able chairmanship of Mr. F. Le Gros Clark, F.R.S. After the usual loyal toasts, "The Medical Council" was proposed by Mr. Birkett, and eloquently responded to by Professor Humphry, F.R.S. In reply to "The Medical Corporations," associated with the names of Dr. Bennett, F.R.S., as President of the Royal College of Physicians, Mr. J. Birkett as President of the Royal College of Surgeons, and Mr. Willington Clark as Master of the Society of Apothecaries, the first-named gentleman said there could not be much difficulty in responding to the toast on any ordinary occasion, but the present position of the Medical Corporations was so peculiar and critical as to make the duty not a little perplexing. What influence might have been exerted on the mind of the Lord President of the Council by the protracted and elaborate discussions of the General Medical Council, and to what determination his Grace might come in reference to the pending Medical Bill, it was impossible to say. What, therefore, might be the future position of our time-honoured institutions it would be rash to predict. But if we believe in the doctrine of survival of the fittest, he would venture to prophesy thus far: that of all those ancient British institutions of which we boast, our Medical Corporations would not be the first to disappear, and perhaps he should be pardoned if he further ventured to say that among the Medical Corporations the one over which he had the honour to preside—the Royal College of Physicians—would not be the first to die out. The more intimately acquainted anyone was with the constitution of our medical institutions, and the more dispassionately he considered the influence they exerted on our profession, the more, he was satisfied, he must be convinced of their beneficial action, whether as regarded the interests of the profession or the welfare of the public. For himself, the more he knew of the medical profession, its wants and its aspirations, the more was he convinced that it would be an evil day for themselves and for the public if ever the control of the profession as a body, its education and social relations, should be taken out of the hands of the profession itself. Nor did he believe that there was one present who would not sincerely deplore any legislative change that should diminish the influence or endanger the prestige of the Medical Corporations.

In proposing "Prosperity to the Provincial Schools," Professor John Wood, F.R.S., observed that the teachers of the provincial schools were a most important and influential part of the great Corporation of the Royal College of Surgeons; and he pointed to the presence that day of such numbers of the Fellows of the College, from all parts of the kingdom, as a proof that the College possesses an amount and degree of vital force and energy that will secure its continued prosperity and growth in spite of any medical legislation. Referring to the election into the Council, he said the electoral struggle had been this time a stout, very close, and well-contested one. The candidates were unprecedentedly numerous and influential, and the less fortunate ones had done all they knew honourably to attain to the honours of the suffrage. He was sure that all would agree with him in affirming that a contest characterised by more hearty friendliness and goodwill had never been fought out with more energy; and there were none to whom he would more willingly give place than to the three successful candidates.

Mr. Oliver Pemberton, one of the two recently elected honorary Fellows of the College, having responded to the toast, Mr. Lund proposed "Success to the Metropolitan Schools," coupling with the toast the name of Mr. Luther Holden, the senior Vice-President of the College. The "Health of the Chairman" was elegantly given by Mr. Savory; and after other usual toasts, the company separated.

FROM ABROAD.

Induction of Premature Labour by Pilocarpin.

Dr. Schauta, assistant of Dr. Späth, in the Vienna Midwifery Clinic, in an article in the *Wiener Med. Woch.*, May 11, observes that some time since he perused an account of two dropsical women in whom Dr. Massmann, of St. Petersburg, had employed a hypodermic injection of pilocarpin for the purpose of inducing sweating. It happened that both these women were pregnant, and in both premature labour occurred a few hours after the pilocarpin was administered. These cases did not prove much, as they were not very exactly observed as regards the period of pregnancy, while premature labour is not an uncommon occurrence in dropsical pregnant women having Bright's disease. Still, he resolved on the first occasion that presented itself to test the power of pilocarpin as an abortive agent. On May 1, a primipara aged twenty-two was admitted, and a minute account of her condition and of the measurements of the pelvis are furnished. It will suffice to say that she was robust and in good health, with no signs of rickets presenting themselves, her last menstruation being supposed to have occurred on August 2 to 6, 1877. However, the pelvis having been found so contracted that the passage of a child at the normal end of pregnancy would be exceedingly doubtful, Prof. Späth consented to an attempt at induction of labour by means of pilocarpin. On May 3, at 3.23 p.m., the contents of a Pravaz syringe full of a 2 per cent. solution of the muriate of pilocarpin were hypodermically injected in the left thigh. The first results observed at the end of 4 minutes were dilatation of the pupils (which had been contracted), disposition to vomit, sweating of the face, and a flow of saliva, which were soon followed by a sweetish taste in the mouth and trembling of the lower extremities. The secretion of sweat then rapidly appeared over the whole body, increasing at the same time on the face. At the end of a quarter of an hour the sweating had reached its maximum, and then became quickly arrested, chilliness as if from evaporation replacing also the former sense of heat. The salivation, which had kept pace with the sweating in intensity, also ceased almost suddenly, although a relapse lasting for 2 minutes occurred 26 minutes after the injection had been effected. During the whole time the thermometer in the axilla remained unchanged (36·8° Celsius), the pulse rising from 68 to between 92 and 100, and the respirations increasing from 24 to 40. All these phenomena then abated, so that by 5 o'clock the patient's state had become quite normal, or, as she expressed it, she felt just as she did in the morning. When seen at 6.15 she stated that she had since felt painful contractions in the abdomen. Her temperature was the same, the pulse being 72, and the respirations 32. An examination was made, and the cervix, which had been firmly closed, was found to be looser, its canal admitting the finger to the extent of 3 centimetres;

and the head was plainly felt through the membranes. She had some hours interrupted sleep, but perceived no pains. Examined again at 10 o'clock: the canal of the cervix was found more dilated and only 2 centimetres in length, the membranes being distended. Besides the mucus on the finger, some blood was observed. At 10.7 another injection of pilocarpin was made on the left forearm, and in two minutes afterwards sweating of the face appeared; and the phenomena succeeded each other exactly as they did after the first injection, even to the occurrence of the relapse of the salivation at the end of 25 minutes. Shortly after 11 o'clock the patient fell asleep, and awoke at 5 in the morning, complaining of pains in the abdomen and a sense of pressure downwards. By 5.45 the pains had set in regularly, and (without going further into details) the labour was terminated at 8.25 by the birth of a living female infant. The placenta was discharged spontaneously at the end of 20 minutes, and the uterus contracted well. At the date of the report (May 9) both mother and child were doing well.

The child weighed 2275 grammes and measured 47 centimetres. That its birth exhibited the power of the pilocarpin is shown by the fact that the mother during several days she had been under observation had not felt the slightest pain, the cervix also remaining prior to the injection completely closed; while after the administration of this the action became rapid and energetic. Dr. Schauta believes that this case and those reported by Dr. Massmann, at all events show decidedly the desirableness of additional trials of pilocarpin being made with respect to feeble pains, abortion, etc.

Artificial Suckling and Weaning of Infants.

A paper furnished to the *Revue Médicale* (June 17), by that indefatigable friend of the French infant, Dr. Brochard, contains some hints worthy of transcription. He observes, as a sign of a bad change of procedure in recent times, that artificial suckling now is said to consist in giving the infant the sucking-bottle, while formerly it was called "bringing up by hand." By the common use of the sucking-bottle the indolence of the nurse is encouraged, and the child injured. Furnished with a caoutchouc tube, the infant is now allowed to suckle itself as long as it pleases if it remain quiet, thus prolonging its repast for too great a time, and destroying all regularity in the administration of its food. A much better plan is adopted in Normandy, for in place of the bottle and tube, which can never be kept clean, a little phial, having a small piece of sponge passed into its neck, is used. An infant can very well be brought up by hand if milk is employed, to the exclusion of all broths, soups, etc. The meals, too, must be given regularly every two hours. Several nurse-children should not be collected together under the same roof, as they then perish in frightful numbers; and Dr. Brochard thinks the Academy of Medicine acts quite rightly in endeavouring to encourage maternal suckling, instead of improving the means of artificial suckling.

For weaning, Dr. Brochard lays down four rules:—1. It should never be done suddenly, one regimen being gradually transformed into another, so that the child may be progressively prepared for weaning. The time for it, as Trousseau justly observed, cannot be fixed by the almanac, but it must depend upon dentition. As soon as the teeth appear we should commence our preparations. About the fourth or fifth month we may accustom it to the sucking-bottle, substituting this for one of the sucklings at night, and afterwards for another; and even for a fortnight after weaning the child should have nothing but milk. At a later period farinaceous food and broths may be added. Many women begin to give their infants this kind of food far too soon, and at the time of weaning cannot get them to take the milk which should then form almost their only diet. Solid food should be delayed for some weeks, and given only as the teeth appear. 2. The child should never be weaned until it has its teeth. 3. It should never be weaned during very hot weather, when diarrhœa is apt to occur. 4. It should not be weaned while in the act of cutting its teeth, the intervals which occur between the cutting of the different groups of teeth being selected. The chief ill-effect of too early weaning is that the infants are subjected to premature alimentation, most infants dying because they eat too soon and too much; and we should always discourage the pride of so many mothers, that their infants "can eat anything." At whatever date weaning is performed, it should always be done methodically, and nothing but milk should be given. On the other hand, too late weaning is mischievous; and the glorification of another set of mothers, who declare that their infants have had nothing but the breast until the tenth or twelfth month, is misplaced, as is the practice of those who refuse to wean them until they have cut all their teeth. The danger here is the production of inanition, the milk losing its nutritive properties, so that at the tenth month it no longer suffices for the infant.

REVIEWS.

Lectures on Clinical Medicine. Delivered in the Royal and Western Infirmaries of Glasgow. By Dr. McCall Anderson, Professor of Clinical Medicine in the University of Glasgow. With illustrations. London: Macmillan. Pp. 268.

We rise from the careful perusal of this book with very mixed feelings, at the bottom of which, however, seems to lurk one of dissatisfaction. A volume of clinical lectures is, or should be, unlike most other works we meet with nowadays: there ought always to be something new in it, and one should be able to say, after due study of its contents, that he has learned something. It would be obviously unfair and unjust to say that this is not the case with Dr. Anderson's lectures, but we are bound to say that they might easily have been very much better, and in some respects we do not hesitate to join issue with him on more than one point. Rightly viewed, this is, however, not a serious objection, for it is this quality over all others which seems to distinguish work the result of personal observation from that merely quoted from some one else. The Lectures seem to be a selection from the regular teaching lectures delivered by the author from time to time, and some of them are hence perhaps better adapted for the use of students than for that of the profession at large. Nevertheless, they contain much which is well worth knowing. It is perhaps also owing to this feature that some of the lectures contain too much of what might be called ordinary knowledge—facts which are found in all the text-books, and which, though valuable in drilling students, are somewhat out of place in a volume of lectures laid before the public. Moreover, if we may be allowed to say so, the book is marred by signs of haste: thus we find lines transposed, making portions of the text hardly intelligible; "pulse 140°"; and the like. But let us turn to the substance of the volume itself. We may pass over the first lecture, which is merely introductory, and the second, which relates to pain as a symptom; as well as the third and fourth, which deal with gastric and cerebral vomiting, and a case of hysteria, respectively. We may safely say that none of these contains anything specially worthy of attention beyond a certain amount of doubtful teaching. The fifth lecture, however, deals with the subject of spinal irritation—a phrase not often employed nowadays, and which Dr. Anderson applies to a condition he cannot very well define, but which is indicated by localised pain and tenderness over the corresponding vertebræ. Whatever the condition be, Dr. Anderson says that it is best dealt with by blisters or other remedies for local congestion, and he gives some fairly striking cases illustrative of his views. We confess to looking with some doubt on most of these cases of so-called spinal irritation; nevertheless, Dr. Anderson's facts are well worthy of attention as furnishing a clue to treatment in a certain number of obscure cases. What is certain, we have seen cases of the kind indicated resist far more active treatment than any he ever seems to have had recourse to. One of the cases narrated could hardly, by any definition we could accept, be included in this category; it seems to be a case of hysteria in the male, pure and simple. In the chapter on Embolism we have narrated a very rare case of much interest, where plugging of the vessels both of the brain and of the lower portion of the body arose from the bursting of a hydatid cyst in the septum ventriculorum. This, however, did not occur in Dr. Anderson's own personal experience, but in that of a former pupil. It is carefully told. Lecture VII., on a supposed case of disease of the pons Varolii, is to our mind one of the most unsatisfactory in the book. Indeed, we are at a loss to know how

such a diagnosis could ever have been arrived at. The sum of the symptoms was this: left hemicrania with giddiness, left facial paralysis, impairment of vision on the left side with injection of the eyeball, left hemiplegia with loss of power in the right leg and to a less extent the right arm, difficulty in articulating, and partial loss of taste. It is difficult to account for such a group of symptoms on the theory of a single lesion, and we cannot see anything that points specially to the pons in their causation. There is one note we feel further bound to make: though the sense of taste was impaired, the patient could tell sweet from bitter; and the author introduces some extraordinary physiology to account for this impairment, referring it to paralysis of the chorda tympani. Now, the fact of the matter is, that as long as the four simple tastes remain—salt, sour, sweet, and bitter—taste is unimpaired; what is wanting is the sense of flavour, dependent on a totally different set of nerve-fibres. In this same lecture, too, occurs a passage which must surely be a misprint. He excludes syphilis as the cause of the disease (probably wrongly), and then he goes on—"All that we can say is, that in young adults, if we are able to exclude syphilis, a tumour of the brain is generally benignant in character (glioma, sarcoma, etc.)." Surely Dr. Anderson knows that some of the sarcomata are very types of malignancy—glioma not being the least so.

In the next two lectures we have some really valuable additions to our knowledge. They deal with the treatment of aneurism of the aorta by galvano-puncture. Dr. Anderson is not an out-and-out advocate for this mode of treatment, and the cases on which he operated were all in a dangerous condition. In one at least he met with real and well-merited success, but he makes unpleasant allusions to bleeding from the punctures, and in at least one case death followed from this external hæmorrhage. It is important to note the plan recommended by Dr. Anderson. He uses a constant current Stöhrer's battery with a strength of from six to eight cells of a large size. He makes use of one fine needle covered nearly to the point with vulcanite, so as to completely insulate it as regards the tissues, and this is attached to the positive pole of the battery. The negative pole is represented by a plate of zinc laid, not on the skin, but on a sponge soaked in salt-water, which is applied close to the tumour, and the current is passed for a varying period from half an hour to an hour. Of course the negative pole may also be represented by a needle, but the author thinks the plan indicated above the best. One point in connexion with the diagnosis of aneurism we cannot help criticising: "On applying the hand, it was found to be very soft, and not only the seat of pulsation, but also what is a very characteristic symptom of expansion, and each time the ventricle contracted a distinct vibration was experienced—'purring tremor,' as it is called." The sentence as it stands is nonsense, and affords a good example of the want of careful revisal formerly alluded to, but we may safely conclude that the author means to state that purring tremor is a very characteristic symptom of aneurismal expansion. This is hardly more intelligible; at all events, we may ask what the expansion is which purring tremor over the heart indicates. Our space will not admit of further comment, though we should like to speak of the valuable use to which Dr. Anderson puts iced cloths in the treatment of disease, and of the lectures on a department Dr. Anderson has made specially his own—viz., skin diseases.

The Throat and its Diseases. With 100 typical illustrationsin colour, and fifty wood engravings designed and executed by the author, Lennox Browne, F.R.C.S.Ed., Senior Surgeon to the Central London Throat and Ear Hospital, Surgeon and Aural Surgeon to the Royal Society of Musicians, etc. London: Baillière, Tindal, and Cox. Pp. 351.

We are somewhat at a loss for terms in which duly to characterise this work. That it is the result of long and heavy labour is evident, but this seems to have been expended much more upon one part than another. Thus, had the coloured plates of laryngoscopic images been published by themselves along with a textual explanation, we could have found nothing but praise of the work; but we are half inclined to think that the letterpress spoils it. The book, the author says, is "written specially for the use of those engaged in the active practice of their profession"; but surely if such is the case the personal exploits of the author need not occupy the foremost place they do, for, with all due deference, there were laryngoscopists before Lennox Browne. To our thinking, what the practitioner wants is a well-digested synopsis of our actual knowledge well illustrated by properly detailed cases. We regret to write thus of any portion of a work which is so meritorious as that now before us. The plates are most excellent. Mr. Browne's well-known dexterity with the brush and pencil makes us quite sure of the accuracy of the delineations here presented to us, and if he has reason to be satisfied with the chromolithography, we may well be so.

Experimental Researches in Pure, Applied, and Physical Chemistry. By E. Frankland, Ph.D. (Marburg), D.C.L., F.R.S., President of the Institute of Chemistry of Great Britain and Ireland, etc., Professor of Chemistry in the Royal School of Mines. London: John Van Voorst. Pp. 1047.

Dr. Frankland has thought well to collect in this single large volume the papers and memoirs which from time to time have been published by him in various ways during a long course of years. In this we think Dr. Frankland has been wise, and the papers thus collected cannot fail to have for the student a value which separately they did not possess. Many of them were difficult of access, whilst here we have them grouped and classified in the most convenient manner. The earlier portions consist of inquiries into the constitution of bodies by both the analytical and synthetic methods, and are specially adapted for the use of advanced chemical students and inquirers. Most of the work relating to applied chemistry, which is the part most interesting to us as practitioners of medicine, was done in the Laboratory of the Rivers Commission, and constitutes the most valuable series of researches into the pollution, purification, and analysis of potable waters with which we are acquainted. To medical officers of health this portion is invaluable, and to them we most heartily commend it. Another section refers to or deals with physical chemistry, and will be read with interest by all.

A Clinical History of the Medical and Surgical Diseases of Women. By Robert Barnes, Censor of the Royal College of Physicians, late Examiner in Obstetrics and Diseases of Women at the University of London and the Royal Colleges of Physicians and Surgeons, Obstetric Physician and Lecturer on Obstetrics and Diseases of Women to St. George's Hospital. Second Edition. London: J. and A. Churchill. Pp. 910.

A new edition of Dr. Barnes's admirable treatise on the diseases of women can hardly fail to be most acceptable to the republic of medicine. By far the best of its kind published in this country, it has for some time been unobtainable, being out of print, but this space of time has been amply utilised by Dr. Barnes in adding to and otherwise perfecting the volume now before us. Care and industry are evinced in every page, and we think Dr. Barnes may be sincerely congratulated on the result. The volume is profusely illustrated by woodcuts, many of them entirely original; there is, moreover, an appendix or index of authors which may be said to almost constitute a bibliography of the subject. It would be useless under the conditions which here exist to enter into any lengthy details of criticism; all that is required is a word of appreciation and approbation.

A Key to the Organic Materia Medica. Written for the Students of the South London School of Pharmacy. By Dr. John Muter, M.A., F.C.S., Director of the School; Author of "Pharmaceutical Chemistry, Theoretical and Practical," etc.; Public Analyst for Lambeth, Newington, Southwark, Bermondsey, Rotherhithe, and Wandsworth. Sold by Baillière, Tindal, and Cox. Pp. 500.

The present edition of Dr. Muter's book is widely different from the old one, which was almost entirely devoted to the purposes of a handbook for his own private pupils. The work now before us will be found capable of a more extensive employment, since, in many ways, it is as well fitted for the medical student as for the student of pharmacy only. The chemical portion has been more especially attended to, and

made as full as possible. Moreover, a series of what are called "Specially Distinctive Tests" is given, which serves, when followed, as a kind of course for the qualitative examination of drugs. Another feature of this book is the portion relating to the microscopical examination of drugs—a portion which cannot fail to be of much use. The illustrations which were intended to accompany this part could not be provided in time for this edition.

Speaking of the book more critically, we would highly commend the portions relating to the descriptions of natural specimens of the drugs, but still more those relating to their chemistry. In dealing, for instance, with the separation of the alkaloids, each step is given and explained; the tests for each are given and explained, and in many instances the processes for detecting adulterations are also laid down. This portion will be specially valuable to both teachers and students of the Materia Medica.

GENERAL CORRESPONDENCE.

VINDICATION OF WINE.

LETTER FROM DR. R. DRUITT.

[To the Editor of the Medical Times and Gazette.]

SIR,—The experience of the world has stamped wine as one of the greatest blessings to man. A misapplication, as it appears to me, of laboratory experiments and certain views as to drunkenness induce some persons to denounce it as a poison, and to deny its value as food and medicine. For instance, in a leading article of the *Times* of June 27, 1878, we read as follows:—"Alcohol is declared to be neither a food nor a medicine, but a poison, capable, like other poisons, of serving an occasional use, but this not frequently, while in the majority of cases it is absolutely and entirely mischievous."

Convinced that questions such as these can only be determined by experience on the broadest scale, I applied to one of the highest living authorities on all points of hygiene and diet, and I enclose you an extract from the answer with which he favoured me. It will be remembered that Surgeon-General Gordon was shut up in Paris during the whole of the German siege. I am, &c.,

8, Strathmore-gardens, Kensington, W. R. DRUITT.

Extract from a Letter on the Nutritive Value of Red Wine during the Siege of Paris, from Surgeon-General C. A. Gordon, C.B., M.D., etc.

"With regard to the wine question, I simply reply that, according to my experience in my own person, and from observation in several countries, and under a considerable variety of circumstances, wine and other fermented liquors used in moderation do most assuredly contribute to warmth, nourishment, and comfort. As you are aware, I was confined in Paris throughout the entire siege by the German armies, and for a couple of months of the time had very scanty rations of food indeed. As I think I mentioned to you on my return to London from the siege, not only did I, while on short food rations, experience a *desire* for red wine, but I felt while using it that in a measure it actually supplied to me the requirements of food. When the siege began and food was not very scarce, I used to take half a litre of Chablis. This I at first liked very much, but as food became scarce I found the allowance intoxicating to some degree. I then abandoned it, to drink the common *vin ordinaire*, which I enjoyed, and felt the benefit of as I say, my allowance of it being very often nearer a litre than half a litre. I give particulars on this point in my book on the 'Hygiene and Surgery of the Franco-Prussian War,' but just now have no copy of the work beside me to refer to. In my work on 'Army Hygiene,' also, I give my views on the subject generally. What I think is very important is the absence of 'famine fever' in Paris during the siege. This was at the time, by the French medical men with whom I conversed on the subject, considered due in a considerable degree at least to the fact that all the population had a quarter of a litre of red wine daily. When the Prussian fire became directed upon the wine-stores, the great care taken to protect them against destruction or damage by shell showed clearly how great value was placed upon their contents.

"In all this I draw the line between the *moderate* and *discreet* use of wine, and excess or untimely use of it. Thus, after a severe day's work here in India, a person tired and worn out will not only enjoy his 'beer,' but will, as he says, feel himself 'set up' by it; whereas if he takes the same potation immediately before exposing himself to the sun, it is most likely he may thus induce an attack of fever. This I also notice in my book on 'Army Hygiene.' Of course, all this is quite at your service, to make any use of you may desire. I may, however, mention that I myself neither drink beer nor spirits, simply because the use of either *upsets* me. As I dare say you recollect, I indulge pretty freely (although, I hope, not to excess) in light wines, particularly *light* claret, when exhausted by work or fatigue; and *after* the work is done for the day I from time to time indulge myself with a pint of sparkling wine, and certainly with a feeling of benefit. Here again, however, I must guard myself by saying that I only do so when *work* is over.

"During exposure out of doors, if I feel thirsty, which I don't often do, I simply take soda-water or tea. In the Mutiny, tea was our only drink while actually marching during the daytime, and exposed to the then *intense* sun-heat. In the evening, however, such of our officers as drank beer enjoyed the potation, and appeared to derive benefit from it.

"The fact is, there seems to me to exist in the minds of a lot of people a determination *not* to see that, although very great evils may and do arise from the abuse of wine, etc., yet that very great good arises from their use, as I say, moderately and discreetly."

MEDICAL NEWS.

UNIVERSITY OF DUBLIN.—SUMMER COMMENCEMENTS, 1878.—The following degrees and licences in Medicine, Surgery, and Midwifery were conferred, on Thursday, July 4, in the Examination Hall of Trinity College, the University Caput presiding:—

Baccalaurei in Chirurgiâ.—Eduardus Jacobus Cowen, Henricus Lawrence Cox, Franciscus Augustus Bonner Daly, Jacobus Dunne Day, Jacobus Campbell Hall, Arturus Gualterus Patricius Inman, Gulielmus Cox Neville, Guido Percival l'Estrange Nugent, Johannes Gregg O'Neill, Gulielmus Cleland Wilkinson, Ricardus Blayney Wrightson.

Baccalaurei in Medicinâ.—Fredericus Carolus Berry, Ludovicus Buchanan, Arturus Jacobus Campbell, Gualterus Petrus Carson, Franciscus Augustus Bonner Daly, Yelverton Dawson, Henricus Singer Gabbett, Joseph Gibson, Jacobus Campbell Hall, Ricardus Atkinson Hayes, Reynolds Peyton Hetherington, Arturus Gualterus Patricius Inman, Jacobus Bostok Jacob, Robertus Henricus Johnston, Christopherus Johannes Nixon, Guido Percival l'Estrange Nugent, Johannes Gregg O'Neill, Gualterus Poole, Fredericus Ogilby Ross, Gulielmus Cleland Wilkinson.

Magister in Arte Obstetriciâ.—Gulielmus Cox Neville.

Magistri in Chirurgiâ.—Robertus Norman Thompson, Gulielmus Fetherstonhaugh Lambert.

Doctores in Medicinâ.—Gulielmus Chatterton, Gulielmus Clibborn, Arturus Henricus Cole Dane (*in absentiâ*), Yelverton Dawson, Herbert Johannes Fausset, Gulielmus Fraser, Henricus Alexander Gogarty, Ricardus Atkinson Hayes, Gulielmus Walter.

Licentiati in Chirurgiâ.—Jacobus Grove Crofts, Croasdaile Miller Thompson.

Licentiati in Medicinâ.—Jacobus Grove Crofts, Croasdaile Miller Thompson.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examinations in Anatomy and Physiology at a meeting of the Board of Examiners on the 9th inst., and when eligible will be admitted to the pass examination, viz.:—

Berry, Edmund, student of the Manchester School.
Da Silva, Pascoal M., of the Bombay School.
Garry, John, of the Glasgow School.
Gibbes, Heneage, of the Aberdeen School.
Langley, P. W. Leslie, of the Belfast School.
Michell, Richard, of St. Thomas's Hospital.
Nichols, Frederick P., of the Cambridge School.
Pickering, R. Whitworth, of the Manchester School.
Potter, Edward F., of the Leeds School.
Power, Charles F., of the Manchester School.
Prothero, Richard, of the Liverpool School.
Rowlands, William, of the Edinburgh School.
Watson, Solomon G., of the Westminster and Cork Schools.
Wilson, William, of the Edinburgh School.

The following gentlemen passed on the 10th inst., viz.:—

Coffin, Arthur B., student of St. Bartholomew's Hospital.
Doyne, Robert W., of the Bristol School.
Harrison, James, of the Manchester School.
Scarth, Isaac, of the Manchester School.
Serancke, F. Niccol, of the Liverpool School.
Wakefield, Horace, of St. Bartholomew's Hospital.
Wilson, Henry, of the Manchester School.
Wöhrnitz, Ferdinand B. M., of University College Hospital.

APOTHECARIES' HALL, LONDON.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, July 4:—

Higgs, Alfred, Belgrave, Leicester.
Walker, Horatio Edward, 47, Trinity-square, S.E.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Biden, Edward James, Charing-cross Hospital.
Bray, Ernest Edward, Middlesex Hospital.
Hodgson, Freeth Foster, St. Bartholomew's Hospital.
Jewers, Ernest Edwin, Middlesex Hospital.
Palmer, Harold Lewis, London Hospital.
Rudd, Charles Frederick, St. Bartholomew's Hospital.
Wall, George Braithwaite, Charing-cross Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

MCHARDY, M. MACDONALD, F.R.C.S.—Surgeon to the Royal South London Ophthalmic Hospital, *vice* Nettleship, resigned.

MANVILLE, B. E., M.R.C.S. Eng.—Surgeon-Dentist to the Metropolitan Free Hospital.

WHITCOMBE, EDMUND B., M.R.C.S., Assistant Medical Superintendent of the Borough Asylum, Birmingham—Medical Superintendent of the East Riding Lunatic Asylum at Beverley.

NAVAL, MILITARY, &c., APPOINTMENTS.

ADMIRALTY.—Thomas Russel Pickthorn has been promoted to the rank of Inspector-General of Hospitals and Fleets in her Majesty's Fleet, with seniority of July 3, 1878. Inspector-General of Hospital and Fleets James Jenkins, M.D., C.B., has been placed on the retired list from July 2.

BENGAL MEDICAL ESTABLISHMENT.—To be Surgeons-Major—Surgeon Griffith Griffith; Surgeon Lewis Cameron, M.D.; Surgeon Daniel O'Connell Raye, M.D.; Surgeon William Pleacel Warburton; Surgeon Edward Alfred Birch; Surgeon Denis Francis Keegan, M.D.; Surgeon William Walker Galloway; Surgeon Lewis Edward Eades; Surgeon Stephen Coull Mackenzie, M.D.

MADRAS MEDICAL ESTABLISHMENT.—To be Surgeons-Major—Surgeon Lewis Charles Nanney and Surgeon Charles Edwin McVittie.

BIRTHS.

CLEGHORN.—On July 1, at Blenheim, New Zealand, the wife of George Cleghorn, M.R.C.S.E., of a son.

GAYTON.—On July 8, at the Homerton Small-pox Hospital, the wife of W. Gayton, M.D., M.R.C.P.E., Medical Superintendent, of a daughter.

MUMFORD.—On July 8, at Bartlett's-passage, Holborn-circus, the wife of William Lugar Mumford, M.D., of a son.

STEELE.—On July 1, at 94, Queen's-road, Peckham, the widow of the late Edward Harry Steele, M.R.C.S.E., L.S.A., of a son.

THOMAS.—On June 30, at Shepperton, the wife of E. F. Thomas, M.R.C.S., of a daughter.

MARRIAGES.

COWARD—BENNETT.—On July 3, at Harley-street Congregational Chapel, Bow-road, Christopher T. Coward, L.F.P.S. Glasg., of The Ferns, Burdett-road, to Emily, third daughter of James Bennett, Esq., of 51, Turner's-road, Limehouse.

DALTON—DEANE.—On July 10, at the parish church, Croydon, Benjamin Neale Dalton, M.D., of South Norwood, to Frances Maria, eldest daughter of Frederic Deane, Esq., of South Norwood.

GREENFIELD—FOSTER.—On July 4, at Bristol, William Smith Greenfield, M.D., of Wimpole-street, to Charlotte, youngest daughter of Joseph Foster, Esq., of Bristol.

HALL—DIEHL.—On July 2, at St. Andrew's Church, Southport, Radclyffe Radclyffe, only son of Charles Radclyffe Hall, M.D., of Derwent House, Torquay, to Mary J. Sager, daughter of the late Edwin A. Diehl, of Philadelphia, U.S.

SIMMS—BROADHEAD.—On July 4, at Pontefract, Henry Jordan Simms, L.R.C.P.E., third son of the late Charles Simms, barrister, of St. John's, Newfoundland, to Mary Anne, elder daughter of Joseph Broadhead, of Woodfield House, Pontefract.

STOCKS—CLAYTON.—On July 4, at St. Stephen's, South Lambeth, Frederick Stocks, M.R.C.S.E., of 421, Wandsworth-road, to Frances Esther Clayton, of 176, South Lambeth-road.

DEATHS.

FRASER, DONALD, M.D., M.R.C.P. Lond., at 5, Fairfax-road, South Hampstead, on July 7, aged 67.

FRASER, J. G., M.D., late of the Bombay Medical Service, at Merlewood, Inverness, on July 2.

NANKIVELL, MARGARET, wife of C. B. Nankivell, M.D., at Ashley Lodge, Torquay, on June 30.

POTTER, WILLIAM HENRY, only son of F. D. Potter, M.R.C.S. Eng., of Ongar, Essex, at Coorg, India, on May 13, aged 31.

SHIPTON, J. N., M.R.C.S. Eng., Surgeon-Major A.M.D., at Warwick, on July 2.

WARD, WILLIAM, M.D., of Horncastle, at The Hill, Wimbledon, on July 8.

WINKFIELD, WILLIAM B., M.R.C.S., L.R.C.P.E., at Shirley, Hants, on June 30, in his 44th year.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population in computed according to the census of 1871.

RESIGNATIONS.

Eastry Union.—Mr. C. Emmerson has resigned the Sandwich District; area 7360; population 4492; salary £50 per annum.

Epsom Union.—Mr. J. R. Bosworth has resigned the Banstead District; area 5518; population 1666; salary £50 per annum.

Horncastle Union.—Mr. W. Ward has resigned the Workhouse; salary £40 per annum. Also the Horncastle District; area 28,571; population 8179; salary £78 per annnm.

Reeth Union.—Mr. John H. Mearns has resigned the Muker District; salary £22 10s. per annum.

APPOINTMENTS.

Poplar Union.—Roderick Macdonald, L.R.C.P. Edin., L.R.C.S. Edin., to the South District. Joseph F. Porter, M.D. Dub., M.R.C.S. Eng., to the Bow District.

Watford Union.—George A. Hicks, M.R.C.S. Eng., L.R.C.P. Lond., to the Bushey and Aldenham District.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BIRMINGHAM BOROUGH LUNATIC ASYLUM.—Assistant Medical Officer, who must be registered with both medical and surgical qualifications, and unmarried. Applications, with testimonials, to the Clerk, at the Asylum, on or before July 23, addressed to the Committee of Visitors, "Application, etc."

BODMIN UNION, CORNWALL.—District Medical Officer. Candidates must be duly registered, and must be qualified by law to practise both medicine and surgery. Applications, accompanied by diploma, certificate or licence, and testimonials as to character and ability, to Preston J. Wallis, Clerk to the Guardians, on or before July 18.

BRADFORD INFIRMARY AND DISPENSARY.—Dispensary-Surgeon and House-Physician. Candidates must be registered as legally qualified medical and surgical practitioners. Applications, stating age and with recent testimonials as to moral character and professional ability, to William Maw, Secretary, on or before July 25. The salary attached to each office is £100 per annum.

BURTON INFIRMARY.—House-Surgeon. Applications, stating age, previous experience, and accompanied by testimonials, to the Hon. Secretary, Mr. J. C. Grinling, Burton-on-Trent, on or before July 25.

CHORLTON-ON-MEDLOCK DISPENSARY.—House-Surgeon. Applications to the Secretary, 53, Princess-street, Manchester.

GENERAL HOSPITAL AND DISPENSARY FOR SICK CHILDREN, PENDLEBURY AND MANCHESTER.—Physician. Candidates must possess either a university diploma or the membership of the College of Physicians of London, or the fellowship of the College of Physicians of Edinburgh. Applications to the Chairman of the Medical Committee at the Hospital, Pendlebury, from whom further information may be obtained on or before July 29.

LEICESTER BOROUGH LUNATIC ASYLUM.—Assistant Medical Officer. Candidates must be qualified and registered, should not exceeed thirty years of age, and must be unmarried. Applications, with copies of recent testimonials, to Dr. Finch, at the Asylum, not later than July 18.

ROYAL ALBERT EDWARD INFIRMARY, WIGAN.—Junior House-Surgeon. Applications, with recent testimonials, to Wm. Heaton, Hon. Secretary, on or before July 29.

SOUTHPORT CONVALESCENT HOSPITAL.—Resident Medical Officer. Candidates must possess a medical and surgical qualification recognised by the Medical Act of 1858. Testimonials and qualifications to the Chairman, William Froane, Esq., on or before July 20.

HOSPITAL SATURDAY FUND.—The Council of this Fund have just had the gratification of receiving through Mr. John Melhuish, jun., of 29, St. Swithin's-lane, the sum of £30, being a bequest left by the late Mr. Westropp to Mr. William Oxenford Melhuish (since deceased), to be divided among the London hospitals "at his discretion." The letter forwarding the cheque concludes thus:—"I have selected the Fund with which you are connected as the recipient of Mr. Westropp's generosity on account of the expansive character of its operations."

ANATOMICAL EXAMINATIONS.—The following were the questions on Anatomy and Physiology submitted to the 118 candidates at the primary examination for the diploma of Membership of the Royal College of Surgeons, on the 5th inst., when they were required to answer at least *four*, including one of the first two out of the six questions, viz.:—1. Define what is meant by blood-pressure, and state the chief causes of its variation. 2. Describe the structure of the different transparent media of the eye, and the part they play in the physiology of vision. 3. Describe the intrinsic and extrinsic muscles of the tongue. 4. Describe in order, from above downwards, the several structures which are brought into view when the sternum and costal cartilages have been removed, the anterior mediastinum cleaned, and the pericardium laid open. 5. Trace the facial artery from its origin to its termination, and give the distribution and relation of its branches. 6. Give the dissection required to expose the trunk and branches of the small sciatic nerve.

Epidermic Grafting in Coloured Races.—At the Société de Biologie, a naval surgeon, M. Maurel, stated that during a two years' residence at Guiana he had made numerous experiments on epidermic transplantation, placing the grafts on persons of different race and colour. He found that not only did the graft take well, whatever description of transplantation was made—whether transported from the skin of a black to that of a white, or the reverse—but that there always remained a whitish line at the point of junction, wherein pigmentation was not produced. The pigment disappeared when a graft was transplanted from a black to a white person; but when the two individuals were highly coloured, the graft remained black except at the point of cicatrisation.—*Gaz. Hebd.*, July 5.

The Schwann Festival at Liége.—The unveiling the bust of Prof. Schwann, the *Presse Médicale Belge* (June 30) states, was a most imposing manifestation, a very large concourse of scientific celebrities, both Belgian and foreign, having assembled to do the originator of the cell-doctrine honour. Among the latter were Prof. Michael Foster of Cambridge, Prof. Waldeyer of Strasburg, Prof. Ranvier of Paris, Prof. Donders of Utrecht, and Prof. v. Brücke of Vienna. In fact, biological science was well represented from all parts of Europe, and even from the United States. After an address by M. Stas, of the Belgian Academy, and President of the Committee, setting forth the Professor's claims to this high scientific recognition, the bust was unveiled, and *la Brabançonne* thundered out amidst immense enthusiasm, an album being at the same time presented to the venerable Professor, containing the photographs of those scientific men who sympathised in the manifestation, but were prevented from personally taking part in it. A grand banquet terminated the festivities.

The Adulteration Act: Spirits and Water.—In the Queen's Bench Division (sittings *in Banco*, before the Lord Chief Justice and Mr. Justice Mellor), the Lord Chief Justice, in giving judgment in the case of Sandes *v.* Small, which was an appeal by an inspector against the decision of the magistrates at Derby declining to convict a publican under the Food Adulteration Act of 1875 (38 and 39 Vic., cap, 93), said he should be sorry if it in any way tended to defeat a most useful Act—the object of which was to protect the poorer class of customers from the serious frauds to which they had been subjected. The Courts, however, must take care that they did not unduly interfere with the relation of seller and buyer to the prejudice of either, and they would in his opinion be doing so if they extended to cases in which both parties were perfectly aware of the terms on which they were dealing provisions intended only to apply to clandestine and fraudulent transactions. It seemed to him that the true construction of the enactments was that where the seller professed to sell a particular article, and he sold it altered by the admixture of something else, it must be taken that he did it "to the prejudice of the buyer," unless the fact was duly brought to the knowledge of the purchaser; but that if the alteration of the article by the admixture—as the alteration of spirits by the admixture of water—is brought to the knowledge of the customer, and he chooses to deal on that footing, and purchases accordingly, it never can be said that dealing thus carried on to the satisfaction of both parties can be interfered with. But, on the other hand, if the seller chooses to sell an article with a certain admixture, the onus lies on him to prove that the purchaser knew what he was purchasing with respect to the alteration of the article. The Act has provided him with the means of protecting himself against such a presumption, and says that if he attaches to the article a notice of the alteration which has been made in its quality, then he shall be protected against any charge of an offence under the Act; if he does not resort to this protection, then the presumption of law attaches and is unrebutted. If he can show that he brought home to the knowledge of the customer that the quality of the article has been altered by admixture, then he does not commit the offence, because he does not sell an article "to the prejudice of the purchaser," and the parties were perfectly free to contract on that footing. In that view the seller would not commit an offence, though he might not have affixed a label to the bottle, because he did not sell "to the prejudice of the purchaser." In the present case, therefore, the defendant had committed no offence within the statute, and though it was true it was a question of fact, yet it need not be sent back to the magistrates to decide, as it was sufficiently manifest, and it was clear that the defendant had committed no offence. That being so, it was not necessary to enter into the other questions which arose, and the decision of the magistrates must be upheld. Mr. Justice Mellor concurred in this conclusion, thinking that the notice fixed up, that all spirits sold in the house were "mixed," showed that no offence had been committed. The decision of the magistrates, therefore, was affirmed, dismissing the complaint.

Composition and Quality of the Metropolitan Waters in June, 1878.—The following are the returns (by Dr. Meymott Tidy) of the Society of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, etc.	Nitrogen: As Nitrates, etc.	Ammonia.		Hardness. (Clarke's Scale.	
				Saline.	Organic.	Before Boiling.	After Boiling.
Thames Water Companies.	Grs.	Grs.	Grs.	Grs.	Grs.	Degs.	Degs.
Grand Junction ...	20·80	0·101	0·135	0·000	0·009	14·3	2·8
West Middlesex...	19·10	0·073	0·114	0·000	0·008	13·2	2·8
Southwark and Vauxhall ...	19·30	0·098	0·114	0·001	0·010	14·3	2·8
Chelsea	19·80	0·090	0·099	0·001	0·009	14·3	2·8
Lambeth	20·70	0·098	0·144	0·001	0·011	14·8	3·3
Other Companies.							
Kent	28·50	0·003	0·444	0·000	0·002	20·60	5·1
New River ...	19·90	0·045	0·144	0·000	0·006	14·8	3·3
East London ...	20·40	0·056	0·114	0·000	0·006	14·3	3·3

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Mr. Edward Elphick, Moonta.—Received with thanks.

Mr. John Forster, Adelaide.—Received with thanks.

Noteworthy Gifts to Charities.—Lord Justice James, for himself and Lords Justices Brett, Baggallay, and Thesiger, delivered judgment last week in the case of Attree *v.* Howe, in which the Corporation of Brighton appealed from the decision of the Vice-Chancellor Hall, that a gift by will of Midland Railway debenture stock is void under the Mortmain Act, as being a gift of an interest in land. Two other cases depended upon the decision in this case. Lord Justice James said this case was of some difficulty, from the fact that the decisions of the courts below upon the very point had conflicted. Clearly shares were not within the Act, and debenture stock scarcely differed from shares. The holder of it could not take possession of the railway. He had only a charge on the net profits and earnings of the Company. Such a charge was not an interest in land. The result, therefore, was that testators might leave railway debenture stocks to charities, and the appeal must be allowed.

Notice of Infectious Diseases Obligatory.—The Staines Rural Sanitary Authority have recently forwarded to the Brentford Board of Guardians, for their consideration, a copy of a petition presented to the House of Commons, and in the form of a memorial, also forwarded to the Local Government Board, showing the necessity of legislative provision, making it compulsory on medical men, householders, and others, to give notice to the sanitary officers of the existence of contagious or infectious diseases; and the former authority have requested the co-operation of the Brentford Board in endeavouring to obtain such legislative enactments as would confer the obligation required: but no action was taken on the matter by the Board.

Violating the Lunacy Laws.—A surgeon of Windsor was charged at the Bucks Assizes at Aylesbury last week with taking under his care an insane lady without complying with the Act by procuring the necessary order and informing the Commissioners of Lunacy that the lady was insane. It may be remembered we drew the attention of our readers to the case when it was tried at the Lent Assizes, the only question then left for the jury to decide being whether or not the defendant knew the lady was insane at the time he received her under his care. The judge ruled that it must be proved he did before there could be a conviction. The jury could not agree, and were therefore discharged. For the defence it was urged that the defendant received the patient as a lady who was suffering from nervous debility; and her father stated that when he placed her under defendant's care he was certainly not aware that she was insane. He told the doctor that she was only suffering from nervous debility, and he thought the defendant's conduct towards the patient had been satisfactory. A verdict of guilty was now returned by the jury, and the defendant was fined £100.

A. Haslewood, Buxton.—We cannot indicate any special book. You had better refer to your ordinary medical adviser.

Feminine Evolution: N. N. G.—M. Octave Feuillet says that "the real pure Parisienne in her complete development is an extraordinary creature. In that strange hothouse of Paris, the child is already a young girl, the young girl is a woman, and the woman a monster."

Inquisitor.—The net profits of the bazaar recently held in aid of the Stanley Hospital, Liverpool, amounted to £4244 18s. 7d.

Surgeons to Works and their Liabilities.—The case of a workman employed under a company, who had paid a weekly contribution to the medical fund formed for the surgeon to the works, was recently disposed of by Judge Falconer and a Merthyr jury, which deserves attention. The surgeon to the Aberdare and Plymouth Iron Company was sued by a fitter for having neglected to attend upon his wife when called upon, thus necessitating his obtaining other medical assistance, for which he had to pay £8 10s. In February last the fitter's wife was ill, suffering from inflammation of the lungs, and though sent for by the husband, the surgeon did not attend, on the plea that he himself was indisposed, having a bad cold. He is stated to have told the plaintiff that he would not risk his own life by going out, even to save Queen Victoria's. The solicitor for the plaintiff argued to the point, submitting that the surgeon, as a paid official, should have attended to the sick woman—if not personally, through a substitute. The jury concurred with this view of the case, and returned a verdict against the surgeon, who consequently had to pay the amount disbursed by the plaintiff and the costs of the suit.

COMMUNICATIONS have been received from—

Mr. John Chatto, London; Mr. H. Courtenay Fox, London; Dr. Thos. Barlow, London: Dr. B. Kelly, London; Dr. Robert Druitt, London; Dr. Octavius Sturges, London; Dr. Frenerick Churchill, London; Mr. T. M. Stone, Londou; Dr. Alex. Yule, Fernhurst; The Secretary of the Hospital Saturnay Fund, London; Mrs. Isabel Thorne, Sevenoaks; Dr. Meymott Tiny, London; The Registrar of Apothecaries' Hall, London; Mr. G. Hill Smith, Stevenage; The Secretary of the Charity Organisation Society, London; Dr. Rogers, London; Dr. Edwarn Sparks, Crewkerne; Dr. Dunglison, Philadelphia; Dr. J. D. Moore, Lancaster; Dr. G. E. Herman, London; Mr. George Gaskoin, London; Mr. George Meadows, Hastings: Mr. W. B. Sealy, Nelson, New Zealand; The Registrar-General, Edinburgh; Mr. A. Haslewood, Buxton; Dr. J. W. Moore, Dublin.

BOOKS AND PAMPHLETS RECEIVED—

Vaccination Tracts, part 3—Davos-Platz, a New Alpine Resort for Sick and Sound—Henry J. Bigelow, M.D., Litholapaxy, or Rapid Lithotrity with Evacuation—J. E. Petrequin, Chirurgie d'Hippocrate, 2 vols.—Alexander Harvey, M.D., and Alex. Dyce Davidson, M.D., Syllabus of Materia Medica.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médicale—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—The Louisville Medical News—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Cincinnati Clinic—Practitioner—Medical Temperance Journal—Analyst—North Carolina Medical Journal—Pantiles Papers—Students' Journal and Hospital Gazette—Morningside Mirror—Canada Medical and Surgical Journal—Westminster Review—Medical Examiner.

APPOINTMENTS FOR THE WEEK.

July 13. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

15. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

16. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

17. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 1½ p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

18. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; St. Thomas's (ophthalmic operations), 4 p.m.; London, 2 p.m.

19. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1¼ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 6, 1878.

BIRTHS.

Births of Boys, 1286; Girls, 1234; Total, 2520.
Average of 10 corresponding years 1868-77, 2142·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	809	702	1511
Average of the ten years 1868-77	686·4	635·6	1322·0
Average corrected to increased population ...	...	...	1415
Deaths of people aged 80 and upwards ...	...	...	40.

Note.—The births and deaths registered last week may be compared with the average numbers in the corresponding weeks of the ten years 1868-77 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	3	5	3	1	25	...	1	1	22
North ...	751729	4	5	6	2	23	...	2	1	34
Central ...	334369	...	4	1	1	11	...	1	...	22
East	639111	1	5	4	3	22	...	2	1	26
South	967692	11	12	5	4	27	3	3	2	41
Total	3254260	19	31	19	11	108	3	9	5	145

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·804 in.
Mean temperature	60·1°
Highest point of thermometer	76·7°
Lowest point of thermometer	44·0°
Mean dew-point temperature	53·0°
General direction of wind	N.E. & W.S.W.
Whole amount of rain in the week	0·94 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, July 6, 1878, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1878.*	Persons to an Acre. (1878.)	Births Registered during the week ending July 6.	Deaths Registered during the week ending July 6.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3577304	47·5	2520	1511	76·7	44·0	60·1	15·62	0·94	2·39
Brighton	103923	44·1	44	25	72·0	48·2	59·7	15·39	1·13	2·87
Portsmouth ...	129461	28·9	100	49	75·2	51·5	58·1	14·50	1·41	3·58
Norwich	84620	11·3	57	36	75·2	46·0	59·6	15·34	0·00	0·00
Plymouth	73599	52·8	36	21	75·0	49·5	60·1	15·62	0·29	0·74
Bristol	206419	46·4	137	55	77·3	45·7	60·7	15·95	2·34	5·94
Wolverhampton ...	74240	21·9	69	19	76·5	46·3	57·5	14·17	0·04	0·10
Birmingham ...	383117	45·6	290	122	...	...	...	...	...	...
Leicester	121473	38·0	79	70	72·5	43·8	58·9	14·94	0·16	0·41
Nottingham ...	165267	16·6	82	59	76·4	40·0	58·5	14·72	0·13	0·33
Liverpool	532681	102·2	412	251	71·1	51·1	58·8	14·89	0·00	0·00
Manchester ...	360514	84·0	291	192	...	...	...	...	...	...
Salford	170251	32·9	145	68	73·6	46·1	58·1	14·50	0·09	0·23
Oldham	107366	23·0	90	41	...	...	...	...	...	...
Bradford	185088	25·6	136	76	71·0	45·0	57·0	13·89	0·05	0·13
Leeds	304948	14·1	233	123	73·0	44·0	58·4	14·66	0·02	0·05
Sheffield	289537	14·7	198	127	74·0	43·0	58·9	14·94	0·07	0·18
Hull	143139	39·4	107	54	76·0	43·0	58·2	14·55	0·00	0·00
Sunderland ...	112459	34·0	84	49	79·0	48·0	58·6	14·78	0·13	0·33
Newcastle-on-Tyne	144570	26·9	118	42	...	...	...	...	...	...
Edinburgh	222371	53·1	155	82	...	...	...	...	...	...
Glasgow	566940	94·0	435	240	69·0	53·5	60·8	16·01	0·39	0·99
Dublin	314666	31·2	192	150	73·6	47·7	61·8	16·56	0·05	0·13
Total of 23 Towns in United Kingdom	8373953	37·9	6010	3462	79·0	40·0	59·1	15·06	0·40	1·02

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·80 in. The lowest reading was 29·62 in. at the beginning of the week, and the highest 29·98 in. on Thursday at noon.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1878 by the addition of seven years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. Nottingham, Salford, and Oldham, however, form exceptions to this rule, as the estimates for these three towns have been revised with the aid of local information as to the rate of increase of inhabited houses. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

LECTURES ON THE DIAGNOSIS AND SURGICAL TREATMENT OF ABDOMINAL TUMOURS.

Delivered at the Royal College of Surgeons of England.

By T. SPENCER WELLS, F.R.C.S.,
Consulting Surgeon to the Samaritan Hospital, etc.

Lecture VI.

Amount of Human Life Saved by Ovariotomy—Antiseptics in Abdominal Surgery.

Mr. President and Gentlemen,—In the arrangement of the subjects of the six lectures, of which this is the last, I proposed, in the fifth lecture, to give some account of cases where, after the removal of one ovary, disease had appeared on the other side, and led to ovariotomy twice on the same patient. But the time which remains is so short that all I can say now is that, besides the four cases recorded in my book "On Diseases of the Ovaries," to which I have so often been obliged to refer, I have operated a second time upon seven other patients, all of whom have recovered. In one other case, where the disease recurred on the same side, or rather where there was a regrowth from the pedicle (the first operation having been performed by another surgeon), the patient died. In another patient, the second cyst was not the other ovary, which was healthy, but a cyst which appeared to have formed where some firm adhesions had been separated at the first operation. This patient recovered.

I wished also to say something about ovariotomy performed during pregnancy; but all the time allows me to say now is, that since the nine cases which form the subject of my paper on Ovariotomy during Pregnancy, in the *Transactions of the Obstetrical Society* for 1877, I have had one other successful case, followed by the birth of a healthy child at the full term of pregnancy; making ten cases, with only one death.

Then I was also anxious to say something about what has been called "normal ovariotomy," or Batty's operation. But as I have only once performed this operation, and, in the last twenty years, cannot recollect to have seen more than one other case in which I think there could have been any justification for recommending it, I will pass that operation over without further remark. And I will now recall the attention of those who were present at the last lecture to Lord Selborne's calculation of the amount of human life saved by the performance of ovariotomy in my own practice only. I am not going to say more of this public or non-professional view of the results of the work of *one* British surgeon, by a great lawyer, whose intellectual power carried him to the head of his own profession; and I will endeavour to carry on the investigation, and ascertain what the gain to human life *in the main* has been from this one operation. Writing in 1872, Peaslee asserted: "It may be shown that, in the United States and Great Britain alone, ovariotomy has, within the last twenty years, directly contributed more than thirty thousand years of active life to women, all of which would have been lost had ovariotomy never been performed." And no calculation is attempted of the lives of the children borne by the women saved. It is difficult to ascertain how many times ovariotomy has been performed since 1872. Galley, collecting all the cases published till 1873 (excluding the cases of surgeons who had only operated once), collected together 1540 cases, with 1010 recoveries—a proportion of 65·5 per cent. Olshausen has put together all the cases in the *Jahresberichten* of Virchow and Hirsch between 1867 and 1874, and gives a total of 1087 operations and 751 recoveries, or 69·1 per cent. He has also obtained special reports of all the operations in Germany up to the beginning of 1877, with a result of 613 cases and 353 recoveries, or 57 per cent. I should weary you if I were to endeavour to give you the results obtained by different operators in different countries, but I hope that some day this information will be obtained and brought before the profession in a trustworthy manner. It is enough for my present purpose to have proved that not only in this country and America, in our colonies, and all over Europe, the saving of life by ovariotomy in the last twenty years has been very great; and I doubt whether such full information as to the number of operations, the proportion of recoveries, and the subsequent state of the patient, could be obtained of any other surgical operation. All the operators of large experience or established reputation have published their fatal cases as well as their successes, and most of them have given details of their cases of incomplete operations, or cases in which diagnosis had been erroneous or imperfect. It is not unlikely that surgeons who have not operated often may occasionally have put in print a successful case, and left a failure unrecorded; and this may, to some extent, affect the accuracy of a general statistical table. But it does not do so more in the case of ovariotomy than in lithotomy or the greater amputations. I doubt very much whether a surgeon, who wished to obtain information as to the results of lithotomy at home and abroad during the last twenty years, could obtain it with anything like the same ease, or to the same extent or reliability, as can be done in the case of ovariotomy. Remembering that the number of cases can now be reckoned by the thousand, that the mortality compares favourably with that of lithotomy in the adult, and that, instead of being an operation confined to a few surgeons and a few small hospitals, it is now frequently performed in all our metropolitan hospitals and in many of our provincial infirmaries, and the extension abroad is as great as I have just mentioned, it would be very difficult for the younger surgeons present to believe that in 1858, only twenty years ago, one solitary operation by Mr. Cæsar Hawkins was the only successful case of ovariotomy which had ever occurred in any of our large metropolitan hospitals. The operation had once been successfully performed in Ireland; no successful case had occurred in Scotland since Mr. Lizars's partial success in 1825. The operation was not even alluded to in the standard surgical works of the day for nearly forty years after that date. Before 1860 it was severely condemned in the best works on the diseases of women, and in the most influential medical reviews; and the opposition continued for some years, until the knowledge of the work carried on in the small institution known as the "Samaritan Hospital" led to the general acceptance of ovariotomy by the profession in this country, to its extension abroad, to a wider appreciation of the influence of British surgery, and to the vast saving of human life shown in the calculations of Dr. Peaslee and Lord Selborne.

I have already spoken of many successive changes in the mode of operating, and of many improvements in the different instruments used. I will now ask your attention for a few minutes to some other changes in the after-treatment, besides those which I have described when speaking of alcoholic stimulants. In the earlier days of ovariotomy, when death did not result from shock or hæmorrhage, peritonitis was looked upon as by far the most frequent cause of death. But we very soon learned that the peritonitis was something very different from ordinary peritonitis. It was much more like puerperal peritonitis, and the fever resembled puerperal fever. Then septic peritonitis, or septicæmia, was recognised as the most frequent cause of death after ovariotomy, and our efforts were directed towards the protection of the patient from the causes of this form of peritonitis, and of blood poisoning; and, if poisoning occurred, to removing the morbid products, by assisting their elimination and counteracting their effects. Then observations led to the conviction that, as the peritonitis which we dreaded was a peculiar form of the disease, very different from simple peritonitis, so the fever was distinctly a septic fever, very different from the simple fever which accompanies most severe injuries and operations. Take a case of simple fracture, or of any subcutaneous operation: some blood is extravasated, some tissues torn or divided, some exudation is taken up by the lymphatics and carried into the blood-stream, and this will be accompanied by some rise in the temperature, which may reach 102°, 103°, or 104° Fahr. in the evening, falling one or two degrees in the morning. And this degree of fever may last from two or three up to ten or twelve days. But this simple fever need not excite uneasiness. The patients scarcely feel ill, lose very little weight; the tongue is not dry, the skin is moist and probably freely sweating, and the urine may be normal in quantity (even increased), while the bowels may act even more than in health. We frequently see this condition after ovariotomy; although, when the fever is simple, the temperature seldom rises over 100°. Septic fever is a much more formidable enemy. The nerve-centres at once show that they are under the influence of poison.

The patient feels ill, is indifferent, apathetic, or somnolent, is soon extremely weak and depressed, and all the functions of nutrition and excretion are altered. The tongue and skin are dry; the urine either scanty or concentrated, with the normal proportion of the chlorides and urea greatly altered, or else abundant and albuminous; the bowels are constipated; nausea and vomiting are frequent. Whether these symptoms are observed with or without a previous rigor, and whether the temperature reach to 105° or 107°, or is kept by some cooling process down to 102° or 100°, the case is a very grave one, and can only be accounted for by some process of blood-poisoning. Some blood left in the cavity of the peritoneum after the separation of adhesions, some ovarian fluid, or some peritoneal fluid mixed with the blood, is decomposed or putrefies, and the absorption of this poisonous mixture is doubtless the cause of this septic fever. Why, in some cases, blood might be effused, or ovarian or ascitic fluid absorbed, with nothing more than simple fever of little consequence to the patient accompanying these changes, and, in another case, apparently equally favourable, putrefaction of the effused fluids and deadly septicæmia occur, was the problem which we had to solve. Drainage was, not very long ago, looked upon as an essential part of the operation, or as a frequent necessity in the after-treatment; and I have already told you what I have done as to drainage. It has certainly been useful sometimes, either by preventing the accumulation of fluids ready to decompose, or by affording a channel for their removal, or for the injection of antiseptic fluids; but, in spite of drainage—some even think, promoted by drainage—septic fever will occasionally arise. I must not go into the question of bacteria and the germ-theory now; the great question is, Can we in any way protect the patient from the causes of decomposition or putrefaction in the effused fluids? The early cases of ovariotomy were done in the pre-sanitary age. The work set on foot by the Health of Towns Commission, and by the labours of the early sanitary reformers—Walker, Chadwick, Southwood Smith—had scarcely begun to tell upon the health of towns; the lessons taught by the registration of births and deaths were only just beginning to affect the professional mind. The supply of water was even worse than it is now. There were a great many more cesspools and fewer drains. Less attention was paid to ventilation, and there was more smoke in the atmosphere. There can be no doubt that, however far short we may fall of what we may reasonably hope to become, still we are far better housed, fed, clothed, and protected from poison than we were twenty years ago. But even now, in the best houses, our patients are daily subject to injurious influences, which are too often overlooked. The drinking-water of the household may be poisoned by the fæcal gases of the soil-pipe, or by decomposing refuse in the uncleaned cistern. The air in the house may be poisoned by the entrance of sewer-gas from the street drains, simply from neglect of the obvious precaution of cutting off the communication between the house and the street drain; and there are many houses, in town and country, where, in neither the living nor the sleeping-rooms, is there any effectual provision made for the supply of fresh air, or for carrying off the products of the respiration of the inhabitants, or of the combustion of gas or other means of artificial light. The mode of warming is equally bad. There are very few rooms in which an invalid can be kept comfortably warmed, without being alternately chilled or heated. But, again, in all these respects, we are better than we were twenty years ago. At any rate, when a case of fever does arise, whether after a surgical operation or at any other time, people do begin to inquire, not only how the patient is to be treated, but why he became ill, and how other people are to be protected from the illness; and so the surgeon, instead of bewailing the spread of pyæmia, erysipelas, or hospital fever, and looking upon epidemics of either one or the other as almost necessary attendants of surgical practice, hardly to be understood or explained, is often able to point to some very obvious and easily removed cause of the occurrence. Who can tell what effect has been produced upon sanitary science by the illness and death of the Prince Consort, and by the late illness of the Prince of Wales, from preventable disease? If the cause be not found in the water-supply, the drainage, the ventilation, or the food of the patient, then the question of infection arises. And I need not remind this audience of the many unsuspected means by which infectious contagious disease may be conveyed to a patient. The question for us is, how the patient may be protected. Fourteen years ago, I called the attention of the British Medical Association, at the Cambridge meeting in 1864, to the causes of excessive mortality after surgical operations. I showed that even where a patient was supplied abundantly with fresh air, yet with the air unsuspected sources of danger might enter through the wound. I directed special attention to the demonstration by Pasteur of the presence of infective germs or organisms in the atmosphere; to the result of the examination by Dr. Angus Smith of the air of large cities and crowded rooms; and to the researches of Chalnet into the varieties of putrescible organic matter, collected from the walls, sashes of windows, and bed-curtains of hospital wards, and in the linen returned from the laundry; and I concluded by an attempt to apply the lessons taught by Polli, who had proved that the development of many low forms of animal and vegetable life was checked or stopped by the use of sulphur and the sulphites. I think the work of Polli and the use of sulphurous acid, and of the alkaline and earthy sulphites, has been too much disregarded since carbolic acid has been brought into such general use. Polli showed very clearly that whether pyæmia and affections characterised by multiple abscesses followed the introduction of pus into the blood, or symptoms of septicæmia followed putrid infection, or some specific disease followed the inoculation of the specific exudation material; in any or all of these cases, the poison is rendered inactive or neutralised, just as all fermentations of organic matters or the putrefactive changes in animal tissues or liquids are stopped by the action of sulphurous acid. This lecture was reprinted last year, and published by Messrs. J. and A. Churchill. It was two years afterwards that carbolic acid began to be used by Lister in Glasgow. In 1869, at Leeds, it was ridiculed by the surgical orator as a professional error; and it was not till after the address of Lister at Plymouth, in 1871, scarcely eight years ago, that the antiseptic system can be said to have spread widely, either at home or abroad. My own position in this matter is very peculiar, and calls for explanation. I find myself mentioned by some writers—partly on the strength of the lecture to which I have just referred, partly to the use of cotton-wool, dry dressing, and Skinner's absorbent deodorising powder, of oil of tar and calcined oyster-shells after ovariotomy, and partly to the extreme care which I took in keeping my wards and patients protected against the access of any form of infectious or contagious disease—as one of the earliest exponents and advocates of the antiseptic system in this country. Then, on the other hand, I find (not without regret, though perhaps without any surprise) the opponents of the antiseptic system making use of the results which I have obtained in ovariotomy as one of the strongest facts they can adduce in favour of their argument, that the antiseptic system, if not an entire mistake, is certainly an unnecessary and troublesome complication of surgical practice. If (they say) in one of the most serious operations ever performed upon the human body, where the largest serous cavity is opened, and the freest access is afforded to any infective organisms which may be near the patient, Mr. Wells can obtain eighty recoveries out of one hundred operations; and as on two occasions he has had long series of successful cases, one of twenty and two of twenty-seven, without a death to break the run of success,—if in the last two years of his practice at the Samaritan Hospital, in 1876 and 1877, he had only seven deaths out of seventy-one cases, not one in ten,—and all this without any of the special precautions supposed to be necessary by the advocates of the antiseptic system, never using the spray nor any carbolised solutions for sponges or instruments, no catgut sutures, and no protective carbolised gauze for dressing,—if such results as these in such an operation have been obtained, is it possible that the germ theory can be true or the practice founded upon it necessary? It is troublesome—may it not be injurious? Cases of poisoning by carbolic acid—fatal poisoning—have been recorded; and in many cases where recovery has followed, the patients have still been exposed to great suffering and inconvenience.

All these arguments I have heard over and over again, and undoubtedly they have affected my own practice. Several years ago, I began to try the carbolised sponging and drainage after amputation of the breast; and Dr. William Thompson published several cases where, in my practice, after the removal of mammary tumours or of the entire

breast, immediate union followed without any suppuration. I did not use the spray in these cases, but sponged the raw surfaces with carbolised water, kept in a drainage-tube for a day or two, and used protective dressing. The results were perfectly satisfactory. At first, I thought the result might be due to the drainage only; but, on trying drainage in one case without any carbolic acid, we had such profuse fetid discharge, and so much fever, that I have never since tried drainage after amputation of the breast without antiseptic precautions. But encouraged as I was by the adoption—the imperfect adoption, if you please—of the antiseptic system in breast cases, I still hesitated about adopting it in ovariotomy. I should have liked to make a comparative series of experimental operations upon some of the lower animals, under precisely similar comparable conditions, with and without antiseptic precautions; but with such a fanatical popular outcry against vivisection, and with a strong personal objection to operating on living animals, and a still greater reluctance to expose human life to anything in the nature of an experiment, I have rather watched with care the doings of others in this matter than made any attempts at leading the advance. At first, I was not encouraged by what I heard. One old friend of mine, rejoicing in a success of twenty-one cases running without a death under antiseptics, when pressed as to his success before the use of antiseptics, found that he had twenty-three running, and for some time afterwards wholly or partially discontinued his new practice.

The first case in which I actually saw the carbolic spray used, and the antiseptic dressing strictly carried out, impressed me unfavourably. The cold fog appeared to me to chill and depress the patient, and she afterwards died with symptoms attributable (as I thought) partly to the cold and partly to the carbolic acid poisoning; and the operator, though an enthusiastic advocate of the antiseptic system in its minutest details, abandoned its use in ovariotomy for several months. It was about this time that I had resolved to operate in a hundred cases with all antiseptic precautions. My friend Dr. Kocher of Berne, who some years ago assisted me in many operations here, and has since operated himself very successfully, wrote to me in May, 1877, strongly urging me to try the antiseptic treatment. He said he had himself done ovariotomy in eighteen cases: the first five without antiseptics, and three deaths; the last thirteen with the spray and other antiseptics precautions, and only two deaths. Olshausen had urged me to do so on the strength of recent experience in Germany; and I had prepared to begin in October, 1876, with the eight hundred and first case, when a purely accidental circumstance interfered, and the success without antiseptics was so great—every case from eight hundred and one to eight hundred and twenty-six being a recovery, two operations performed also for the second time on the same patient also recovering (making twenty-seven successful cases without a death)—that I felt it would be almost wrong to do anything which might possibly be rather injurious than helpful. Every now and then a case occurred during this time or last year which looked as if the patient suffered from septic fever, and I felt regret that I had not adopted antiseptic precautions; and, when Mr. Lister first came to London, I sent specially to invite him to superintend the arrangements for carrying out all the details of his method at the Samaritan Hospital at my next ovariotomy. He was prevented from doing this, and I continued my usual practice until the close of 1877, when I ceased to operate at the Samaritan Hospital on being appointed Consulting-Surgeon. As I have just said, my hospital practice for the last two years had afforded 90 per cent. of recoveries; and, although I had long ago indulged in the hope that ovariotomy on a large scale might be performed with a mortality of not more than 10 per cent., I never ventured to expect a much greater success than this, and even now I doubt whether it is likely to be obtained; still, I was anxious to obtain it if possible, and, after satisfying myself by the experience in Germany of Olshausen, Hegar, Schroeder, Nussbaum, and others, that I need not fear danger to the patient if I used carbolic acid, and after watching some of Mr. Thornton's cases in the Samaritan Hospital, and finding that thymol, while free from some of the objections to carbolic acid, appeared to be a trustworthy antiseptic, I determined to begin the year 1878 by antiseptic ovariotomy, and by the alternate use of thymol and carbolic acid. The result has been that, of fourteen cases of completed ovariotomy, only one has died, and that patient died of tetanus after the healing of the wound, almost certainly independent of the influence of carbolic acid. One case of ovariotomy performed for the second time on the same patient also recovered. One case in which an uterine fibroma weighing seventy pounds was removed also recovered. Another in which a portion of a uterine fibroid was removed recovered. So did a patient in whom an exploratory incision only was made, and another where incision only led to emptying the peritoneal cavity of ovarian fluid. In all, nineteen operations, with eighteen recoveries and one death. In three other cases (one where a large cancerous undescended testicle was removed from the abdomen of a man, one where part of an ovarian cyst was removed, and one where an incision was made in the abdominal wall of a moribund patient), death followed. In the two last cases, I do not believe death was hastened by the operations; the patients were so far gone when they were performed as to be in a hopeless condition, antiseptics or no antiseptics; and, from the nature of the disease in the testicle case, if the antiseptic did no good, I think it did no harm.

Supporters of the antiseptic system might very well say that this result is encouraging; that, of twenty-two serious operations, eighteen recovered, and, of the four who died, in two scarcely any reasonable expectation of recovery could have been entertained. Opponents of the system might say: "You have had four deaths out of twenty-two cases; whereas, before you tried antiseptics, you have twice had twenty-seven cases without a death; and we must have more facts before we can arrive at the truth upon this momentous question." We must learn exactly what is necessary and what is useless among the appliances introduced by Lister, and adopted with more or less modification by his followers.

To begin with the spray, I have had very great doubt myself whether it is an essential or useful part of the antiseptic treatment. It is exceedingly troublesome, and I think I have seen the cold or chilling of the abdominal cavity injurious. Mr. Lister, however, assures me that he has had too many proofs of its necessity for me to feel justified in trying the antiseptic system without it. Dr. Keith has told me that his trials before using the spray were much less satisfactory than they have been since. And, as all that we know experimentally of the action of even so weak a solution of carbolic acid as 2 per cent. upon morbid poisons bears out the inferences drawn from practical observation, our object must be to get the most perfect form of spray we can, and, while obtaining all the good we can from its use, to protect the patient from any of its injurious effects. If we follow a system at all, it should be followed thoroughly; otherwise we may be met, as I am met by very good friends, with the explanation of any failure by some apparently trivial neglect of what to them appears important. They claim the successes as proofs of the value of the system; they explain the failures by some alleged neglect of some petty detail. In one case, I thoughtlessly used a clamp which had not been carbolised, and was warned of probable failure; but the case appears, in spite of my negligence, on the list of successful antiseptic operations, and was one of the cases in which there was no fever after the operation. If there had been any fever, no doubt it would have been explained, to the entire satisfaction of many people, by the presence of some infective germs on the clamp. Of course, this explanation might possibly be true; and I freely admit that, in an experimental inquiry, no such carelessness should be permitted, especially as it gives rise to the suggestion from zealous or enthusiastic partisans that no one but themselves can be safely trusted to perform an operation antiseptically. "If," they say, "you do not believe in the presence and omnipotence of germs—infective germs—all about the patient and surgeon, nurses, bedding, instruments, sponges, dressings—indeed, always and everywhere—you are sure to leave some loophole unprotected against the entrance of one or more of these dreaded enemies. You must accept the theory, or act as if you did, or your practice will certainly be faulty." My answer to this would be, that I have watched the performance of a good many operations by surgeons who have complete faith in the system, and who believe they carry it out accurately, but I have never yet seen one case where a good many germs might not have escaped the action of the carbolic acid; and I believe that I or any surgeon present who wishes conscientiously to protect his patient from any of the atmospheric or other impurities which may possibly affect her injuriously, whether he uses

carbolic acid or any other antiseptic, may, by careful attention, do so as completely and thoroughly as the most accurate experimenter can desire. Feeling all this, and feeling also that undue faith in the system may lead to rash practice and the attempt to do things which had better be left alone, and knowing also how difficult it is to obtain any trustworthy statistical comparative facts to determine the relative success of any operation well performed, with and without antiseptic precautions—all other things being equal—I think what I have said of my own observations, although they only amount to twenty-two cases, may have some little value. I shall certainly continue the trial until I arrive at some conclusion one way or the other; and I think I have already noticed a considerable difference in the progress of cases after operation since I began to use carbolic acid and thymol. There has distinctly been less elevation of temperature in every one of the cases that I have ever, or only exceptionally, seen before. Even when patients recovered well, there was generally a rise of temperature to 101·2-3° Fahr., and more or less continued cooling of the head required to prevent a further rise. But, in some of the cases treated antiseptically, recovery has been obtained with scarcely any elevation, 100° to 101° being the extreme. I may say that, in antiseptic ovariotomy, fever is the exception; whereas formerly it was the rule. If this experience should hereafter be confirmed by further observations, it would certainly be a very strong argument in favour of the universal adoption of the antiseptic system in ovariotomy; and the experience in Germany does bear out this view. A few days ago I received a letter from Dr. Olshausen, of Halle, giving me the results of his own practice and those of Esmarch, Hegar, and Schroeder, with and without antiseptics. Without, there were sixty-five cases and thirty-three deaths—more than one-half; while antiseptically, of one hundred and fifty-five cases, there were only thirty-three deaths, or scarcely more than one-fifth. Considering that these are the results obtained by the same operators in the same operation, and that the operators are all convinced that the greater success is mainly due to the use of antiseptics, it would be quite impossible to ignore, and very wrong to undervalue, the importance of such an array of facts. Opponents might, perhaps, explain them away; but we are not here either as opponents or as advocates. All we desire is to arrive at the truth, and to do the best that can possibly be done for every patient entrusted to our care. As far as the inquiry has hitherto extended, the results would encourage us to continue it carefully, but without being seduced into the extravagances of some whose faith in carbolic acid knows no bounds. I have been told of one surgeon who hardly ever thinks of washing his sponges. He throws them into a solution of carbolic acid, with complete confidence that whatever poison they may contain will be neutralised or destroyed. I have no objection to a little extra precaution. I am quite ready to put a clean sponge into carbolised water; but I like to know that it *is* clean before I put it in. I have more than once said, "This sponge had better be burned," and the reply has been, "Put it in one-to-twenty"; and more than once, noticing an unpleasant odour in the ward, I have suggested more cleanliness and ventilation, and have been met by the answer, "Oh, there is plenty of carbolic acid." Only two days ago, one of the most distinguished of the rising surgeons of the day told me that he had gone straight from a post-mortem examination to operate for strangulated hernia, quite confident that the spray and washing the hands with carbolised water would make him safe. Another, to whom I was showing the rounded trays in which I place my instruments, so formed that no deposit can rest in the angles, said, "Oh, I do not think that matters. One-to-twenty makes all safe." This undue confidence in antiseptics may lead to danger rather than safety, and so far I see no reason for altering the opinion I publicly expressed at Manchester last year, that "for my part I would rather operate in a clean, quiet, well-warmed, and well-ventilated building, be it large or small, without any antiseptic precautions, than run the risk of trusting to the neutralising or destructive power of chlorine or iodine, sulphur or tar, borax or the permanganates, salicylic or any other acid, in a place tainted by the presence of sewer-gas, or the seeds of some infectious or contagious disease." While ready and anxious to adopt any improvement, neglecting nothing likely to add to the safety of the patients who are confided to our care, we must not be led away by overweening confidence in any antiseptics to omit any of those precautions which experience has proved to be necessary, and we must be quite as cautious against the introduction of any contagious disease as we were before endeavouring to ascertain whether antiseptics will give us additional security. In a word, let us regard the antiseptic treatment not as a substitute for those measures which have already proved effectual, but as an additional safeguard. Time and further experience alone can show what the value of this hoped-for additional security may be. That it will prove to be of real and very great value I hope and believe. Experience, daily accumulating, encourages the hope and strengthens the belief.

(*To be continued.*)

CLINICAL LECTURES ON CERTAIN VARIETIES OF PHTHISIS AND THEIR TREATMENT.

DELIVERED AT THE HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON.

By JAMES EDWARD POLLOCK, M.D., F.R.C.P.,
Senior Physician to the Hospital.

LECTURE III.

(*Concluded from page 674 of last volume.*)

THE object of a change from this climate to any other is to secure facilities for being in open air more than is here possible, the avoidance of damp and wet weather, a shorter winter, so that much confinement indoors shall be avoided, and the absence of high winds from the north and east.

I cannot, of course, in a single lecture point out the localities most adapted for the residence of a phthisical patient, but general principles can be laid down which may guide us in every case. For the summer, at least, *elevation* of locality should be chosen; and in Switzerland there is accommodation of a good kind to be found at various levels up to 6000 feet above the sea. Here we have diminished barometric pressure, and a purer and dryer air; and to these causes are doubtless due the elastic and bracing feelings which we all enjoy at considerable elevations.

Let *pure* air be our first requirement, and *bracing* air—that is, dry, and drawn from elevations above plains and alluvial soil—be the next. For winter, shelter from severe winds, exposure to sun (which implies the absence of cloud and fogs), and a short winter, are the chief points.

A sea-voyage to the Antipodes, which implies daily exposure to the air, which is ever changing, offers many advantages to a certain class of phthisical patients. But there are many drawbacks—in ill-ventilated cabins, to which your patient will necessarily be confined at night, and in bad weather; and in the necessary great vicissitudes of temperature through which a long voyage will conduct him. There are, indeed, many dangers in such an expedition, and surgeons of ships which carry such passengers have again and again assured me that the risks are great, and the benefit only occasional. The want of variety in diet, and the absence of many acceptable, and even necessary, additions to the table of the invalid, obtainable only on shore, should also be well weighed before sending phthisical patients on a voyage.

For myself, I have been rather successful in the results of cases I have sent abroad; and this leads me to give you some rules for your guidance in their selection. These are my observations:—

1. Never permit any patient to travel who is not in the quiescent stage of disease—or who, in other words, is feverish, with high evening temperature, and the physical signs and conditions already described to you, indicating the continuous form of phthisis. Observe this rule, and you will be successful; break it, and your patient and his friends will not thank you.

2. None of the secondary complications should be present, as continuous or frequent diarrhœa, serious gastric disorder, or laryngeal irritation.

3. Chronic single cavity, with retraction of walls accomplished or proceeding, is favourable for removal to a dry bracing locality, if the hæmoptysical element be wanting in the case.

4. That form of disease which I have described as diffused deposit in one lung, without much dulness or signs of mass-

ing of disease, with pretty large chest, and with moderate emaciation, generally does well on a sea-voyage.

5. A first-stage case already chronic does best for travelling about, with frequent change of residence. The complication with bronchitis or asthma is generally much benefited by change.

6. Persons ought not to travel *at all* with feverish symptoms—with secondary complications—with a large amount of local disease in any stage—with both lungs diseased, with poor digestion and greatly lowered nutrition—or in such a state of weakness or emaciation as to require home comforts, peculiar beds or chairs, or varieties of invalid cookery.

I turn now to the management of a case of chronic phthisis at home: and this is a fitting place to say that we are familiar with very many cases which do exceedingly well in all stages of disease in this most abused climate of England.

True, you will say, but would not these cases benefit more by removal? Having seen many of these removals and the results, I answer that a vast number are better treated here. Improve their surroundings, give your patient well-ventilated chambers, guard him against noxious influences, and attend to all his smaller ailments at their outset, and it is wonderful how well many patients do at home. If consumption were a cold-catching, or a bronchitis, or catarrh, as popularly believed, *but as we know it is not either in origin or in fact*, we might have, nay, would have, many more advantages from foreign climates. But what is the natural history of phthisis? It is found everywhere, in all continents, most rapid and fatal in very hot climates—the West Indies, Italy, and Southern Europe. On the other hand, my experience, and the experience of this Hospital, enable me to say that chronic phthisis can be very favourably managed at home. Look at our results impartially, and you will be satisfied that a large amount of good is being done to both in- and out-patients, and, as I think, sufficient to justify the managers of the institution in building a new hospital with improvements in space and ventilation. The medical staff has not failed to impress on the Committee the advantages to be derived from having a convalescent institution in the country, where, on an elevated position and in pure air, we should find greater benefit to very many cases of chest disease than could possibly be obtained for them here on the low level and alluvial soil of the Thames valley. And I doubt not that, with the liberal views which have always characterised the management here, we shall one day see this great improvement added to this noble institution. It will then, indeed, be more eminently curative than it is now; and when wards are assigned to which acute cases capable of remedy can be instantly admitted, the mortality of phthisis will be assuredly much diminished. At present, owing to the numbers applying for admission, our cases are often delayed for weeks or months before entrance to the Hospital, when the disease, which was probably capable of arrest, is found to have drifted into the hopeless condition of progressive phthisis. This state of things has much increased the fatality of our cases, but it is a subject of deep regret to the Committee; and the new building, and increased facilities for the instant admission of cases allowing of immediate remedy, will do much to set it right.

I will now give a few general rules for prescribing for phthisis.

In all cases submitted to us we have to consider that which is adapted to combat the general condition of waste and lowered vitality of the patient, and next, to relieve his most urgent symptoms. And first let me say, let there be no useless prescribing. Let every drug ordered have a special object, and never give an unnecessary dose. Spare your patient all you can in the way of medicines; and for this end, and in order to watch the true effect of remedies, cultivate an extreme simplicity in prescribing. The homœopathic school, whom perhaps we brought down on our own heads by superabundant and multiform prescriptions, have this great merit—that they give one drug at a time.

Your patient's diet should be light and nutritive, and abundant without causing repletion. Distension is a common cause of retching, and mechanically gives distress and induces cough. Food at night will often check the colliquative sweating of phthisis, and secure sleep. In the early morning, when, you will remember, the patient's temperature and vital power are at a minimum, milk with a small quantity of rum will be highly useful; and milk should enter largely into his diet throughout the day.

The use of *alcohol* in phthisis appears to me to be very limited. As a reducer of temperature we need scarcely have recourse to it, and as it relaxes the arterioles and capillary circulation it would rather tend physiologically to increase the colliquative sweating. It is in its action in promoting digestion, in small doses, but above all in its temporary effect in raising and sustaining nerve-power at periods threatening collapse, that we find its greatest use in phthisis. At the occurrence of pneumothorax, and in the extreme period of disease when vital powers are rapidly failing, it may sustain cerebral exhaustion and add to the comfort of the patient. Such are its uses, but its abuses are manifold, for when taken habitually it is a promoter of degenerations, forwarding the changes in tissues generally the result of old age, and increasing destructive processes in the body. Viewed in this light it has its occasional use in phthisis, but cannot be regarded as a remedy in any but occasional emergencies.

The *nutrient and tonic* medicines rank highest among the agents adapted to influence all chronic disorders which waste the tissues and lower vital power. Among the first, indeed at the head of these, stands *cod-liver oil*. A prolonged experience of it at this Hospital has certainly not lowered its repute, but we have learned to use it with greater discretion than those who in its early days adopted it for every case of phthisis. Oil supplies a nutrient to the blood, and seems to enter the system through the lacteals, especially when given after food. In promoting the formation of fat in the tissues it probably supplies the form of fat-globule of which the system has been drained by a wasting disease, and there seems little doubt that it promotes favourable changes in the diseased products in the lung. It is counter-indicated where there is serious gastric disturbance, nausea, vomiting, and diarrhœa; and I have not found it useful where high temperature is maintained; neither does it do good when the patient greatly dislikes it. The dose is very commonly overdone, and in such cases it passes off by the bowels unchanged. I should say that more than one ounce in the day is rarely of use. Many years ago I made somewhat extensive experiments in feeding bullocks, sheep, and pigs with cod-liver oil, when the article was much lower in price than it now is. Part of a stock-farm in Essex was devoted to the purpose, where there was every facility for separation and comparison of the various modes of feeding. We found that the animals were more quickly fattened by the admixture of cod oil in their food than by linseed-oil cake, or any other diet; and here is direct proof of the weight-increasing power of animal oils. But we also found that we readily overdosed the animals; and especially in pigs it was remarked by butchers in distant places, who were not acquainted with the method of feeding, and to whom the carcases were sold, that the fat was yellow and "fishy" in flavour. We then reduced the quantity given, with advantage.

No class of remedy is more frequently given in phthisis than tonics—quinine, iron, and bitters, with either acids or alkalies. These all have their uses, but certain rules must be observed to insure success, and it is not a matter of indifference which we shall select.

Quinine as a reducer of temperature must be given in large doses, often even to the production of cinchonism, but its effects are only temporary, for the heat of the body rises soon after the drug has been reduced in quantity. But as a tonic and appetiser in small doses it is almost unrivalled, its combination with an aromatic being always advisable. Quinine will sometimes also check sweatings, but I have not found it cut short the daily chill, often amounting to rigor, in cases of advancing phthisis. For the purpose of stopping the morning shiver which occurs about 11 a.m., I have found arsenic the best remedy, and many careful observations made in the wards have satisfied me of its use. But it is curious that we did not observe the same result as against the *evening* chill and exacerbation.

As an *appetiser* strychnia is perhaps best; but an acid (as nitric) with a bitter (as calumba) is often found to clear a loaded tongue when purgatives have been given. As regards *purgatives*, they should, as a rule, be avoided, and, when used, the mildest are to be selected. I rarely find occasion to give calomel or blue pill, for a rhubarb draught and alteration of diet will answer all the purposes, and *at less cost* of strength to the patient. On the whole, my wards are managed with very few purgatives, and the choice

is given to laxatives which promote the peristaltic action, as aloes, nux vomica, and belladonna, rather than to those which produce watery motions and stimulate the mucous membrane. Mucous irritation is so common an event in chronic phthisis that we ought carefully to avoid in drugs or diet anything which might induce it.

As directly strengthening the patient, restoring the wasted red globules, and adding vigour to the muscular tissues, *iron* is a most important remedy. It is, however, counter-indicated where the temperature is high, or where there is gastric disturbance, red tongue, nausea, or diarrhœa. It should be withdrawn when these conditions are present, and it is not useful in progressive phthisis. I have known it precipitate the symptoms of early phthisis. The best preparation seems to be the perchloride in small doses, continued for a long period.

Before considering the important subject of congestion of the lung and hæmoptysis, I must say a few words about three symptoms which we are treating daily—cough, diarrhœa, night-sweats.

Every patient seems to have a cough mixture, but I am not sure that he often has the right one. Cough is that action of the respiratory muscles which has for its object the removal of secretions lodged in the air-passages. It is a reflex act therefore. Being a reflex nerve act, the result of a local irritation sending its message to the cerebro-spinal centre, and exciting secondary muscular action, it may be set agoing by any irritant in the air-track. Often there is no secretion to remove when the cough is dry. The part to which the irritation is always referred by the patient is the trachea.

When there is secretion the cough is a necessary act for relief, and if checked the distress would be increased, and this kind ceases when the secretion is removed. If the act of expectoration be distressing, and the matters difficult of ejection, with tightness of chest and of breathing, expectorants are indicated, as squill or antimony with alkalies. Again, a frequent irritative cough is very common is phthisis, which harasses the patient and prevents his sleep. For this opium or morphia is the appropriate remedy, and especially a combination with hydrocyanic acid much used in this Hospital. Sedatives applied locally, as in inhalation, will much relieve, and in many instances a small blister applied to the larynx.

Let us carefully discriminate, therefore, as to the two kinds of cough—that for the necessary relief of accumulated secretion, and that from irritation of a portion of lung or of the air-passages.

The first kind is most common on lying down and on rising, and should not be interfered with. For the latter those medicines which diminish nerve-sensibility should be used, and the relief to be obtained from sedatives properly applied is very great in phthisis. But what is more common than the mistake of advising expectorant mixtures of squill and even antimony for every kind of cough? It is fitting to speak here of *opium* in its various preparations. It has been well asked, "Who would undertake to treat phthisis without it?" While, however, its sedative power—that is, in allaying and lulling nerve-sensibility—is well known and daily put in action, its *sustaining power*, by which it retards vital destructive changes and exalts (for the time) vital power of resistance to disease, is less generally known. When a patient is staggered by a pneumothorax, or exhausted by inanition from inability to take food, and from the later events in phthisis—profuse hectic sweatings and diarrhœa—opium not only relieves his distress, but prolongs his life. For such purpose I prefer the solid form of pure opium given in repeated small doses day and night with camphor; and we have all witnessed its effects in calming and sustaining exhausted cases when so administered.

Diarrhœa I believe to be, on the whole, best met by opium and bismuth, the dose of the former to be increased or lessened according to symptoms, three to ten minims every few hours. The opiate enema is also of great value. These combinations are better than chalk and the ordinary astringents, catechu, logwood, etc. The bismuth appears to sheath the whole mucous tract; the opium restrains peristaltic action. Remembering the frequent ulceration of the glands in the ileum, I have used small blisters over the ileo-cæcal valve with great advantage.

For profuse night-sweats, which waste the patient, we find gallic acid in ten-grain does, oxide of zinc three to five grains, and belladonna the best remedies. Sponging with cold vinegar every morning is highly useful, and I have had opportunities of seeing the Turkish bath of great use. This latter remedy we hope to put in practice shortly, when our new buildings are completed.

Hæmoptysis is among the most important events of phthisis, and merits our most careful thought. It is of two kinds, the *congestive* and the *passive*. The first form may be present in every stage of phthisis. There may be, indeed, much congestion without hæmoptysis, and it is right to remember that the congestion is what you have to treat, and not the bleeding, which is rarely other than a relief to the over-charged lung. But we are all led away by names; and in nine cases out of ten, when called to a case of hæmoptysis with quick pulse and high temperature, we find the patient treated by gallic acid and various styptics.

Congestion, or inflammation, marked by rise of temperature, quick and somewhat hard pulse, flushing, and a sense of tightness at the chest, or even by fever, is a most serious event in phthisis, for we know it means a fresh infiltration around and into the alveoli, and that the products so blocking the lung form a centre from and to which disease extends. The physical signs show consolidation, more or less, of a portion of lung, and, in fact, the patient is undergoing a slight pneumonia, while he is said to be suffering from spitting of blood. It is a small pulmonary apoplexy, and ought to be treated as such. For this form give ice, cooling salines, light purgatives repeated in small doses, and cup your patient over the affected side; stop all stimulants and tonics and oil, and let his diet be on fluids, such as milk. The hæmorrhage I speak of is not going to be presently fatal, and although the patient and his friends may be alarmed at the sight of blood, it is not to be treated as a hæmorrhage, and styptics are not to be given. Far different is the passive, often large, sometimes immediately fatal, bleeding arising from eroded vessels or aneurism of a pulmonary branch (generally in a cavity). Your patient, if he survive the first gush of blood, which often fills up the whole bronchial tree, is pale, exsanguine, exhausted, and you must bring to the rescue the most powerful styptics, as turpentine, alum in full doses, acetate of lead, and ergot with digitalis. What we have got to do is to promote coagulation (nature's process for stopping the bleeding), and to excite contractility of the involuntary muscular coat of arteries. Our styptics do this, or they do nothing. Dr. Powell has well pointed out that in treating such hæmorrhages the faintness of the patient—as in all hæmorrhages, so in pulmonary—tends to coagulation, which is the very safety of the patient, and it must not be too readily interfered with by pouring in stimulants. The rational treatment is to promote the formation of coagula and the contractility of vessels. Stimulants may be needed, but must be slowly and judiciously had recourse to. As discriminative guides to the two forms of hæmorrhage I have described, the temperature and pulse are invaluable. I have pointed out to you the leading features of the two classes of cases, but of course there are some of a mixed character—congestions, in which increased loss of blood (after a certain quantity) would exhaust, and exhaustions from great passive bleedings which may demand instant application of stimulants to save life. But I think the above remarks are true clinical guides in the majority of cases. Let me here, also, repeat what I said in a former lecture, that an early profuse hæmoptysis is often followed by a long pause in disease, while occasionally also a first centre of morbid action takes place by blood mechanically settling in the lower parts of the lung, and inducing degenerative changes in the pulmonary alveoli.

Time warns me that I must draw these remarks to a close. In speaking of treatment, I have offered rational indications and the results of clinical observation rather than mere didactic axioms. The old prescriber gives little physic, but writes no aimless prescriptions; and let me conclude by saying that the most successful practitioner in phthisis is he who conducts his patient through the various incidents of a chronic disease with early treatment of the congestive complications and with the greatest amount of support to his vital powers.

Mr. Richard Davy has been elected Surgeon in charge of the Orthopædic Department at the Westminster Hospital. Lectures on the Surgical and Mechanical Treatment of Deformities will be given during each summer session.

ORIGINAL COMMUNICATIONS.

ON THE MANAGEMENT OF CHOREA.

By OCTAVIUS STURGES, M.D.,
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(*Concluded from page* 561 *of last volume.*)

III.

In order that the argument in favour of managing chorea in place of treating it with drugs, whether cogent or not, may be rendered complete it is necessary to mention in conclusion some of the contingent advantages of this plan as well as to meet some of the more obvious objections both to the method itself and the theory on which it is based.

And, first, it must be noticed that the drugs most commended in severe chorea are not such as can be given to children with indifference. Arsenic and chloral and opium and tartarised antimony do not cease to be poisonous when the recipients are choreic. On the contrary their danger is then heightened because the proper toxic effect of such remedies is not met by appropriate antidotes but rather noted with satisfaction as showing that the drug is really operative. We cannot reach the good without encountering the harm, and may even say that the harm is certain while the good is doubtful. The reality of this evil no practical physician will question. Does anyone suppose that a course of antimony continued through many weeks, as was lately the very common practice in chorea, contributed nothing to the wasting and loss of health which the disease entailed? And in the very free use which is made now of chloral and opium in severe chorea, pushing these drugs in fact almost without limit where death threatens, is no allowance to be made for the deadly character of such agents; or is it to be held that their force is entirely spent in combating the fatal issue? I am not saying now that such treatment is without justification—it may have the amplest,—I only say that in the final reckoning the remedy is to be taken into account as well as the disease. It would be true to say that on becoming violently choreic the patient encounters more dangers than those of his disorder and that, assuming the particular drug employed is not the fittest, (which must happen sometimes) disease and remedy combined may suffice to kill when either might have been survived taken singly.

Contrasting with this necessary evil to be encountered, more or less directly as part and parcel of specific drug treatment, is the necessary good which is inherent in the so-called moral treatment. It is one singular merit of this plan that it reaches back so as to embrace the whole intelligent life of the child. It is applicable, I mean (supposing it to be of service at all), to the daily routine of his life so soon as he has passed infancy, and has already obtained a hold before the first incentives to chorea begin to vex him. Now, however valuable arsenic or antimony may be in restoring steadiness to a child already choreic they will hardly be commended for schoolroom use. The moral treatment, therefore, supposing it to deserve the name, has the inestimable advantage of being beforehand, preventive as well as curative.

From this point of view (which I have endeavoured elsewhere to justify) we look beyond chorea as a disease and come to recognise its earliest suggestions in the universal disposition of childhood towards restlessness and the very imperfect and precarious command possessed by children over the muscles concerned in expression and emotion. With this insight we are not without means (sanctioned by a larger use and a more general concurrence than any of the Pharmacopœia) of reinforcing these feeble powers by suitable training and discipline so as to enable them to resist attack. The influence of such discipline is plainly seen in the better ordering of the limbs, of the face, and (most of all) of the voice which is to be met with wherever culture has been applied to any or all of these departments of muscular action. This better order implies not only an extended and more accurate use, but also an enlarged control.

It may be fairly questioned whether the prevailing system of educating children (a business which, as Dr. Bucknill has so well put it, is becoming more and more ours) is the best adapted to this end. It will be admitted that the constant appeal to the dull senses of infants by means of strange sounds, imbecile addresses and constant swaying about of the body has its origin rather in the maternal instinct than in any actual demand on the part of the offspring. Infants will sometimes respond to such treatment by gestures supposed to denote satisfaction and sometimes express, in the same imperfect way, tedium and satiety. But the case of the sensitive child is quite different. With the world quite strange and every event of its rapid life a new experience, with everything wonderful and many things alarming, a child finds itself regarded as a subject for mere amusement. Its inquiries and first guesses at truth, limited command of language, physical difficulties in the way of speech, and ignorance as yet of the wretched conventions of life, are either taken in the light of jokes or else as affording fit ground for reproof. It is true that children are very ready to concur in the playful treatment of their own mistakes and will even make efforts to sustain it by saying and doing what they know to be foolish. They abandon the serious investigation of phenomena, which is a strong passion with them, for the sake of notice and admiration which is a passion stronger still. Yet it seems hardly possible that the habit of self-reliance and the power of control, a growth which needs cultivation, can escape injury from such treatment. It may be urged that it is the children of the well-to-do who meet with this treatment most and that these are not more but probably less prone to chorea than the children of the poor. The reason is that these latter, while they miss the benefits of physical training, have their own special trials. Rich and poor are often found thus to share one disorder from separate yet kindred causes. Against the extravagant notice and exaltation of self-consciousness prevalent amongst the children of the rich must be put the early struggling and premature acquaintance with the stern realities of life prevalent amongst the children of the poor. To whatever extent it may be true that spoilt children are made thereby the more ready for chorea, there is no doubt at all, that overtaxed and overdriven children are its most favourite subjects.

And, indeed, with the insight which this latter class of patients affords of chorea engendered, as it so often is, not by a single terror but by a long course of trial, such as overschooling or insufficient rest in bed, or severe and unequal competition in exercise and play with older or stronger children, we have the best reason for discrediting any system of treatment whatever that claims to secure its object rapidly and uniformly. That it should be within the power of rest and judicious management to undo at once this long accumulating evil is immediately seen to be ridiculous. There is no proper proportion between the cause and the cure. With this conviction the moral treatment expressly limits its own performance and as the disorder grows plainly declares itself less and less able to cope with it. But to the unknown power of drugs everything may be committed. The notion of resisting disease by force here survives in full vigour, while the diversity of medicines and of their preparations is admirably suited to a theory of combat. With the failure of the first assault others can follow directed to a different point or with a greater force or a more concentrated energy. However reasonable it may be to urge that such measures have the common effect of weakening the resisting power of the patient, they still show that the practitioner is alive to the gravity of the situation, meeting severe disease with severe remedies. So long as it is known that we have at our command the power of narcotising or paralysing the patient into some sort of quiet it is certain that, in every case of extremity, we shall be called upon to use it.

The need is the more pressing to urge the claims of this moral treatment at a time when danger is remote. Even so it will apply to all but a very few cases of which the circumstances are so exceptional that it may be fairly doubted whether choreic convulsion is with them more than a symptom of some structural disease inevitably fatal. My conviction is that chorea of whatever severity (granting, of course, that, in the severest, bed and constraint are a necessity) is capable of no better treatment than that which has been advocated—the treatment of watching and waiting which in spite of protest has already displaced so many remedies. But my expectation is far less than this. Let but this method be applied at home to our ordinary every-day chorea on its first appearance, and let the spirit of it reach beyond the hospital ward to all who have the management of children. In this

way, as I believe, St. Vitus's dance already delivered from the hands of the priests and, in its old pattern as a popular and highly infectious disease, for the present abolished, may be still further suppressed by judicious *neglect* and the absence of that open attention and specification by means of which, in virtue of a principle which all the world recognises and shares, all disorders of the same class are matured and magnified.

In conclusion I would add a word in answer to those who assert that teaching of this kind implies a superficial reading of chorea which exaggerates certain features of the affection while it altogether overlooks the others.

It has been objected for instance that chorea is not a disease but a symptom and that scientific treatment should penetrate beyond such phenomena and seek the source of them, in rheumatism or vascular change or peripheral irritation of a material kind. I have discussed elsewhere these asserted relations of chorea. But as regards the precise form of the present objection it must be insisted that the distinction between symptom and disease is after all a mere distinction of convenience which it is quite possible to push to an absurdity, the very same phenomenon appearing now as a symptom and presently as the prime mover and source of disease. Thus, for example, violent choreic convulsion, having little in common with ordinary chorea, is sometimes, like other convulsion, only a symptom of disease of a nervous centre. It seems to be so in some of those very rare instances where it is associated with acute rheumatism and proves very rapidly fatal. But chorea, there is reason to believe, may of itself set up central changes in the brain and spinal cord and these may ultimately cause death when the chorea itself (a chorea, it may be, which has originated in sudden fright) has subsided.(a) Its relation now is obviously the converse of the former. It is no longer a symptom but the origin of the subsequent disease. It is the first step or, what is practically precisely the same thing it is the first recognisable step of a series. Every step in disease argues a step before and no one supposes that he can reach or would be able to recognise the very first. The altered functional use implies no doubt a correlative material change but of this change which is not itself accessible it is the first and sole evidence. It is not by choice therefore but by compulsion that the analysis ends where it does. Tracing the phenomena back to their source it is at this point of disordered movement that we finally lose sight of them. That for us is the starting point: the rest is hidden.

But when all the instances of chorea ending in death and associated with structural changes have been eliminated by how much do we diminish the sum of the affection? The disordered movements of ordinary chorea which endure for a while and then disappear leaving no trace behind, you may call symptoms or not as you please. It may be gratifying to some to hold the mind in suspense waiting for a revelation which the circumstances must for ever withhold. As a matter of fact the condition of the living patient supplies all the material for analysis we are ever likely to possess and this in so absolute a sense that the event of death, which alone could give us access to more, would at the same time impart such an element of exception as to forbid our drawing conclusions from that particular case.

But besides this charge of superficial observation, (which is too far from the present occasion to be discussed at length,) there are two other objections which may be very easily dismissed. The one is that the choreic state needs medicinal treatment inasmuch as it often coincides with an ill state of health, betokened by disordered secretions, malnutrition or anæmia, and that ample experience shows, all theories apart, that so soon as these defects have been set right the chorea begins to mend. The other is that the heart affection of chorea needs special care and treatment.

To the first objection it may be answered that my argument throughout has been mainly directed against drugs used as specifics, in the likelihood of their harm and the improbability of their good. As choreic children are not protected from the ill effects of these reputed specifics, so they are not excluded, I suppose, from the good effects of such drugs as may be suggested to the physician by their general state of health. The improvement of chorea and of hysteria with the improvement of health is a striking fact in the history of both affections. It seems indeed surprising that while noting the effect upon the temper and muscular disposition of sensitive children and young women—not of acute illness, but of the temporary worry of indifferent health, it should be so little admitted that both chorea and hysteria are primarily of mental origin, the appropriate expressions of outbreak in those functions, motional or emotional, which even in health are only partially controlled.(b)

To the other objection, namely that the heart symptoms need separate care, it need only be said that there is no indication whatever to guide us in the treatment of the cardiac irregularity and mitral regurgitation of chorea. Nevertheless, since it is one of the prime objects of the treatment which has been now discussed (a treatment which need not be less vigilant because it is not paraded,) to rest the overworked muscles and avoid difficult and unnecessary exercise, the condition of the patient owing to these precautions is precisely what we should desire for him if the heart symptoms had to be considered alone.

(a) See, for instance, Cases 4 and 6 of Dr. Dickinson's seven fatal cases recorded in his paper on "Chorea," *Medico-Chirurgical Transactions*, vol. lix.

(b) It has been urged lately that any attempt to refer chorea to the same category as emotional disorder is at once negatived by facts already ascertained in regard to cerebral localisation. This is so unintelligible a proposition that one cannot but suspect some confusion of thought the tendency of which would be to discredit Nature herself. The facts of emotion, it need hardly be said, are perfectly secure against all experiments whatever. In any apparent conflict it is the experiment that must be revised. Now it is given in these facts that certain emotions produce a certain character of muscular movements and the question has been raised whether the similar but more permanent muscular movements of chorea have a similar origin. This may be answered Yes or No, but it is not conceivable that any advance of knowledge in cerebral localisation should affect the answer. The determination of the several nervous centres concerned in movement (supposing it made) would apply equally whether the movements were prompted by emotion, by chorea, or by direct volition; it would throw no light upon any asserted relationship of these of a mental kind.

THE LAWS WHICH REGULATE MORTALITY FROM MEASLES.

By H. COURTENAY FOX, M.R.C.S.

(*Concluded from page 588 of last volume.*)

In the former paper I attempted to show what is the annual mortality from measles on the average of a long series of years; in what manner this mortality isinfluenced by difference of sex; and also what is the nature of its distribution at the different ages of life. It was pointed out that the mean annual mortality from this common fever is in England at the rate of 439 to each million of the population, and in London 567 per million. For the first two years of life boys are much more prone to die of measles than girls are; but after this age, curiously enough, the male sex appears to have the advantage over the female in the struggle with this particular disease. In both sexes, however, the mortality is observed to attain its maximum in the second year of life; it rapidly declines from this point; so that, in fact, the deaths from morbilli are almost entirely confined to infancy.

I pass on now to the questions numbered 4 and 5 in the preceding paper, namely—In what manner is the death-rate from measles affected by difference of season? and, What do we know at present of the frequency, duration, and intensity of the epidemic visitations of this disease?

4. The seasonal fluctuations of measles. I have before me the calculated mortality (with the usual corrections) from measles in London for every calendar quarter during the thirty-seven years 1840-76. The average mortality of the respective quarters during this extended period is as follows:

First quarter	133 per million.
Second „	147 „ „
Third „	123 „ „
Fourth „	164 „ „

It may be readily seen that the sum of these figures is equal to the annual mortality for London already quoted. A curious feature in the behaviour of measles thus comes to light. Its death-rate declines, as a rule, during the winter and summer quarters, and rises in the spring and autumn. There are two maxima in the year, that in the fourth or autumn quarter being somewhat the higher of the two. The greatest number of deaths in any month from morbilli have been registered in December. During January the number

falls very fast, and about the middle of February it touches its lowest point or first minimum. We may therefore infer that cold is not specially provocative of measles. From this point the deaths increase gradually until they reach their highest point, as a rule, in June. This is the first maximum for the year, and is not quite so high as that in December. A steady decline now commences, and continues until the second minimum is attained in September. Heat, therefore, as well as cold, appears to have no direct connexion with the spread of this disease. Each week after September shows a marked increase in the number of deaths until they touch their second maximum in December. The deaths in this month average twice as many as those in September. The general character of the seasonal fluctuations of measles may therefore be thus expressed: the mortality curve rises from each equinox to the following solstice, and it falls from each solstice to attain a minimum point shortly before each equinox.

5. Epidemics of measles. In discussing this part of the subject, I feel the want of a satisfactory definition of the term "epidemic," in order to know what to admit and what to exclude. For practical purposes, however, I include in this term all cases in which the quarterly mortality is above the average, omitting only those instances in which the excess is very small—say less than one-fifth of the average value. To enumerate the several epidemics of measles which have prevailed in London, even since the introduction of the modern system of registration, would occupy too much space. I will therefore content myself with making some remarks of a general character upon them. Though subject to great fluctuations, as we shall presently see, this disease has never been wholly absent from the metropolis during the last thirty-eight years. Not one week but has witnessed some deaths from this complaint. The actual number of deaths per week has varied within very wide limits, having once been so high as 168, and having on two or three occasions dwindled down so low as two. The distinct epidemics in London have been sixteen in number. The average interval from, say, the commencement of one epidemic to that of the next is consequently a little over two years. Sometimes it has been slightly shortened, at others it has been a little prolonged; but in general these epidemics have preserved a remarkably even march, succeeding one another at about two years' distance with considerable approach to regularity. Twice only did this interval exceed three years, and in each instance there occurred at the middle of the interval between two epidemics a transient rise in the death-rate, which quickly subsided, and which we may perhaps regard as an abortive epidemic.

The duration and intensity of the epidemic visitations of measles are subject to considerable variety. Some have passed over in about six months; the greater number were nine or twelve months in duration; whilst the longest of the series was protracted from the summer of 1841 to the winter of 1844. The most intense epidemic witnessed during the period under review occurred in the cold summer and autumn of 1845. The autumns of 1873 and 1847 come next in the order of severity. There appears to be a tendency for the severer visitations to occur in definite groups of years, and for these groups to alternate with other periods of relatively healthier years.

The following analysis will perhaps make this point clearer:—

Average Annual Mortality from Measles in London.

For the eight years	1840-47	. .	669 per million.
„ ten „	1848-57	. .	467 „
„ nine „	1858-66	. .	675 „
„ ten „	1867-76	. .	489 „

The first and third groups in this series are characterised by greater severity of epidemic prevalence. Why this should be so, it seems impossible to say in the present state of our knowledge. In the alternate ten-year intervals the epidemics are of a decidedly milder character, and they recur at rather longer intervals. A similar tendency to the occurrence of alternate batches of years of higher mortality and lower mortality is exhibited by the statistics for England at large; but, of course, the actual difference between one group and another is not so conspicuous as it is in the limited area of the metropolis.

Is the fatality of measles upon the increase or not? I nk that the above figures afford evidence of a slight increase—so far as London is concerned. For the death-rates of the third and fourth groups are respectively slightly higher than those of the first and second, with which they are comparable. It may be readily imagined that, were our knowledge confined to the last nineteen years only, we might form a very different conclusion.

The march of measles (or rather of those cases which come to a fatal issue) has thus been traced for nearly forty years. A twofold law of periodicity has been disclosed. The successive epidemics have recurred with tolerable regularity, and without any marked exception to the rule, at intervals of about two years. Besides this, the severity of the disease appears to be subject to fluctuation in accordance with a wider cycle of nine or ten years. If, in the future, measles observes the same rules by which its known course has been hitherto directed, we may assume that we are near the commencement of a fifth group of years, in which the epidemics will be rather more frequent and fatal than during the last decade, and will approximate to those of the first and third groups above described. The last time that it prevailed epidemically in London was in the spring and autumn of 1877. The mortality has since declined, and is at the date of writing this remarkably low. It will be an interesting matter to watch whether the same laws of conduct and recurrence thus shadowed forth are to guide its course in the future.

Stoke Newington.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

NORTH STAFFORDSHIRE INFIRMARY.

CASE OF OVARIOTOMY DONE ANTISEPTICALLY—RECOVERY.

(Under the care of Mr. FOLKER.)

[Reported by Mr. W. A. Frost, House-Surgeon.]

Mary Ann B., aged fifty-five, widow; a spare woman, of very quiet and contented disposition; six children, youngest aged sixteen; catamenia ceased ten years; general health good. In August, 1875, her abdomen began to enlarge symmetrically.

September, 1876.—Paracentesis, ten quarts of clear greenish fluid being withdrawn; the fluid immediately began to re-collect.

August, 1877.—Abdomen symmetrically distended, measuring thirty-four inches in circumference at umbilicus; ensiform appendix tilted forwards; wave transmitted freely in all directions on palpation. Paracentesis; ten quarts of clear brownish fluid withdrawn, after which a swelling twice the size of an orange, and freely movable, was felt in the right inguinal region.

April 9, 1878.—The cyst having again filled, patient was re-admitted. Abdomen at umbilicus measured forty-two inches and a half; other signs as before.

24th.—Breakfast at 8 a.m., consisting of tea, two eggs, and toast; at 11 a.m., beef-tea; patient in excellent spirits—cheerful, and hopeful. 2.30 p.m.: Ether having been administered, ovariotomy was performed by Mr. Folker, all the details of the antiseptic method being observed. The incision commenced half an inch below the umbilicus, and was carried downwards for four inches. The cyst being exposed, the hand was passed over its surface, and it was found to be completely free from adhesions. Cyst tapped, and twenty quarts of transparent brownish fluid withdrawn; the cyst itself was then drawn through the wound, the edges of which were kept in close contact with it. The pedicle, which was long, and of the thickness of the little finger, was secured by a clamp and divided. The wound was then closed by interrupted sutures of carbolised silk above and below the clamp, a few pieces of catgut being introduced at its lowest part for drainage. Antiseptic gauze and macintosh, and a flannel many-tailed bandage having been laid on the bed, the patient was lifted on to them, and the wound having been covered with protective, the dressings were crossed over the abdomen (overlapping considerably in front), and secured by the many-tailed bandage. A suppository of one grain of opium was introduced, and a

catheter left in the bladder. The pulse remained good throughout the operation; at its close it was weak but regular. The tumour consisted of a single large cyst with three smaller ones, the size of tennis-balls, attached to it, but not communicating with its cavity. The weight of the cyst was two pounds five ounces, and that of the fluid forty-six pounds four ounces. In the evening the temperature was 99·2°; pulse 88. Patient very comfortable, and had dozed at intervals. Diet: For the first twelve hours nothing but ice was given; then milk. On the fourth day chicken broth was added; and on the eighth fish diet was given.

Seventh Day.—The bowels acted for the first time, two enemata and a small quantity of castor-oil by the mouth having previously been given.

Eighth Day.—Dressings changed for first time; there was very slight fetor in the slough beyond the clamp, this was sponged with a solution of chloride of zinc; there was no redness about the wound, which had the appearance of having united throughout.

Tenth Day.—Dressings changed; no fetor.

Thirteenth Day.—On the dressings being removed the clamp was found to be free, a few superficial granulations in the situation of the pedicle. In changing the dressings certain antiseptic precautions were omitted. In the evening the temperature, which had been below normal for four days, rose to 101°, but there were no other unfavourable symptoms.

Seventeenth Day.—Sutures removed; wound firmly united. A few superficial granulations in situation of pedicle; cicatrisation took place here two days later.

Twenty-first Day.—Allowed to get up.

Twenty-eighth Day.—Discharged.

Temperature.—First day, a.m. 99·2°, p.m. 99·8°; second day, a.m. 99°, p.m. 99·6°; third day, a.m. 99·2°, p.m. 101·4°. It then fell to normal, and remained so, with but slight variations, until the evening of the thirteenth day, when it rose to 101°, falling to normal the following morning; remained normal until the sixteenth day, when the evening temperature was again 101°. The same the following evening; it then fell to normal, and there was no further rise of importance.

Remarks.—The above case was as favourable a one for ovariotomy as could well occur; the general health of the patient was good, and from her disposition she was unlikely to cause any difficulty in the after-treatment by impatience or irritability. The operation itself, too, was entirely uncomplicated. So many elements for a favourable prognosis being present, it is impossible to say whether the antiseptic treatment contributed to the result. It happens, however, in these very simple cases, where there is little shock, and no hæmorrhage or peritonitis, that death sometimes takes place from septicæmia. How far Lister's method will succeed in eliminating this cause of death can only be proved by statistics of all the cases operated on.

Colour-Blindness.—The *New York Medical Record*, June 8, in an article on this subject, while insisting upon the necessity of persons entering upon the railway or marine services undergoing examination by experts, observes that many of the colour-blind are aware of their defects, and for the purpose of retaining their positions educate themselves so as to keep the fact from others. They learn the names of colours, and, by the help of outward signs, with a keen perception of gradations of light and shade, they supply their want of sensibility by the exercise of their judgment. A remarkable case in point is that of a Mr. Butcher, who, put early in life to the carpet trade, shortly afterwards discovered that he was colour-blind. By close observation he made himself acquainted with the proper names of colours, and thus kept his defect secret from those about him. By educating his eye to the peculiar *warmth* imparted, when all the colours in carpets were said to harmonise he was enabled to raise himself to the position of salesman in a large house of business. As a matter of fact he could not distinguish reds and scarlets from greens and browns; orange and yellow he could select with ease. He eventually became blind from white atrophy from the blood-supply to the veins and retina being cut off. Thus the mere test of naming colours cannot always be relied on, and a more thorough and systematic examination is necessary.

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Medical Times and Gazette.

SATURDAY, JULY 20, 1878.

THE LATEST PHASE OF UTERINE SURGERY.

The neck of the uterus is the part of the organ most accessible to examination and treatment, and it is probably for this reason that the variations observed in its condition have been so much thought of, and so diligently treated. At one time inflammation and ulceration of the cervix were said to be the origin of most of the chronic diseases of women; and the speculum and the caustic were used with proportionate zeal. Then it was found that some cases of dysmenorrhœa, associated with malformations of the cervix, could be cured by incision of this part. From this basis of unquestionable truth the practice extended itself. One writer teaches that all cases of dysmenorrhœa are due to mechanical obstruction; when no such obstruction can be found, it being merely because our examination is imperfect. If so, the rule of practice obviously follows—when in doubt, incise the cervix. It was observed further, in some patients who suffered from too profuse uterine hæmorrhages, that after incision of the cervix (whether it be from some effect of the operation itself, from the slight local depletion involved in it, or from the rest and the other hygienic precautions accompanying it, is a point that has not been closely analysed), the hæmorrhage became lessened. Hence a further development—for metrorrhagia, incise the cervix. It was ascertained, also, by good observers, that in some cases of fibroid tumour of the uterus, division of the cervix was followed by considerable relief to symptoms. Therefore, a still further advance was made; and by some less careful specialists it became almost a routine practice to treat fibroids by incision of the cervix. Next, American ingenuity persuaded itself that by cutting the cervix, the canal of a bent uterus could be made straight; and therefore incision came in as the remedy for flexions. And hence, with a certain school of gynæcologists, for dysmenorrhœa, metrorrhagia, sterility, (and most uterine diseases have at least one of these symptoms,) flexions, and fibroids, incision of the cervix seems

to have become the grand remedy. And unfortunately, those who have advised and done this operation most largely, have been very chary of publishing their results. Successful cases have been published, but very few unsuccessful, although there is hardly any gynæcologist of any experience to whose knowledge has not come, not merely cases of unsuccessful result as to relief of symptoms, but of dangerous perimetric inflammation, and even death, following this operation. So far as we know, none of those who so largely advise this proceeding have published that which alone to a scientific thinker could be the only argument of any weight—*i.e.*, a detailed statement of the whole of their cases, the symptoms and local conditions for which done, and the result, immediate, temporary, and permanent, of each. We, therefore, are obliged to speak vaguely, for we have no definite facts; but we think there can be no question that by some writers the benefit of this operation, and the range of its utility, have been greatly exaggerated, and its dangers greatly underrated. Although it is a remedial measure of unquestionable value, yet it would seem that we are not yet in a position to define with accuracy, the cases in which a favourable result may be expected from it.

But now has come a swing of the pendulum the other way. Whatever benefits division of the cervix by the surgical knife or scissors may bring about, when the same thing is effected by nature in the process of parturition, it is, according to Emmett, the source of a vast deal of illness; and so, when he finds a patient with uterine symptoms and a fissured and gaping cervix, he performs a plastic operation, and sews it up again. A very well written paper by Dr. W. H. Baker, of Harvard University, has drawn our attention to this subject. He is in this matter a disciple of Emmett, and believes that about 9 or 10 per cent. of the total number of uterine diseases are to be ascribed to this cause. Emmett has performed his operation nearly 200 times, but we are not in possession of any detail concerning his cases. Dr. Baker, however, gives tolerably full particulars of five cases, and an examination of these cases will, we think, throw some light on this operation, and perhaps indirectly on the causes which have retarded the attainment of exact knowledge in gynæcological science.

We may say first that in each of these cases the fissures in the cervix were reunited by a plastic operation according to Emmett's plan; but to prevent repetition we shall not mention it again. The first case was in hospital a month, was discharged "cured," and "unfortunately could not be followed further"; that is to say, the patient had the benefit of a month's rest, and some local depletion (for the only danger of the operation is said to be from hæmorrhage), under which conditions most uterine diseases do improve. Particulars are not given as to the extent to which the symptoms were relieved, nor was the permanence of the cure ascertained. The second case had a retroversion, and we suppose some morbid condition of the interior of the uterus, though we are not told what. There was considerable hæmorrhage at the time of the operation—in other words, free depletion. After recovery from the operation, the uterus was replaced, and some intra-uterine applications of carbolic acid were made. This patient was discharged "entirely relieved of her sufferings," and four months afterwards continued well. A most satisfactory and creditable case; but it is not, to our mind, quite certain that it was the sewing up of the lacerated cervix alone which cured her; and that the depletion, the correction of the displacement, the intra-uterine applications, and the six week's rest, had nothing to do with it. The third case had a retroversion, a ruptured perineum, and a large cystocele. A month's preparatory treatment was required. Subsequently to the repair of the cervix, operations were done for the cystocele and the ruptured perineum, after which, the uterus having regained its natural position, the patient was sent home cured. She was heard from afterwards, and continued to do well. This case again was a most complex one. Whether the depletion, the prolonged rest, and the restoration of the uterus to its proper position, or the reparation of the fissured cervix, did the more good, we cannot but think at least open to debate. We ourselves incline to think the cervical operation the least important factor. The fourth case had a laceration of the perineum, and the remains of an old attack of cellular inflammation. The operation had to be delayed for four months, until the adhesion formed by the cellulitis had disappeared. The patient recovered without a bad symptom, and has since enjoyed good health. Here, again, it is not clear whether the symptoms were due to the cellulitis or to the fissured cervix. The former is usually thought more important; and there are no facts given in this case to demonstrate otherwise. The fifth case is the only one which was uncomplicated. We are told the patient would not have presented herself for treatment were it not for the annoyance of a copious leucorrhœal discharge. She had no pain of any kind, and, in fact, had so little the matter with her that it was difficult to make her understand the importance of an immediate operation. It was, however, performed, and since then, says Dr. Baker, "she has been free from the previous annoyance, and we feel sure saved herself a great deal of suffering which must have followed had not the operation been done." We cannot say we altogether agree with the belief expressed in the last sentence.

Out of Dr. Baker's five cases, therefore, three were so complex that it is not possible to be sure that the symptoms were due to the condition of the cervix, or the cure to the operation performed on it. In one the result was not ascertained. In the only uncomplicated case, and therefore the only one from which an inference can safely be drawn, the patient had so little the matter with her that it was difficult to get her to have an operation performed. From this case we should infer laceration of the cervix to be a very insignificant thing. Our examination of Dr. Baker's cases, therefore, brings us, so far as we can form a judgment from so few cases, to a conclusion quite different from his. We fully admit, however, that an opinion formed from such scanty data is very liable to modification.

We said that this paper threw light on the causes which have retarded the progress of gynæcology. It does so, by force of contrast. Want of exact diagnosis, want of care in ascertaining results, and of candour in publishing them, have been the causes which have led to the routine adoption of so many modes of treatment which have afterwards come to be looked on with suspicion, and to fall into disuse. Such a carefully ascertained and detailed statement of the facts as Dr. Baker has given is the only way by which new modes of treatment can be commended to the thoughtful and prudent. Work like this must in the end enhance the reputation of the author, whether it lead to the adoption of his practice or not. Had he published a string of cases described in this fashion—"laceration of cervix, leucorrhœa, induced sterility, operation for repair of cervix, cure"—he might perhaps for the time have led a large number of imperfectly educated dabblers in gynæcology to carry out the operation, and suffering women to submit to it. Unfortunately, he might have pointed to well-known names as his models in this kind of writing—this putting forth a series of names of symptoms and morbid conditions, ending with cure—a kind of thing which instructs no one, and is beneath criticism. It is on account of the manifest ability and fairness of the author that we have thought it worth while to examine his paper so carefully. We hope that he

will publish even fuller accounts of the subsequent cases which he may treat in the same way.

COMPOSITE PORTRAITS.

Mr. Galton, the accomplished author of "Hereditary Genius," has employed a modification of photographic appliances to determine the existence of facial types; and the system which he has adopted promises to be of great value to men engaged in more than one line of scientific research. Mr. Galton shows that from a number of portraits which have a general resemblance, though they differ in details, it is comparatively easy to construct a face which will be a typical representation of the portraits employed—a face which, to those unacquainted with the process, would be accepted at once as the photograph of an individual, and which, though unlike each of the portraits from which it was built up, still retains a general resemblance to all of them. Mr. Galton selects a number of photographs, similar, though not necessarily exact, in attitude and size. These he disposes in front of each other, so that a horizontal line passes through both pupils in each photograph, while another line passes vertically half way between the pupils and down the middle line of the face. In this manner the portraits are, with regard to essential features and planes, accurately super-imposed. When they have been thus arranged a photographic camera is placed in position before them, and the real process begins. If, for instance, eight photographs have been fixed, and they are of such a kind that eighty seconds would be required to take an accurate copy of any particular one of them, the most superficial portrait is exposed for ten seconds; the cap is then readjusted, the first portrait removed, and the second exposed. This, by the withdrawal of the cap from the object-glass, is in its turn acted upon for an equal time, and is then removed to make way for the third, and so on till each of the eight has been exposed, so as to leave an impression on the sensitised plate. The result is a "generalised picture." In the language of Mr. Galton's favourite doctrine of averages, the picture is "a composite of eight component portraits. Those of its outlines are sharpest and darkest that are common to the largest number of the components; the purely individual peculiarities leave little or no visible trace. The latter being necessarily disposed equally on both sides of the average, the outline of the composite is the average of all the components." These composite portraits are better-looking than the individual photographs from which they were compounded, "because the average portrait of many persons is free from the irregularities that variously blemish the looks of each of them."

Mr. Galton has as yet experimented mostly with the portraits of criminals, and the typical face which he gives in a woodcut is certainly very true to the general conception of the criminal type. The process, however, will be of greater value when the author of it, or those who pursue his simple method of investigation, can produce the representation of new and hitherto doubtful types, instead of illustrating types already completely recognisable. Mr. Galton indicates many useful purposes to which this system of photography may be subservient. Thus it may give us "typical pictures of different races of men if derived from a large number of individuals of those classes taken at random." Another use is the obtaining of a really life-like photograph of an individual by exposure under different phases of expression, and at intervals of time. Another would be the compounding of the most probable likenesses of historical personages from a collection of varying representations of them. From a sociological point of view another purpose to which Mr. Galton thinks his process to be applicable is not devoid of interest. "The last use," he says, "of the process that I shall mention is of great interest as regards inquiries into the hereditary transmission of features, as it enables us to compare the average features of the produce with those of the parentage. A composite of all the brothers and sisters in a large family would be an approximation to what the average of the produce would probably be if the family were indefinitely increased in number. . . . As regards the parentage, it is by no means sufficient to take a composite of the two parents; the four grandparents, and the uncles and aunts on both sides, should be also included." There can be no doubt that composites on this principle would be of much interest "in forecasting the results of marriages between men and women"; but the idea is quite as humorous as it is scientific. One can imagine in the reign of science the possibility of an ardent lover making a collection (previous to venturing on a proposal of marriage) of the portraits of his own and his sweetheart's grandparents, of their uncles, aunts, cousins, and more distant relatives, and entrusting the whole to a composite photographer for the production of the composite portrait, which would represent the average appearance of the issue from the projected alliance.

Much has been said, and little is known, of the physiognomical expression characteristic of certain forms of disease, and a late able and respected professor of the practice of medicine in a Northern university placed great reliance on the system of physiognomical diagnosis. There can be little doubt that diseases of certain organs are represented by certain kinds, not only of facial expression, but of facial form; but it is only in well-marked instances that this form and expression can be readily represented. Confirmed epileptics could easily be reduced to two or three facial types. Maniacs and melancholics are, as a rule, readily recognisable at sight; and even when the mind is not prominently affected, the face may assume a form and an expression which are of themselves sufficient to enable us to determine what system is affected by disease. The wasted and wan expression of the phthisical patient differs from that of the sufferer from malignant disorder. Abdominal diseases imprint upon the face the form and expression which approach more or less to the cast of features which has acquired the name of "hypochondriacal." Many faces suggest the existence of heart disease, different forms of disease even lending different expressions to the face. While, to give another familiar instance, renal and prostatic diseases have a facial physiognomy which is readily recognisable. It appears to us that by Mr. Galton's method it would be quite possible and exceedingly serviceable to determine the typical physiognomy of diseases; and by a single step beyond this determination it might be possible to arrive at the facial type indicating a predisposition to various forms of disease, so that the physician might claim the possession of the faculty not only of reading the *mind's* construction in the face, but of estimating by the study of facial types the existence, or the probable occurrence, of definite diseases of the *body*. In a report of Mr. Galton's paper, which appears in *Nature*, of May 23, 1878, he asks for materials which may enable him to prosecute his researches. Whoever is able to collect full sets of family photographs can safely venture upon the employment of them in the method pursued by Mr. Galton, inasmuch as the process does not produce the slightest mark of injury. And whoever has the inclination and the power to collect materials such as would lead to the determination of such types as we have suggested, could not do better than to entrust them to Mr. Galton, whose patience in research and moderation in generalisation are well known. Such inquiries call for wide co-operation, and if they could be popularly introduced, so as to supplant some insane

fashionable amusements, such as the collecting of old stamps and of fictitiously valuable crockery, a lasting benefit might be conferred on society.

THE WEEK.

TOPICS OF THE DAY.

Taking into consideration the different cases which from time to time are brought to light at the police-courts, no one can doubt that selfishness and the greed of gain are largely instrumental in aiding the spread of infectious diseases. Two recent cases are strongly illustrative of this assertion. In the first, a landlord of a beer-shop at Langley was summoned for exposing himself in his tap-room and the public street whilst suffering from small-pox. The evidence showed that in May last Mr. Dodd, surgeon, found the defendant suffering from an attack of this disease, and the Inspector to the Sanitary Authority called and gave the usual instructions as to isolation and disinfection. Later on, Mr. Dodd, understanding that the man could get into some fields by a back way, gave his sanction to his taking a walk there; shortly afterwards, however, the defendant was seen in his tap-room by Mr. Southey, the Medical Officer of Health, and, on his remonstrating with him, he said it was impossible to keep from people, and rather than do so he would go to gaol. It also appeared that he walked fifty yards along the highway to get into the fields. The magistrates fined this defendant £4 8s. In the other case a bailiff was charged at Liverpool with having seized and removed in the public streets furniture which had been exposed to infection from scarlet fever, and the householder was summoned for having transmitted the goods knowing them to have been so exposed. The latter affirmed that he believed the fever had disappeared some time; but the bailiff, who was warned of the danger, said he did not care, and removed the goods, including a sofa which had served as a bed for one of the fever patients. The magistrates acquitted the householder, but fined the bailiff 40s. and costs.

In further development of their scheme for providing classes for instruction in ambulance work, the Order of St. John last week opened another class at the barracks of the Honourable Artillery Company at Finsbury. Mr. Owen, of St. Mary's Hospital, who recently superintended the course of instruction at the Albany-street Barracks, delivered an inaugural address to a very large company; and subsequently Major Duncan, R.A., the director of the ambulance department of the Order of St. John, explained at some length the nature of the movement.

A shocking case of ill-treatment is reported as having occurred in the Gloucester County Lunatic Asylum, and three of the attendants have, on the preliminary inquiry, been committed to the next assizes for trial on a charge of manslaughter. Happily these cases of brutality in asylums are now of rare occurrence, but the present seems to have been a very bad illustration of the worst days of violence and force. An old man aged seventy-three, in a feeble condition and suffering from heart disease, was ordered by the assistant medical officer to be removed to a separate room on account of being restless. In carrying out this order the three warders in question appear to have used such violence that a post-mortem examination showed fracture of the breast-bone and nine ribs—four on one side, and five on the other. The principal witnesses are the patients in the Asylum, but Dr. Mackenzie, the medical superintendent, stated that the injuries were not consistent with due and necessary restraint of the deceased, even if he struggled to the extent represented, while he was of opinion that the patients who gave evidence on the inquest were quite competent to do so. If the charge of ill-treatment is substantiated on the trial, the sentence should be sufficiently severe to act as a deterrent for the future.

A new Hospital for the Paralysed and Epileptic was opened last week in Welbeck-street, Cavendish-square. It is announced that the consulting staff will comprise the names of Drs. Broadbent, Crichton Browne, F.R.S., Lockhart Clarke, F.R.S.; Mr. Callender, F.R.S.; Dr. Greenhalgh (diseases of women and children); Mr. Brudenell Carter, Ophthalmic Surgeon; and Mr. Lennox Browne, Aural Surgeon. The institution is called the West London Hospital for the Paralysed and Epileptic, and it seeks to supply a want which has long been felt—viz., a provision for the care of paralysed infants, who will be placed under the care of a thoroughly efficient matron. The accommodation, though limited, is very complete; and there is an electrical room, a gymnasium, Turkish, hot, and cold baths, and a cheerful ward for the children.

The *Sanitary Record* reports that, at the recent annual meeting of the Imperial Medical Society of the Caucasus, a paper was read by Dr. Dubelir on the sanitary state of the army of the Caucasus from April, 1877, to February, 1878. From the figures given it would appear that the losses from sickness and wounds during the ten months amounted to 13,780 men, or 6·4 per cent. of the total strength. Of these men 2579 were killed on the field of battle, 1330 died of wounds in the ambulances and hospitals, and 9871 were, according to Dr. Dubelir, carried off by sickness. During the first six months of the period under consideration the health of the troops was good; but during the last four months it was bad—7466 deaths from sickness occurring, as against 2405 in the first period. The principal cause of the mortality during the last four months was typhus, 3607 deaths being credited to that disease, or 48 per cent. of the total mortality from all causes. During the first six months 440 deaths occurred from typhus, or 18 per cent. of the total mortality.

Some investigations at the Hammersmith Police-court last week elicited a curious statement as to sanitary affairs at Acton. A healthy-looking old man residing at the latter place was summoned by the Local Board under the Public Health Act for carrying on the business of a fat-melter and pig-feeder, whereby he created a nuisance injurious to health. His premises had been under the notice of the Board for several years, and in 1872 the defendant suffered imprisonment on an indictment at the sessions. The Deputy Inspector of Nuisances deposed that he had detected the smell at a distance of 150 yards from the premises; and various witnesses residing in the neighbourhood were called, who pronounced it "awful" and "atrocious," while one went so far as to call it demoralising, as it caused men to fly to the bottle and tobacco as a relief. The magistrate, Mr. Bridge, appeared, however, to take a rather lenient view of the nuisance; he said that it was essential that the offal of London should be consumed somehow. He suggested that the defendant should agree to make alterations by which the business could be carried on without being a nuisance. The defendant ultimately agreed to do so, and the summonses were adjourned in order that the premises might be inspected by Dr. Whitmore and the necessary alterations suggested.

Sir Garnet Wolseley, who has been appointed to take the chief command in England's recent acquisition, the island of Cyprus, has selected a distinguished staff to serve under him. Sir Anthony Dickson Home, V.C., K.C.B., the head of the Sanitary Branch of the Army Medical Department, has been nominated Principal Medical Officer; and his distinguished services during the Ashantee War fully justify the

selection. He will be assisted in his duties by Surgeon-Major R. W. Jackson, C.B., another officer of Ashantee fame; and looking to the success with which all the medical arrangements of that difficult campaign were carried out, it will be conceded that Sir Garnet has acted wisely in securing the co-operation of such tried officers of the medical staff.

The weekly returns of the Sanitary Commissioner of the Punjaub, for April 20 and 27 last, give a terrible mortality from small-pox; in the first of these weeks 1302 deaths were registered, in the latter 1311. In one district, Gurjaon, 545 deaths were reported from this disease in the first week, equal to 40·6 per 1000 of the population, and 455 deaths in the second week, giving a death-rate of 33·9 per 1000. The steady persistency of this disease in the Punjaub threatens to make its visitation more fatal even than cholera, from which malady only one death was reported in each of the weeks under notice. It is surprising that the authorities cannot contrive more efficient means for securing the protective agency of vaccination, although doubtless all their efforts are much baffled by ignorance and prejudice.

We are unable to speak very hopefully of the prospects of this year's Hospital Sunday Fund. At the beginning of the present week the total sum received at the Mansion House amounted to £21,000—a result which shows no increase over last year's collection at a similar period. Moreover, if the sums obtained at the Roman Catholic places of worship on Sunday last are to be gauged by the results of the collections at the Pro-Cathedral, Kensington (£32), and St. George's Cathedral, Southwark (£19 18s. 9d.), the gross total will not be very materially increased. The managing committee of the Fund express a hope that the sum eventually raised will exceed £25,000—last year's total; but even if it does, it cannot be overlooked that the second year's collection realised £30,000; and thus, with increased organisation and more widely spread publicity, the movement has considerably lost ground in the metropolis.

THE MEDICAL BILL.

The hope, if any still remains, that the Medical Bill of the Government will become law during the present session of Parliament, appears to be growing "fine by degrees and beautifully less." On the evening of the 15th inst., various questions were put to the Chancellor of the Exchequer, and various suggestions made regarding the fate of Bills before the House; and Dr. Lush advised the Government to throw over the Medical Act Amendment Bill. In reply the Chancellor of the Exchequer observed that the time had hardly arrived for the formal "massacre of the innocents," but said he would tell the House on what Bills the Government laid most stress; and he then named the Cattle Diseases and the Intermediate Education (Ireland) Bills, the Highways Bill, two Scotch Education Bills, and four or five other measures. But he thought it would be premature to make any statement with regard to the Medical Bill. His acknowledgment, however, that important and lengthy debates may arise on various questions of general policy, and probably of foreign policy also, and that the Navy Estimates and other estimates, and the Indian Budget have still to be discussed, make his reticence with regard to the Medical Bill very significant.

GENERAL HOSPITALS AND OVARIOTOMY.

We understand that the Treasurer of Guy's Hospital has decided to deprive the Obstetric Physicians of that institution of the right of performing ovariotomy there. For the last two years they have performed that operation, under the sanction of the late Treasurer; and before that time, we are told, they did not claim the right to do so, though no rule against it was in existence. The decision now come to by the Treasurer must, we suppose, have been incited by some protest from the surgical staff of the Hospital; but, however that may be, it is, we think, a mistake. Obstetricians have to perform very delicate, serious, and difficult surgical operations, such as craniotomy and embryotomy, whether they be called physicians or surgeons; and we fail to recognise any valid argument against their performing ovariotomy also, especially in these days when the old lines of limitation of practice between the physician and surgeon are being very much overpassed, especially from the surgical side. Certainly, recollecting the account we lately published (page 514, vol. i. of the present year) of the wonderful success Schroeder had had with his ovariotomies, it cannot be said that obstetricians are likely to be unsuccessful operators. Moreover, the surgeons may more than probably find the action of the new rule recoil against themselves; for we understand that the hospitals at which ovariotomies are taken from the obstetricians and distributed among the surgeons—namely, St. Thomas's, the London, King's, and the Middlesex—have had, taken altogether, an average of only six or seven ovariotomies a year, King's having had only two in the last five years. If this be a correct statement, each of the surgeons of those hospitals has, on the average, had one case in about five years. But Guy's Hospital has had, with the co-operation of the obstetricians in sending in cases, about ten cases a year. Is it not likely that it will, under the new rule, sink to the level of those other hospitals? And this when the success that has followed the adoption of the antiseptic method of performing the operation bids fair to place the large hospitals much more nearly, if not quite, on an equality with the small ones with regard to success in ovariotomy.

REPORTS ON THE HOSPITALS AND ASYLUMS OF THE METROPOLITAN ASYLUM DISTRICT FOR THE YEAR 1877.

The Report of the Committee of Management of the Metropolitan Fever and Small-pox Hospitals at Homerton upon the work of the Hospitals during the year 1877, gives a short history of the means adopted to meet the increased requirements consequent upon the severe outbreaks of these diseases in London during that period. Much of the information supplied in these reports is divested of novelty, from the fact of its having been previously noticed when brought before the Asylums Board, but the records of the whole year unquestionably bear testimony to the energy and watchfulness of the committee. A singular fact is mentioned in connexion with the hospital for convalescent small-pox patients which it was found necessary to open at Dod-street, Limehouse: small-pox cases had occurred in this street shortly before the hospital was opened, but during the time it was open not a case was reported in the houses near it; several weeks after its close the disease again made its appearance in the immediate vicinity of the hospital. The Report adds that small-pox has very seriously disturbed the health and comfort of London twice during the past seven years, entailing a severe expenditure of life and money; and yet, notwithstanding such sharp lessons, the same state of things is allowed to continue year after year, no measures of a sufficiently comprehensive character, suited to the wants of this huge metropolis, being taken to arrest the ravages of disease. It is considered sufficient to provide hospitals for the pauper classes, while all other cases are permitted to remain in their own homes, spreading infection in every direction, and keeping the epidemic alive; and the earnest consideration of the Legislature and the public health authorities is called to this subject. The Report also suggests that re-vaccination should not be permitted to be optional, but should be made compulsory. Drs. Collie and Gayton, the Medical

Superintendents of the Hospitals, are very highly commended for the able assistance they have afforded the Committee at all times and under many emergencies.

Fulham.—As the present is the first annual report of the Committee of Management of the Fulham Hospital, it is principally devoted to a history of the circumstances under which the buildings, etc., were erected. The report of the Medical Superintendent, Dr. Fox, who is complimented for the manner in which his duties were performed, shows that a total of 629 patients were received; of these, 303 were convalescents from other hospitals, 320 were acute cases, and 7 were suffering from diseases other than small-pox. Of the acute cases, 47 died, being a mortality of 14·72 per cent., a rate lower than at any other hospital of the Board, and which may probably be attributed to the fact that the patients in the Fulham Hospital came from healthier localities than the majority of those admitted into the other hospitals, and that the disease was consequently of a less virulent type.

Clapton and Darenth Asylums.—This is the third annual report of the Committee, and commences by detailing the steps taken in constructing the permanent establishment at Darenth, which it is confidently expected will be ready for the reception of the children in October next. It is stated that the managers and the Local Government Board have approved the recommendation of the Committee to erect blocks and workshops adjacent to the school for the reception of children sixteen years of age, who, not being cured, are compelled to leave the school at that age, and who, through having from their childhood been trained to habits of order and cleanliness, and by the value of their trained labour, will be maintained at a lower cost than the patients received direct from the parishes and unions into the ordinary adult asylums. The Medical Superintendent of the Temporary Asylum at Clapton, Dr. Fletcher Beach, states that the death-rate for the year 1877 (3·8 per cent.) is the lowest since the opening of the Asylum, and is, in his opinion, in a great measure due to the building being warmed throughout, to improvement in the general health of the inmates, and to the admission of a less number of weak and helpless cases than heretofore.

Stockwell.—The Stockwell Fever and Small-pox Hospitals have been in much request during the year 1877; at the former 837 cases were admitted during the year, and at the latter 1574, which, together with 152 remaining at the end of the year 1876, gave a total number of 1726 small-pox patients treated during the period. The mortality from fever was 18·9 per cent., and from small-pox 17·2 per cent. The Committee regret to have to report that erysipelas has continued to show itself in the Hospital, which, in their opinion, will render it necessary for the whole building to be thoroughly cleansed and repaired. The cost per head for the maintenance and clothing of patients in the Fever Hospital was 9½d. and 9d. for the half-years ending Lady Day and Michaelmas respectively; and for small-pox patients 1s. 1½d. and 1s. for the corresponding periods.

LONGEVITY IN WEST SUSSEX.

Dr. Charles Kelly, Medical Officer of Health, in his fourth annual report on the condition of the Combined Sanitary District of West Sussex, gives some further particulars as to the ages attained by agricultural labourers in that part of the country. The mean average of 898 cases was 62·9 years. Of this number 308 died under, while 590 died over, sixty years of age; 9 died under twenty years of age; 60 between twenty and thirty; 61 between thirty and forty; 69 between forty and fifty; 109 between fifty and sixty; 198 between sixty and seventy; 239 between seventy and eighty; 134 between eighty and ninety; and 19 between ninety and one hundred. These labourers very seldom suffer from any form of fever, and, from being constantly in the open air, their lives, if monotonous, are at least healthy; the greater number die of old age, and some from apoplexy and brain diseases. In Sussex, Dr. Kelly remarks, as in other southern counties, the birth-rate is always lower than in the northern and manufacturing districts. The death-rate in the small towns and country parishes was 18·2 per 1000 for the year under notice, while the mean of the previous ten years was 19·3 per 1000. In the other division, which comprises the chief towns, the death-rate for the year was 22 per 1000, and the mean of the previous ten years 24·1 per 1000. From these returns it may be gathered that the mortality in West Sussex is less than in other similar areas; and Dr. Kelly points out that this may, in a great measure, be expected, because the climate is mild, the rainfall moderate, and the villages and hamlets scattered over a wide area. Dr. Kelly's report comprises separate returns from six rural and three urban districts, and gives a sanitary history for the year of the whole of West Sussex.

THE PARKES MEMORIAL FUND.

At a meeting recently held at Netley, of the subscribers to the Parkes Memorial Fund, to consider, among other matters, the replies to the circular relative to the disposal of the collected money (the replies being found in all cases to agree with the proposal adopted in April, 1877), it was resolved:—"1. That a prize of one hundred pounds in money, and a large gold medal bearing the portrait of the late Dr. Parkes, be given triennially for the best essay on a subject connected with hygiene, to be declared at the commencement of each triennial period, the prize to be open to the medical officers of the Army, Navy, and Indian Services, of executive rank, on full pay (with the exception of the officers of the Army Medical School during their term of office). 2. That the subject for the first competition for the above-named prize be as follows:—'On the Effects of Hygienic Measures in Arresting the Spread of Cholera.' 3. That the essays be sent in to the Committee of the Parkes Memorial Fund, care of the Director-General, Army Medical Department, 6, Whitehall-yard, London, S.W., on or before December 31, 1880. Each essay to have a motto, and to be accompanied with a sealed envelope bearing the same motto, and containing the name of the competitor. 4. That a bronze medal (also bearing the portrait of the late Dr. Parkes) be given at the close of each session of the Army Medical School to the best answerer at an examination in hygiene."

THE ILLNESS OF PROFESSOR SKODA.

The celebrated Clinical Professor of the Vienna University has been for some weeks past dangerously ill from a very severe attack of gout, which, although borne with great stoicism on his part, has caused much anxiety in the professional world and among his wide circle of patients, to whom his loss would be regarded as irreparable. For the last fifteen or twenty years he has from time to time been subject to these attacks, which have much shattered his constitution; but the present one seems to be of unusual severity, the pain being almost insupportable, and accompanied by sleeplessness. Commencing in the great toe, the disease has subsequently manifested itself in various joints, and in the foot there has been suppuration and necrosis, with the discharge of a vast number of chalk-stones, which have sometimes required the aid of the forceps for their removal. The last reports, as published in the *Allg. Wien. Med. Zeit.*, represent his condition as much improved, the pain having abated and sleep having been procured. He has been attended by Profs. Dittel and Schrötter; and his elder brother, Hofrath Dr. Franz Skoda, although in his seventy-eighth year, hardly ever leaves his bedside.

THE HEALTH OF SCOTLAND.

The return of the Registrar-General of Scotland for the month of June last records the deaths of 2348 persons in the eight large towns during that period. Allowing for increase of population, this number is 275 below the average number for June during the last ten years. The deaths of children under five years of age were 1079, or 46 per cent. of the total number; and zymotic diseases proved fatal to 432 persons, or 18 per cent. of the mortality. This rate was not greatly exceeded in any of the towns, those having the greatest proportion being Glasgow, Edinburgh, and Aberdeen, where whooping-cough was prevalent, and Paisley, where scarlatina and fever prevailed to some extent. Whooping-cough still continues the most fatal of the epidemics, and appears to be on the increase, having caused 200 deaths, or 8·5 per cent., during June, as compared with 177, or 7·4 per cent., during May. Of the 2348 persons, one male and three females were aged ninety years and upwards, the eldest of whom was a female aged ninety-eight years and a half.

THE HEALTH OF DUBLIN.

On Friday, the 5th inst., the Superintendent Medical Officer of Health for Dublin (Dr. E. Dillon Mapother) submitted to the Public Health Committee of the Corporation the following report on the health of the city for the four weeks ended Saturday, June 29, viz.:—That the deaths during the past four weeks had been 635, or 25 per 1000 annually, while the rates in London, Glasgow, and Edinburgh had been 21, 26, and 22 respectively. The number of deaths in the corresponding periods of the last ten years gave an average of 563. In public institutions 205, or nearly one-third of the entire deaths occurred. By zymotics 179 deaths were caused, including 31 by whooping-cough and 77 by small-pox, but of the latter 18 took place in former weeks or in districts outside the city. In view of the continued prevalence of small-pox the following resolution was unanimously adopted, viz.:—"That the Local Government Board be requested to consider the advisability of putting into execution the power vested in it for the prevention of the spread of epidemic diseases, the present outbreak of small-pox in Dublin having now lasted over six months, and there being little sign of its diminution, despite every exertion of this Committee." The Superintendent Medical Officer of Health does not seem to have stated that of the 635 deaths registered in the four weeks ending June 29, 510 occurred within the municipal boundary of Dublin, the death-rate within which was 27·6 per 1000. This is the district over which the Public Health Committee exercises control as the Urban Sanitary Authority of Dublin. It appears rather late to call upon the Local Government Board to put their powers into force when the small-pox epidemic has been already raging for six months.

THE JESSOP HOSPITAL FOR WOMEN, SHEFFIELD.

On Monday, the 22nd inst., there will be opened at Sheffield a new Hospital for Women, erected and furnished throughout by the munificent liberality of Mr. Thomas Jessop, J.P. According to the accounts we have received, the building promises to be one of the best of its kind, not only in regard to its architectural beauty, but also in respect to its practical comfort and convenience. Exclusive of the outlay for the site, it is estimated that the building and its furnishings will cost Mr. Jessop at least £22,000; and, as was to be expected, the institution will be named "The Jessop Hospital for Women," in recognition of the beneficence of the donor. The Hospital is divided into two portions, one of which is the hospital proper, and is intended for the treatment of ordinary female patients, while the other portion will be occupied by midwifery cases. Though both are under one roof, the two departments will be practically distinct, there being no internal communication between them, and each having a separate administration. There is also extensive accommodation for an out-patient department. Much attention has been paid to proper ventilation and other sanitary details, and Mr. Jessop has greatly enhanced his noble gift by providing not only convenient but also cheerful and even elegant furnishings in all parts of the building, The architect was Mr. J. D. Webster, of Sheffield, on whose skill and care the building and general arrangements reflect great credit.

DUBLIN ARTISANS' DWELLINGS COMPANY.

The fourth ordinary general meeting of this Company was held on Saturday, the 13th inst. In the absence of Sir A. E. Guinness, Bart., M.P. (Chairman), Mr. Richard Martin, D.L. (Deputy Chairman), presided. The Secretary (Mr. E. Spencer) read the report of the directors, from which it appeared that the capital subscribed is now £31,940. The statement of accounts shows that on June 30, 1878, there remained in bank to the credit of capital account the sum of £430 16s. 9d. The buildings in Echlin-street and Upper Buckingham-street were not ready for occupation last January, as it was expected they would have been; they are, however, now nearly completed, and have been in part let, the former since March, the latter since May. One block of the Dominick-street buildings, containing twenty-four tenements, has been completed since the commencement of the present month, and is now let. Of 114 completed tenements, ninety-nine are occupied, and eighty-one tenements are still unfinished under the existing contracts. The entire revenue for the half-year, including balance of £51 2s. 3d. brought forward from last half-year, amounts to £336 15s. 2d., out of which the directors recommend a dividend at the rate of 3 per cent. per annum, which, after providing for the ordinary expenses and the usual proportion of preliminary expenses, will leave a balance of £2 6s. 5d. to be carried to next account.

QUEEN'S COLLEGE, BIRMINGHAM.

At a meeting of the Council, on July 12, Dr. Sawyer was elected Professor of Materia Medica and Therapeutics, in the place of Dr. Mackey, resigned; Dr. Rickards, formerly Professor of Physiology, was appointed Professor of Pathology in succession to Dr. Sawyer; and Mr. Henry Eales was elected additional Demonstrator of Anatomy.

MEDICAL PARLIAMENTARY AFFAIRS.

Vivisection.—In the House of Lords, on Friday, July 12, Lord Truro presented a petition protesting against the constitution of the Royal Commission on Vivisection, and the conclusions at which this Commission had arrived. He said that two or three of the scientific members of this Commission were partisans of vivisection. He did not think the report of the Commission was justified by the results. Viscount Cardwell thought it would have been more seemly to have discussed the merits or demerits of vivisection when the Bill founded on the report of the Royal Commission was before their Lordships' House. He could say affirmatively that no partisanship was shown by members of the Commission, but all had manifested the greatest anxiety in the cause of humanity. Lord Truro ought to have taken the opportunity of criticising the measure before it received the sanction of their Lordships' House.

Pollution of Rivers.—In the House of Commons, Mr. Sclater-Booth replied to Sir U. Kay-Shuttleworth, that he could not say how many orders requiring offenders to desist from polluting rivers had been issued under the Act of 1876. The local authorities generally had endeavoured to enforce compliance with the Act, and he was certain that all practical measures had been taken by the inspectors to prevent improper pollution of rivers. In three cases the inspectors

had been asked to give certificates that all matters had been carefully kept out of the rivers, but the certificates were refused.

Artisans' Dwellings Act.—Mr. J. Lowther said that Ireland, in proportion to the estimated population, had availed itself of this Act far more largely than other portions of the United Kingdom, with a view to improve workmen's dwellings. Mr. Cross remarked that the time had, he thought, now come when an inquiry should be made into the reason why, in some parts of England, no attempt had been made to provide dwellings for the working classes, even after an official report had been made according to the provisions of the Act.

Inoculation of Cattle.—Sir H. Selwin-Ibbetson, in reply to Sir P. O'Brien, on Monday last, said that the result of the inoculation of cattle for pleuro-pneumonia had not been generally successful. The Government are not prepared to introduce a clause into the Cattle Bill rendering such inoculation compulsory.

Contagious Diseases (Animals) Bill.—This measure passed into Committee on Tuesday last, and progress was reported upon Clause 2.

ACTION OF IODIC ACID, "SULPHOMOLYBDIC ACID," AND FERRIC CHLORIDE, ON MORPHIA AND VARIOUS OTHER SUBSTANCES.

In the recent Chantrelle trial at Edinburgh we had for the first time the so-called sulphomolybdic acid test for morphia brought into a prominent position. In a very valuable article on the trial which has since appeared in the *Edinburgh Medical Journal* occurs a passage so important *à propos* of the test for morphia that we venture to reprint it in its entirety. The passage is from the pen of Mr. David Brown, of the firm of Macfarlan and Co. This gentleman has taken much pains in the matter, and, as it seems to us, has settled the value of the sulphomolybdic acid test. No doubt this is good when perfectly pure morphia in the solid state can be used, but such can rarely be the case in toxicological inquiries, especially in medico-legal cases. Stas's process is the basis of all now in use for the recovery of vegetable alkaloids from the stomach or other organs; and inasmuch as Mr. Brown, in a foot-note published here below, has kindly informed us that the sulphomolybdic acid test is here inapplicable, we fear it will be found of little value in any such case. This opinion we ventured to express when writing on the subject, but it is always well to have one's own private opinions confirmed by others.

Action of Iodic Acid and Starch on Morphia.—When $\frac{1}{2000}$th of a grain of muriate of morphia dissolved in a drop of water was moistened with a little starch paste, and a particle of iodic acid was added, a blue colour was instantly developed, which soon disappeared.

Action of Iodic Acid on Grape Juice.—The juice was simply squeezed from the fruit, and a few drops mixed with starch paste, a crystal of iodic acid being then added. No colour appeared even after three hours. A quantity of the same juice was evaporated to dryness at the ordinary temperature over sulphuric acid, and the residue likewise gave negative results. The dry alcoholic extract similarly treated gave at once a dirty blue colour, which gradually disappeared. With the ethereal extract prepared by Stas's process no coloration could be obtained.

Action of Iodic Acid on Orange Juice.—Orange juice, with iodic acid and starch, gave a blue colour instantly. The dried juice behaved in the same way. No definite reaction could be obtained with the alcoholic extract, only a faint streak of violet generally appearing, which did not increase. The ethereal extract prepared by Stas's process had no effect on the iodic acid.

Action of Iodic Acid on Saliva.—Iodic acid and starch produce immediately with saliva a bright blue. This reaction takes place equally well with dried saliva. When the saliva has been mixed with acetate of lead, and the lead removed by sulphuretted hydrogen, the iodic acid reaction is much less distinct.

Action of Iodic Acid on Mixture of Orange Juice and Saliva.—A violet colour is immediately produced. This reaction resembles that of morphia, but there is in this case no alteration in the colour, the blue tint not being developed.

Action of "Sulphomolybdic Acid" on Morphia.—With a drop of the sulphomolybdic acid, $\frac{1}{2000}$th of a grain of muriate of morphia gave immediately a rich purple colour, which rapidly disappeared, the liquid assuming a brown tint, which in turn passed into blue. This occupied fifteen minutes, and in half an hour the colour had altogether disappeared. The proportions of the reagents were varied, but the results did not materially differ. Free morphia deports itself in precisely the same way. The presence of water interferes with and may altogether prevent the reaction.

Action of "Sulphomolybdic Acid" on Grape Juice.—With no proportions could any coloration be obtained until the lapse of nearly half an hour, and then the colour was very faint and quickly disappeared. In the case of dried juice the reaction was practically the same. The alcoholic extract gave varying results, but the shortest time in which any trace of blue appeared was five minutes, the colour taking about ten minutes to spread through the liquid, and being of an obscure, dirty shade. The yield of ethereal extract by Stas's process was extremely small. It gave an evanescent, reddish tint with sulphomolybdic acid, which, however, did not develope into blue, except in one instance, when the colour appeared in a few minutes.(a) It must here be noted, however, that in examining the product of Stas's process, there is no use in applying the molybdic test, unless special precautions have been taken to get rid of the alcohol, as the least traces of that fluid will reduce the molybdic acid, giving the same blue colour as if morphia were present.

Action of "Sulphomolybdic Acid" on Orange Juice.—No coloration was obtained with the fresh juice. When the dried juice was employed a faint blue made its appearance in from ten to fifteen minutes. With the ethereal extract of orange (Stas's process) no blue colour was produced.

Action of "Sulphomolybdic Acid" on Saliva.—With the natural saliva no reaction was obtained, but when it was evaporated to dryness and mixed with the molybdic acid, a slight blue colour appeared after the mixture had stood for more than thirty minutes.

Action of "Sulphomolybdic Acid" on a Mixture of Orange Juice and Saliva.—No blue colour was obtained until about half an hour, and it was not distinct. A mixture of saliva and orange juice was evaporated to dryness and tested in the same way, with the result that the blue tint made its appearance in about twenty minutes, but was not very decided until some time longer.

Action of Ferric Chloride on Morphia.—A blue or bluish-green is produced, even with $\frac{1}{2000}$th of a grain.

Action of Ferric Chloride on Meconic Acid.—The wine-red tint is perceptible with $\frac{1}{12000}$th part of a grain, but that is about the limit of the reaction. The colour is very distinct with $\frac{1}{2000}$th of a grain.

Action of Ferric Chloride on Saliva.—A slight orange-red tint is produced both with the moist and dry saliva. This colour would not be mistaken for the wine-red of meconate of iron.

Action of Ferric Chloride on a Mixture of Orange Juice and Saliva.—Nothing but an orange colour could be obtained either with the moist or dry mixture.

Action of Ferric Chloride on Vinegar.—Samples of white, brown, and French vinegar were tested; but perchloride of iron, however applied, failed to produce a red coloration. The residue from the evaporation of the vinegars was likewise tested with negative results.

Besides the experiments which have been detailed, mixtures of orange and grape juices, and of orange juice, grape juice, and saliva, both in their natural state, and evaporated to dryness, were tested with the same reagents as were used in the other cases, but the results were just such as might be anticipated from the foregoing experiments, and it would be superfluous to give them in an extended form. In every instance several experiments were tried, and that giving the most decided reaction is the one described.

(a) This sentence refers to and applies to all operations when the final solvents employed are alcohol or liquids containing it—such, for instance, as ordinary 725 ether; and it was inserted for the purpose of drawing attention to a possible source of error in applying the sulphomolybdic acid test when such solvents had been used.

RETREATS AND REFORMATORIES.

(From a Correspondent.)

There is one subject which will, we hope, be very carefully considered by our legislators before they pass the Habitual Drunkards Bill—namely, the desirability of the "Retreats" being placed under the control and supervision of the State. Retreats for drunkards will be much in the same category as Reformatories for vicious children, the difference lying principally in the fact that the Reformatories are intended to reclaim the poorer, and the Retreats will probably be devoted to restore the richer, offenders against the laws of morality. Now, we observe that at the present Midsummer Sessions for Somersetshire, Reformatories are noticed as not working satisfactorily, for the very reason that, although they are sanctioned by law, they are still quasi-private institutions, making regulations with which Government cannot interfere. We fear that if "Retreats" are exempted from complete control, the cure of the patients may become a really secondary consideration. "Institutions" will be opened by philanthropists of limited reasoning powers, who mix up benevolence with greed, and make a living out of the necessities of their fellow-creatures. At the present day, orphans, Indian children, nervous people, and semi-idiots may rely upon finding philanthropists to take care of them "for a consideration." We do not say that these care-takers do not endeavour to do their duty by their charges—and some unquestionably do it right well,—but we are very sure that many of them deceive themselves if they imagine that their benevolence is not tempered by their impecuniosity. The two things are "muddled," to say the least of it; and to what an extent the confusion of ideas may be carried is easily seen by a model advertisement, where a gentleman founds his ability to become a father to the fatherless on the gratifying fact that he is intimately and legitimately connected by various marriages with the Royal Family of England. We do not doubt the benevolence of the advertiser, and we have no reason to suppose that he would be unwilling to lead little orphans along the "royal road to learning," but we cannot follow his logic. Unknown to himself, he has, we imagine, mixed up the desire of increasing his income with the generous love of providing for and instructing Indian children. Hundreds do the same. The widows of the cousins of general officers, the grand-nieces of bishops, and the maiden aunts of Oxford professors, are ready to do their duty by the ignorant, the imbecile, or the nervous—who can pay for benevolence. Poor people! They do not know it, but they trade upon the helplessness of their fellow-creatures. When Retreats are established there will be an opening for a lower class of benefactors. Those who feel so inclined may trade upon the *shame* of their fellow-creatures if "Retreats" are allowed to become private or even semi-private institutions. The habitual drunkard will pay for concealment, and although it will be necessary to avoid exposure, it is not necessary, nor right, nor proper that a patient who enters a Retreat should be made to pay for concealment. Retreats under private management may lead to extortion and exorbitant demands, and, what is of almost as much consequence, the treatment of chronic alcoholism would be neglected. Plenty of people devoid of medical education think that they are competent to restore the health of a constitution impaired by drink. Everybody has a nostrum of his own, and is ready to try an experiment upon the drunkards stomach. In the debate on the Habitual Drunkards Bill it was stated that in Sweden the food of habitual drinkers was flavoured with the spirit of which they had grown to be too fond, until the unhappy wretches got to loathe their former source of delight. Now, this is an example of a kind of plan of treatment not unlikely to prove captivating to keepers of Retreats. There is even a sort of grim humour about it which would doubtless recommend its practice to teetotalers; but we would object to any plan of treatment which was to be indiscriminately exercised upon all stomachs alike. The rule may suit Swedish stomachs; but there must be varieties of digestion even in Sweden, and we doubt whether the treatment of individuals had not better be left to medical practitioners, who have at least learnt what unprofessional people never learn—that a "nick-named" disease is never the same disease in two different individuals. But the patients in Retreats have a double claim on medical men. It is not only that they are sick, but also that they are utterly and entirely helpless when once they have become patients. It might be well if in all cases of disease patients were equally bound. It would be good for the gouty man were he to be the bond-slave of his doctor until the gout was healed; but the law gives no such power as this, and the patient if he chooses may defy his doctor, and take his colchicum and champagne alternately. But not so will it be in a retreat. Right or wrong, the head of the establishment will have his way, and many an experiment may be tried on the unhappy patient who has signed away his power of protesting. If experiments must be tried—and the best remedies for chronic alcoholism are as yet a matter of dispute—let us, at all events, insure that the treatment shall be as reasonable and as scientific as possible, and subject to careful supervision.

FROM ABROAD.

Mumps and Parotidean Orchitis.

Prof. Laveran, of the Val-de-Grâce, recently read a communication to the Hospital Medical Society (*Gaz. des Hop.*, No. 56) in answer to a question asked by Dr. Besnier in one of his sanitary reports as to the frequency of the occurrence of parotidean orchitis and the subsequent wasting of the testicle, and as to the prophylactic measures likely to prevent these accidents. It is impossible to reply exactly with regard to the frequency of the occurrence of mumps in the military hospitals, as the statistics of these establishments do not include it; but it may be stated generally that small epidemics of the affection often occur. In 432 cases of mumps observed among soldiers in very different localities, there were met with 156 examples of single or double orchitis, so that this complication may be said to occur in two out of five cases in adults, although it is very rarely met with in epidemics occurring in schools. The orchitis usually occurs from the sixth to the eighth day after the appearance of the mumps, just as the swelling of the parotid is beginning to disperse. Attributing this to metastasis is out of the question, for the mumps does not subside any more rapidly in the cases in which orchitis occurs than in others, while it may arise spontaneously unpreceded by any affection of the parotid. Although in some epidemics double orchitis has been observed oftener than single, as a general rule one case of double is met with for five or six cases of single. The degree of inflammation of the testicle is as variable as is that of the parotid, chiefly affecting the substance of the testicle itself, the epididymis suffering only in a less degree. By the fourth day the testis has increased two or three times in size, and is very hard and very tender to the touch. Resolution soon takes place, and there is in general no effusion into the tunica vaginalis. Unfortunately, however, the disease frequently terminates in atrophy—a condition which has often been overlooked in civil practice, in which the patients are not so long under observation as soldiers; and the atrophy does not take place sometimes until weeks or months after. In 111 cases of parotidean orchitis, atrophy occurred in seventy-three—*i.e.*, in seven out of ten cases. When atrophy affects both testicles, which is rare, complete impotence ensues; and when only one testis is affected a considerable diminution of virile power occurs. Sometimes the atrophy is arrested, and the testis recovers its normal size and consistency; but in general it persists, and not infrequently the other testis undergoes a compensatory hypertrophy.

With respect to prevention, M. Laveran believes the contagiousness of mumps to be amply demonstrated, and that the disease offers the same specific characters as the eruptive fevers. Isolation is therefore indicated, at least as regards adults. As soon as soldiers are affected with mumps, they should be sent to hospital, and not allowed to mingle with the other patients there. As to preventing the disease localising in the testis, no means are known, all that can be done being to recommend rest.

Castration.

A discussion on this subject took place at the Société de Chirurgiè (*Bulletin*, May 8), in connexion with a case related by Dr. Poinsot, of Bordeaux, in which the ligature of the cord *en masse* had been blamed by M. Desprès, as risking the production of tetanus. Dr. Poinsot quotes the experience of Bouisson, Delpech, Lallemand, and Serre, who never met with this untoward occurrence from following the practice in question. Sédillot and Legouest doubt the reality of the occurrence of tetanus, and both Giraldès and Tillaux are partisans of the procedure. In a case referred to by M. Poinsot, also, in which the vessels were separately tied, tetanus occurred. M. Desprès, in reply, stated that there could be no doubt of tetanus having followed ligature of the cord *en masse*, for those present had witnessed an example in the service of M. Nicaise. Why, in fact, should we act differently with the testicle than with other organs? and who would ever employ a ligature *en masse* in amputations? M. Forget, however, observed that he had often seen Lisfranc perform castration with a ligature *en masse*, and never knew tetanus to follow. He employed a very thick thread, declaring that neither hæmorrhage nor tetanus could occur, since by strong constriction he instantly destroyed the tissues comprised within the ligature. M. Le Dentu said that he had often performed castration, and had found the tying each artery separately very easy, and he considers the ligature *en masse* to be a bad operation. On the other hand, M. Tillaux observed that he had also performed a considerable number of castrations; and although he always used the ligature *en masse*, he had never met with tetanus. By this procedure he considered one of the greatest dangers of castration is avoided, viz., hæmorrhage, which is always to be feared unless the three arteries of the cord are tied. These arteries, which are of very small size, retract, and do not bleed at once; and it is only at the end of some hours that a hæmorrhage, which may prove very difficult to arrest, occurs. As to attributing tetanus to the ligature *en masse*, we must first prove that the ligature of a nerve will induce tetanus. This is very doubtful; and it is by no means rare, on tying an artery, to include in the ligature a nervous filament, without tetanus being induced. Recently, M. Tillaux, in an amputation at the shoulder, tied the brachial plexus *en masse*, without the slightest ill effect resulting. There is no proof that the ligature of a nerve may give rise to tetanus, any more than ligature of a muscle. The chief objection to ligature *en masse* is the great delay which takes place in the coming away of the ligature; and to obviate this M. Tillaux is accustomed to separate the cord and apply three or four ligatures, according to the size of the cord; so that there are partial ligatures *en masse*, which come away in from eight to twelve days without causing any accident. M. Sée, after having performed several castrations with ligatures *en masse* without meeting with any accident, has yet abandoned the procedure, because in large cords the constriction ceases after some hours to be sufficient, and hæmorrhage may occur. He substitutes the following procedure:—After the cord has been dissected its fibrous tunic is divided, so that the various parts may be displayed, and the arteries, which are then easily distinguishable among these, are tied one after another prior to their being divided. Prof. Verneuil disapproves of ligature *en masse*, and has not found any difficulty in seizing the open arteries by hæmostatic forceps, which, after the removal of the tumour, are replaced by catgut ligatures. To be secure against all hæmorrhage, the veins as well as the arteries should be tied, these veins having no valves. In order to be secure against secondary hæmorrhage, M. Desprès thinks four ligatures are required, for, besides the arteries of the cord, the artery of the dartos has to be secured. They may be secured at once, without the application of the hæmostatic forceps. After ligature *en masse*, purulent infection may occur as well as secondary hæmorrhage.

Medico-Legal Experts.

In the necessity which is now generally admitted of altering our procedure with regard to taking medical-expert testimony, the possibility of obtaining which now usually depends upon the power of paying for it, the examples of France and Germany are naturally adduced for imitation. These have the advantage of enlisting the service of neutral experts, whose testimony, however, is not decisive, but may be and is disputed, on scientific grounds being shown in open court; but, at all events in the ordinary course of criminal justice, the exhibition of partisanship and advocacy which sometimes takes place in our courts is avoided. In France, the *juge d'instruction* (an official resembling our stipendiary magistrate, except that the proceedings are not conducted publicly before him) has the power of appointing an expert, whose report guides his future proceedings. It seems, however, from a recent article in the *Gazette des Tribunaux*, that some criticisms have been made on some of these experts in relation to recent criminal trials in France. The public severely blames the *juges d'instruction* for committing these questions to experts, who by temperament are disposed to find every accused person guilty—this having arisen from their having had to appear at the assizes in several cases in which they have declared such culpability existed. But, the writer observes, the public is not aware of the number of cases in which, owing to their testimony, matters have not been carried farther than the court of the *juge d'instruction*. Still, he admits that there are some experts who in form, if not in substance, give some grounds for this prejudice on the part of the public—seeming, by the affirmative form in which they present their conclusions, and the tone they assume, to wish to convey an opinion so certain as to defy all contradiction, and thus producing an unfavourable opinion upon the audience. It is asked, why are the same physicians always chosen as experts? This is due to two causes: first, it is reasonable that men should be chosen who have made legal medicine a special study; and next, that the fees allowed by the tariff are so small that the judges hesitate to demand the services of men of renown, absorbed in the duties of a large practice. It would be, we believe, far preferable that a judge should be able to call for the services of the most eminent men rather than exclusively rely upon those who have become too much specialised. This, too, seems to be the opinion of the writer of the article, for he recommends the payments to be increased, so as to enlarge the sphere of selection.

Since the above was in type, a case has been reported in the *Gazette Hebdomadaire* (July 5), affording additional exemplification that the working of the expert law in France is not satisfactory, inasmuch as the accused person declared guilty by one court has, almost by accident as it were, been recognised as innocent by another. A woman of the name of Lerondeau, living at Chateaufort, in the Department of Seine-et-Oise, was tried at the assizes held at Versailles upon the charge of having poisoned her husband. The report of the experts employed declared that death had taken place in consequence of poisoning by oxalic acid, the presence of which was detected in the stomach. The accused was sentenced to twenty years' hard labour. Some defect in the form of the trial led to an appeal being made to the Court de Cassation, which annulled the sentence, and directed a new trial to be held at the assizes of the Seine.

An examination of the documents having led the presiding judge to entertain some doubts about the case, instead of referring it to the usual experts, he called in Profs. Vulpian and Wurtz, with whom, however, was conjoined an ordinary expert, M. Bergeron. The Paris experts, while admitting that the chemical report made at the former trial by the expert, who was a *pharmacien* at Versailles, was that of a well-informed man, and that there could be no doubt as to the presence of the oxalic acid, declared that the quantity which he had discovered, not having exceeded five centigrammes (three-quarters of a grain), was insufficient to cause death; while the history of the case showed that the symptoms observed prior to death were quite inconsistent with those produced by oxalic acid. Prof. Vulpian denied that poisoning of any kind had taken place. How the oxalic acid which was undoubtedly found in the stomach obtained admission there no one was able to explain. The *Gazette* states that the *Garde des Sceaux*, the Minister of Justice, intends to bring before the Legislature a new measure concerning expertism.

Naval Medical Supplemental Fund.—At the quarterly meeting of the directors of the Naval Medical Compassionate Fund, held on the 9th inst., Dr. Thomas Nelson, Inspector-General, in the chair, the sum of £57 was distributed among the various claimants.

REVIEWS.

Memoranda on Poisons. By the late T. H. Tanner, M.D., F.L.S. Fourth and completely revised edition. London: H. Renshaw. 1878. Pp. 159.

We most cordially recommend these "Memoranda" both to the student and the practitioner of medicine; and we congratulate the editor of this fourth edition of a most useful book on the manner in which his task has been done. The science of toxicology grows apace, and new editions of works which are modestly named "memoranda" require as much as larger volumes a careful study of the medico-legal cases which constantly come forward, and widen the views, not only of medical men, but of members of the legal profession. The editor of this volume points out that the late Dr. Tanner was of opinion that cases of secret poisoning are more common than is generally supposed; and we fear that this opinion has been only too well justified. But all the more is the necessity laid on the medical man, no matter where his lot is cast, to acquire such a knowledge of poisons and of their effects as will enable him to meet those difficult and painful cases which have been hinted at. We do not hesitate to say that these Memoranda should be in the hands of all practitioners of medicine; for though the whole range of toxicology is not treated with the fulness of detail and narratives of *causes célèbres*, met with in volumes tenfold its size, there is given in this little book such an amount of information as justifies the editor's remark, that the book is a "complete manual of toxicology." We are glad also that we can add that the book is not a "cramming" one: it requires study, but at the same time its information is conveyed in a pleasing form. "To enable the reader to pick up at a glance the main points enforced, numbers, capital letters, and italics have been freely used," says the editor; and we think that this innovation will be most useful in a work of this kind. Though the plan originally adopted by Dr. Tanner has been adhered to, the volume has been entirely re-written; and though the space allowed has not been extended, we are pleased to find that cases, such as the "Bravo case," have received careful study, and that all their medico-legal bearings have been brought out. We repeat that we most cordially recommend the book to all; and we congratulate the editor on the result of his effort to perpetuate Dr. Tanner's work.

Fibromes Interstitiels de l'Utérus: de leur Guerison au moyen de l'Hystérotomie ignée par les Voies naturelles. Par le Docteur Abeille, Chevalier de la Légion d'Honneur, Ancien Médecin de l'Hopital du Roule, etc. Paris. 1878. Pp. 66.

Interstitial Fibromata of the Uterus: their Cure by Vaginal Thermo-Hysterotomy. By Dr. Abeille, etc. Paris. 1878.

This work has been written to describe a new method of treating uterine fibromata. The author first gives some account of the symptoms, diagnosis, and prognosis of interstitial fibroids, and discusses the hitherto practised operations for their cure; then describes his own procedure, and finishes by giving reports of six cases successfully treated by it. He seems a person of sanguine temperament, and with great faith in the resources of surgery. It is our misfortune to differ from him at the outset. He says that fibroids, sooner or later, in one way or another, cause the death of most women who suffer from them; and that therefore it is necessary, as soon as the presence of an interstitial fibroid can be made out, to try to effect its cure, without waiting till symptoms become so grave as to impair the patient's health. Our experience, on the contrary, would lead us to think that it is comparatively rare for a fibroid to lead to the death of a patient; that, of all cases of these tumours, those which do not to a great degree impair the health probably form the majority; and that interstitial fibroids, which the author singles out as especially grave, tend, as they grow, to become either submucous or subperitoneal; and therefore that it is a sound rule to abstain from meddling with them until they do cause serious symptoms. To describe the author's mode of treatment would take up more space than we can give to it. Its name indicates its nature. It may be that our comprehension of it is imperfect; but it seems to us similar in principle, although differing in detail, to modes of treatment devised and practised by Baker Brown and by Greenhalgh in this country.

The Transactions of the Edinburgh Obstetrical Society. Vol. IV.—Sessions 1874-75-76-77. Edinburgh. 1878. Pp. 446.

A notice of the transactions of our London societies is often superfluous, for their proceedings are reported in this journal as they take place. The volume before us, on the contrary, contains matter not already given in our pages, and therefore some brief account of it is called for. It records the proceedings of the Edinburgh Obstetrical Society during the past three sessions. This Society publishes only a portion of the writings and utterances of its members, many of the papers being only mentioned as having been read, and the discussions being reported with brevity. We are told, however, that a fuller record is contemplated for the future; and we are glad that it is. A society which prints liberally will preserve, no doubt, much that is valueless; but the task of selection is very difficult: and it is better to sow much chaff than that one grain of wheat should be lost. The chaff will die; the wheat will grow and fructify.

We find that a paper by Dr. John Connell introduced a long and important discussion on the use of perchloride of iron in midwifery practice. Dr. Connell's case in itself proved nothing. The styptic was injected, and the hæmorrhage ceased; but the patient died suddenly an hour and a half afterwards, and no post-mortem was allowed. The general opinion on the subject appeared to be, that the application of this agent is one mode of producing uterine contraction; but that the styptic action is not to be depended on; that in slight cases the hæmorrhage will cease with or without it, and that in bad cases it may, like other remedies, fail. Dr. Matthews Duncan argued that in those conditions met with in surgical practice which most resemble that of the uterus bleeding after separation of the placenta, the effect of styptics is not to be relied on to stop loss of blood. May we point out that the combination of a styptic with pressure is a very effective means of checking venous hæmorrhage—more so than either the pressure or the styptic by itself. Now, Dr. Barnes claims for the perchloride that it not only causes the formation of coagula, but uterine contraction—in other words, pressure and styptic effects are combined. We do not think Dr. Barnes would say that it can never fail, nor would he deny that there are other remedies. The iron undoubtedly has a powerful effect, and in no case has it ever been proved to have done harm. The great prominence which has been given to it has been due, we think, not only to the renown of its introducer, but to the acrimony with which its use was assailed, and the persistence with which imperfectly reported and irrelevant cases were alleged to have proved it dangerous.

Dr. Serdukoff, of Moscow, contributes a valuable paper on the diminution of the uterus after delivery. From his observations he is able to state with precision what has been hitherto known only in a rough, inexact way. He shows that the involution of the uterus goes on with regularity; that it is more rapid in the first few days than subsequently; that where the organ is the subject of disease, involution goes on more slowly; that in women whose labours have taken place at full term this process goes on more quickly and regularly than in those prematurely confined; that prolonged labour retards involution; that in primiparæ it goes on more regularly, but less quickly than in multiparæ who are young, in the older multiparæ the process not going on so well; that in women who suckle the involution is at first retarded, but after the first four days is quicker, though less regular, than in those who do not suckle. That after-pains are not necessary for involution. We may remark that the author constantly refers to tables which we have not succeeded in finding. The value of the conclusions, some of which we have quoted, depends upon the amount of evidence upon which they are based, and therefore we regret that the tables have not been put before us, that we might have judged for ourselves upon this important point.

There are several papers by Dr. Matthews Duncan, the chief of which are on the different injuries to which the external genitals are liable during labour. As in all the work of Dr. Duncan, the greatest possible exactness is aimed at. Our younger workers in obstetric or other fields may

take his precision of observation and statement as a model for imitation. Being not merely records of new observations, but analysis and criticism of old ones, they cannot be abstracted in a few lines, but need careful reading.

Dr. A. R. Simpson writes on complete evacuation of the uterus after abortion. He points out that this process cannot be considered complete, nor the patient safe from hæmorrhage, while any part of the ovum or its appendages remains in utero. He advises that, when the uterus fails to expel its contents, the patient should be put under chloroform; the uterus either pushed down from above, or pulled down by the volsella, and its contents digitally removed. In support of his views he narrates a case. One of the speakers remarked that "he thought the paper useful if for no other reason than to dispel the popular belief that interference with the interior of the uterus was necessarily dangerous." Now, although interference with the uterine cavity is not necessarily dangerous (for the uterus will tolerate a good deal), yet that bad results sometimes follow it, is not merely a popular belief, but a fact. Until we know more accurately than we do, what is the amount of risk incurred by interfering with the uterus under such circumstances, we do not think it is possible to lay down rules for its routine adoption. Dr. Simpson's single case does not teach much. We hope he will publish his further experience of the practice in question. A comparison, say of fifty cases left to nature, and fifty treated by dilatation of the cervix and digital removal of the ovum, would go far towards settling the point at issue. Until it is settled, we hope the popular belief will retain its old position.

Space forbids us to comment, as we might, on many interesting papers contained in this volume. Notably we may mention one by Dr. Engelmann, of Kreuznach, "On Fibrous Tumours of the Uterus"; and several thoughtful and valuable contributions by Dr. Angus Macdonald. The book is a record of work of which any society might be proud.

FOREIGN AND COLONIAL CORRESPONDENCE.

AMERICA.

Philadelphia, June 20.

The Association of the American Medical Colleges—The Resolutions of the Pennsylvania Medical Society with regard to Preliminary Education—Meeting of the Association of Medical Editors: Address from the President—The Annual Meeting of the American Medical Association: Report from the Delegates to the International Medical Congress at Geneva; The Ethical Relation of the Association to Homœopathy; Legal Status of the Insane; Prize Essays; Addresses read before the Association, by the Chairmen of Sections.

The annual gathering of the American Medical Association, at Buffalo, a few days ago, was attended by about 550 representatives of the medical profession from all parts of the country. The proximity of the place of meeting to the great natural wonder, Niagara Falls, induced many of the delegates and members to make this their summer trip, in which they could mingle sight-seeing with the discussion of professional topics, many of them of much less interest. The hotel accommodation at Buffalo is not of the best, but within the past month a palatial edifice of this kind has been opened in that city, founded by one who has amassed a large fortune by advertising his "golden discovery" for the cure of all the ailments of the human flesh. The Committee of Arrangements could not, of course, recognise this "invalids' and tourists' hotel" as deserving a place in the list of hotels at which the professional standard-bearers of ethics and morality should take up their temporary abode, but, in spite of this *quasi* non-recognition, many of the members of the Association were compelled to go there in self-defence. Whether or not their presence there will be turned, to the personal advantage of the individual referred to, remains to be seen. I think a larger number of our Canadian medical brethren were expected, on account of the nearness of the meeting to the borders of the Dominion, but some of the most distinguished gentlemen of that country were absent.

The new Association of American Medical Colleges, which was fully organised last year, holds its meetings annually on the day before the assembling of the American Medical Association. The objects are the advancement of medical education in the United States, and the establishment of a common policy among the colleges in the more important matters of college management. In this body are gathered together delegates from almost all the medical institutions of the country, except one or two which, having inaugurated a three years' course of study, and made other advanced steps in medical instruction, feel that the time is not propitious yet for full affiliation with this College Association. One medical college—the medical department of Howard University—desired to connect itself with it, but the Jefferson Medical College of Philadelphia at this meeting objected, and the objection was sustained, on the ground that no charge was made for tuition—a system incompatible with the spirit of one of the articles of confederation, and also that, while not objecting to the education of women in medical colleges exclusively for women, it certainly did object to the education of the two sexes side by side in the same medical college. The colour question did not, apparently, enter into consideration, though possibly not lost sight of, for this institution is free to all, without regard to sex or race. The Medical Faculty of Howard University forwarded a reply to this objection, which was read at the meeting, but did not affect the views of the College Association. They contended that the object of the Howard University was to provide an institution for the education of all classes, on the broad basis of human rights and human necessities; that it was true that the tuition was free, but that the examinations for the degree were strict, each applicant for matriculation and examination being subjected to a written preliminary examination, written intercalary examinations being also had; that more than half their students had voluntarily chosen three courses of lectures; that some of their graduates had taken post-graduate courses in more northern medical schools, and others had pursued their studies in London and Paris. They claimed also that the College Association was made up of college members which had widely different standards of fees for tuition, graduation, matriculation, etc.; and that practical anatomy being investigated by the sexes separately in distinct rooms, no objection on the score of immorality can be made to this mode of instruction. The presence of women in the lecture-rooms listening to didactic courses, in company with the other sex, was rather a step forward in the path of morality and good discipline there.

At the recent meeting of the Pennsylvania State Medical Society—a body, by the way, composed of delegates from county medical societies within its borders—resolutions were passed in regard to the preliminary education of medical men, and forwarded to the College Association for their consideration. As they indicate an advance in the line of medical progress, I may briefly state that they prescribe that all county medical societies now existing under the regulations of that Society, or which may hereafter be so organised, shall at their next meeting to elect officers, or at the meeting of officers when such Society shall have been organised, and annually thereafter, be required to elect three members called "medical examiners," whose duty it shall be to examine into all applications for admission as students of medicine under the tuition of members of the Society; and that they shall withhold their certificate from any applicant unless he is of good moral character, possesses a good English education, and a sufficient knowledge of Greek and Latin to enable him to pursue his studies to advantage; and no member of any county society shall receive any person as a student of medicine unless he presents a favourable certificate from the committee of examiners. That every member of a county society, before receiving any person as a student of medicine, shall require him to enter into a contract to pursue his studies for a period of not less than three years; and it shall be the duty of his preceptor to present him a certificate, countersigned by the secretary of the local society of which he is a member, setting forth the facts as above stated. That it shall be the duty of all members of the profession holding allegiance to the Medical Society of the State of Pennsylvania to recommend their students to attend only such medical colleges as rigidly enforce the full three years' course of study in their curriculum, and otherwise conduce to elevate the standard of graduation. At the suggestion of Prof. Samuel D. Gross,

resolutions were adopted to the effect that the regularly organised medical colleges of the county hold a meeting to adopt a uniform system of instruction.

Simultaneously with the assembling of the American Medical Association, the editors of medical journals also meet annually on the evening previous to the gathering of that body. The business of such an association is not very extended in character or of much general import; usually a paper or address is read by the President, which elicits considerable discussion, but the interests of editors are not of so single a nature as to require an association to give them publicity, or to bind them in fraternal relations. Beyond the effort which all should make to maintain the dignity of the profession and to convey to their readers the most acceptable items of information in medical progress, science, and art, one would think that, apart from the annually recurring pleasure of social greetings, there would not be much of a scientific character that such a body could discuss to the common advantage.

The President, Dr. J. P. Gray, editor of the *American Journal of Insanity*, and one of the most distinguished mental pathologists of the country, chose for his subject the consideration of the laws governing the treatment of the insane in England and New York, comparing the statutory provisions of the two, so far as the commitment of the insane to asylums, their detention and discharge, are concerned. I may briefly say that, so far as the preliminaries to the admission of patients are concerned, the British and New York statutes agree in certain essential points. In New York the law gives three days more for making out certificates and getting a patient to the asylum; makes three years' practice essential in an examiner in lunacy, while the English law specifies no time. The English law extends the list of those who are excluded by interest or relationship from making out certificates, and simply requires the approval of the certificate by a commissioner in lunacy, and fourteen days are allowed for correcting defects; while in New York the commissioner only prescribes the form of certificate, while its approval must be by a judge or justice of a court of record in the judicial district in which the alleged lunatic resides, and this must be done within five days. Furthermore, New York provides the still greater safeguard that before approving the certificate a jury may be empanelled; and any insane person, or any friend on his behalf, who is dissatisfied with any decision or order of any judge or magistrate, may take an appeal, within three days, to the Supreme Court, who shall stay proceedings and forthwith call a jury to decide upon the facts of lunacy. In making the investigation, the services of two respectable physicians must be called upon. In the commitment and supervision of the insane, the statutes of England and New York both prescribe the existence of visiting, controlling, and local boards with varied functions and duties similar in character and so constituted as to embrace all the interests, requirements, and rights of the public and individual. In England and America the provisions for the discharge of the insane are essentially the same. The responsibility of the discharge, like the initiatory proceedings for confinement, is mainly thrown upon the medical profession. With pauper patients there is no practical difference in the two countries. In respect to private patients the statutes of New York are more simple and practically effective. In all cases the managers of each asylum have the power to discharge, without formality and without the assent of the relations or guardians; while in England the consent of the persons who signed the request or order for admission must first be obtained, or his successor, which may cause delay, annoyance, or even work to the detriment of the patient. So far as New York is concerned, the power of the writ of *habeas corpus* has scarcely ever been invoked for the discharge of patients. Dr. Gray's paper, and the Association in the discussion which followed, condemned the system of jury examination, especially in the case of female patients, as an outrage on the privacy of the individual and his or her surroundings.

I have thus alluded to the two contemporaneous bodies as interesting features coincident with the meeting of the central organisation, the American Medical Association itself. I may briefly summarise the proceedings of the latter, without entering minutely into the details of the business transacted by it. The opening address of Dr. T. G. Richardson, its President, eloquently and forcibly alluded to the great benefits the Association had wrought in uniting the interests of the profession in all the different sections of the country, the encouragement it had given to higher culture; its valuable contributions to the various departments of medicine, to the progress of education in the adoption of the graded system in some of the schools and its prospective introduction into others; suggested the distinct organisation of the 60,000 physicians of the country into uniformly constituted societies; the desirability of obtaining governmental aid to scientific investigation; alluded to the duties of the profession towards state medicine, etc. I regret my notice of its many valuable suggestions must be so brief.

The delegates appointed last year from the American Medical Association to the International Medical Congress at Geneva (Drs. Sims, Drysdale, and Seguin), "to advocate the adoption of a progressive uniformity of means of observation and record," reported that for physicians and surgeons the principle accepted by that Congress was a gradual international uniformity of nomenclatures, scales, measures, calibres of instruments, of their records of private and hospital practice, of physiological experiments, of medical climatology, barometry, thermometry, statistics, etc. It will be remembered that in pharmacy the Geneva Congress accepted the following conclusions voted at St. Petersburg and Brussels:—1. The adoption of a universal Pharmacopœia, to be written in Latin. 2. The decimal system for weights and measures, and the centigrade scale for temperatures. 3. A uniform nomenclature (probably that of Berzelius). 4. The chemical preparations to be of determined strength and purity, and the pure drugs to be of essayed strength, if possible. 5. The Galenic preparations made as simply as possible, and described according to a uniform plan. 6. The other pharmaceutical preparations to be made uniform (that is, those which are powerful, like tinctura opii, aconiti, and nucis vomicæ, hashish, podophyllin, elaterium, etc.). 7. Physicians to be left free and responsible for the non-official ingredients and doses of their magistral prescriptions. The pharmacists about to engage in the preparation of a new American Pharmacopœia will avail themselves of all these conclusions, and will doubtless not forget the warning of Professor Matsen, of Copenhagen, that pharmacists cannot succeed in founding a uniform Pharmacopœia without the aid and concurrence of physicians.

The question of the ethical relation of the Association or rather its individual members, to homœopathy, which has on several occasions engaged the attention of that body, was revived this year in the report of the Judicial Council concerning the charges against the Michigan State Medical Society, referred by the Association at the annual meeting in June, 1877. The charge in this case was an alleged violation of the Code of Ethics by that State Society in electing, as a delegate to this Association, Dr. E. L. Dunster, of the University of Michigan, knowing him to be engaged in aiding and abetting the graduation of students devoted to an exclusive dogma in medicine, meaning homœopathy. Dr. Dunster, it will be recollected, is Professor at the University of Michigan, in which, by act of the Legislature, both homœopathy and regular medicine are taught. When this Siamese twin arrangement was first enforced, several of the professors, believing they could not honourably occupy positions under such circumstances of doubtful professional ethics, resigned; but the gentleman in question and some of his colleagues did not follow their example. After a most careful examination of the Code of Ethics, the Council reported that they failed to find any section or paragraph in it that refers, even remotely, to the practice that constitutes the foundation of the charge under consideration. That any member of the medical profession proper should ever engage in teaching, examining, and certifying to the qualification of students, knowing that such teaching and examinations were to aid said students in obtaining diplomas directly admitting them into a fraternity of irregular practitioners, was evidently not contemplated by the framers of the Code of Ethics; and hence they inserted no clause or section bearing upon that subject. The Council, however, deprecated the practice of aiding and abetting in any way the teaching and graduation of students known to be supporters of singular and exclusive dogmas in medicine, as beneath the dignity of right-minded teachers of an honourable and liberal profession. This decision, founded strictly on the letter of the Code, seemed to the Association to be so greatly lacking as an exponent of the view of the profession at large on the

practice referred to, that it was immediately moved that the Council be instructed to report a law covering the defect complained of, and providing a penalty for the violation alleged. On the next day, therefore, a proposed amendment to the Code was submitted, adding the following words:—"And hence it is considered derogatory to the interests of the public, and the honour of the profession, for any physician or teacher to aid, in any way, the medical teaching or graduation of persons, knowing them to be supporters and intended practitioners of some exclusive and irregular system of medicine."

The necessity for the intervention of physicians in education, in school hygiene, etc., was fully discussed, and the Association resolved that, in its opinion, medical men ought to have a voice in the construction and location of public school buildings, on the questions as to the age at which children ought to be admitted, the hours of study, and the general management of these institutions, and that one or more intelligent physicians should therefore be placed upon the Boards of Education and other similar boards having the control of public education and schools.

The following resolutions, defining the legal status of the insane from a medical point of view, were adopted:—Resolved—"That the personal restraint of the insane is an essential element of the medical treatment of their disease, the use of which, as a therapeutical agency, may be justified by their insanity, just as the use of it as a police agency, for the prevention of injury to person or property, is justified by their dangerous conduct." Resolved—"That while none question the necessity for specific statutory provision to regulate the restraint of those insane persons who are wholly or partly a public charge; we maintain that it is the duty of relatives and friends, and it is also their natural and inherent right, whether declared or understood by statute, to restrain and to care for their sick or insane relatives as a private patient, at his or their expense, in his or their home, or in a legally recognised and regulated hospital; and that the exercise, by them, of so much restraint as is essential to the proper treatment of his disease, is not a violation of his rights of personal liberty; and That their duty and right to exercise such remedial restraint are subject to State surveillance or legal limitation only so far as may be necessary to prevent their neglect of the duty or to punish their abuse of the right."

A committee of five was appointed to confer with General Myer, Chief of the Signal Bureau (familiarly known to the public as "Old Probabilities," from his daily bulletin of calculations of probabilities of the weather), upon the subject of making observations as to the existence of ozone in various localities, and to take such other steps and measures in the matter as may be necessary for the success of the object.

The almost annually recurring discussion of the subject of shortening after fractures of long bones came up this year, and Dr. Sayre, of New York, stood alone in his protest against the views of his surgical brethren, which maintained that these fractures were almost necessarily attended with such a result. The Surgical Section reiterated this year its sentiments upon that subject. Certainly, in the medico-legal aspect of the case, the practitioner can lean for support, in case of a suit for malpractice, on the Section, with much more hope of relief for himself and his possible shortcomings, if I may so call them, than on the New York surgeon, however able the latter may be.

In addition to the reference to the metric system in the report of delegates to the Geneva Congress, a resolution from the Pennsylvania State Medical Society was read, recommending its use, and urging members to familiarise themselves with it, and to advise their students to use it exclusively when they commence their medical career.

The Committee on Prize Essays awarded the prize (or rather two prizes) of $100 to each of two papers of a surgical character—one of these being an analysis of 789 cases of operations on the carotid artery, and the careful and minute measurements of the artery and its branches in 121 subjects, showing the range of variation and the percentage of the same; the other, on the same plan, with reference to the innominate and subclavian arteries, being an analysis of 300 cases, and the observation of fifty-two subjects. The author is Dr. John A. Wyeth, of New York. With all respect to the committee and to the gentleman to whom the credit of the preparation of so elaborate and valuable a paper is due, we doubt whether such essays as this, and the very expensive one published in 1876 in a separate volume on "Excision of the Joints" (at a cost of $6000 to the Association), fairly come under the provision of the Association offering prizes for original researches. Originality in this line can scarcely be claimed for such statistical papers, however skilled, earnest, and indefatigable the author, or however learned and exhaustive the essay. The President, in his opening address, gave utterance to the views of a large number of the delegates, when he said that, during the past twenty-nine years, "Twenty-five papers have been reported upon favourably, for which the Association has paid in prize-money and for publication some $8000 or $10,000. It cannot be denied that many of the accepted essays possess decided literary and scientific value. Some of them, indeed, reflect great honour not only upon their authors, but upon the profession in general. But, after all that can be said in their praise, is it not true that a large proportion of them lack that singular quality which should entitle them, when strictly tested, to the designation of original researches, or even contributions to knowledge?"

The addresses read before the Association in general session, by the Chairmen of Sections, did not, as usual, embrace a review of all that was novel in those departments, culled from the pages of periodicals within reach of all the members, but were original contributions to medical and surgical literature. Professor Henry H. Smith, Chairman of the Section of Surgery, read an able address on "Certain Points in the Pathology of Bones, especially Tubercle." Dr. Loomis, Chairman of the Section of Practical Medicine, Materia Medica, and Physiology, in addition to a sketch of the advances in those departments, discussed at length the climatic treatment of pulmonary phthisis. He thought the necessities of the times demanded the establishment not only of well-organised and thoroughly equipped sanitaria by the sea, in the mountains, in the cold regions of the north, and in the warm regions of the south, but that our mineral springs should be utilised for the cure of disease. To-day we know more of the virtues of Karlsbad, Kissingen, Vichy, and other European waters than of those of Saratoga, Virginia, Arkansas, Colorado, etc., although for all the essential properties of such waters these last scarcely have their equal in any part of the world. The Association thought this latter subject so important for investigation that they appointed a committee to report next year upon it. Dr. J. L. Cabell, as Chairman of the Section of Public Hygiene, read an interesting address on the "Theories of Contagion, or Public Health Measures"; and Dr. E. W. Jenks, Chairman of the Section of Obstetrics, read a voluminous paper on the "Causes of Sudden Death of Puerperal Women." Dr. Kempster, Chairman of Section on Medical Jurisprudence, Psychology, etc., discussed the pathological brain lesions characteristic of insanity, the localisation of functions, etc., and some general matters relating to legal medicine. The rest of the proceedings of the Association need not be detailed, as they were more of a local and personal, than general interest.

The Association adjourned, to meet at Atlanta, Georgia, on the first Tuesday of May of next year. Dr. Theophilus Parvin, of Indiana, was elected President.

THE URINE IN HYDROPHOBIA.—M. Albert Robin gave an account to the Société de Biologie of the results of an examination of the urine which he had made in a case of hydrophobia—the first analysis, indeed, that has been recorded as having been made in this disease. A considerable diminution in quantity occurred, for there were only about 300 grammes (about seventy-six drachms) removed by the catheter in the twenty-four hours. Its density was 1030, and it was so acid that after exposure to the air for a week it still furnished an acid reaction. The solid matters amounted to twenty-five grammes in the twenty-four hours, but the urea was only 10·22 grammes, while there was a considerable proportion of uric acid. The chlorides were diminished, the phosphates were in normal amount, and neither sugar nor albumen was found. On evaporation, M. Robin found crystals of hippurate of lime, margaric acid, leucine, and an enormous quantity of crystals of uric acid. He also, under the microscope, found a large number of bacteria with special characters, and suggests whether hydrophobia might not be inoculated by means of the urine. —*Gaz. Hebd.*, July 12.

GENERAL CORRESPONDENCE.

THE BAEL FRUIT.

LETTER FROM SIR JOSEPH FAYRER.

[To the Editor of the Medical Times and Gazette.]

SIR,—The accompanying extract from Sir Robert Christison's letter affords such an interesting addition to what I said recently about the bael fruit that I send it to you, and am sure Sir Robert will forgive me for doing so.

July 16. I am, &c., J. FAYRER.

[EXTRACT.]

My dear Sir Joseph,— Edinburgh, July 15.

. . . I have extended my knowledge of a subject—*Ægle marmelos*—which has long interested me. I wish much I had known of your intention to publish on it, for I might have added another to the names you have quoted in support of its virtues. The history of my adhesion to it is almost indeed a professional anecdote. Many years ago there arrived one morning a volunteer packet of two pounds from one Pound, pharmaceutic chemist in Oxford-street, with a request to try it. It so happened that on the very same morning I had a letter from a Dundee surgeon, asking further instructions for the case of a gentleman whom I had seen in consultation with him not long before. This was a stout man who came out of a protracted typhus with an enormous suppurating cavity, large enough to hold half a child's head, the result of an extensive slough, occupying the right trochanter and hip of a very big man. Diarrhœa also had set in, and when I saw him had lasted in its chronic form for a month. My Dundee brother-in-trade reported the failure of all astringents and soothers that we had tried, so I accepted Pound's pounds as a good omen, and sent them on. In four days I received a bulletin of marvellous improvement, and in seven days a record of complete recovery. The patient eventually got the big hole filled up, and survived many years.

I was previously acquainted a little with the remedy through Sir Whitelaw Ainslie's book; therefore, when a young Indian officer brought me not long afterwards his chronic diarrhœa from India, which neither London physic nor Portobello atmosphere had cured, I again applied to Pound's remedy, and again, to my surprise, with rapid and complete success.

Accordingly, you will not wonder that I have ever since been a follower of Bael. It is an incomprehensible remedy. I had only the dry hard fruit to work with, and it has neither aroma nor taste—certainly no astringency. Nor do I think that chemical analysis has hitherto thrown any light on the source of its action—I mean of the dried fruit—for, of course, the fresh fruit is quite different in its sensible properties. . . . I am, &c., R. CHRISTISON.

A LEGAL RIGHT CONFERRED BY A PAIR OF STAYS.—The *New York Medical Record*, June 1, has the following note on a recent law case:—A lady was riding in a horse-car so crowded that she was obliged to stand up, when the car, suddenly stopping, she lost her balance, fell over, and fractured her patella. She sued for damages, and the company pleaded contributory negligence on her part, as she did not take hold of the strap that is provided for standing passengers. On the other hand, she maintained that she was unable to reach or hold the strap, owing to the stays which she wore, and that with the present fashion no lady could do so, or at least not without inconvenience and possible injury. The Court decided that, as she laid hold of a fellow-passenger's hand, that was all that was necessary, as under the circumstances she was not called upon to stretch up to the strap, and awarded her about $5000 damages. Appeal was made to the Pennsylvania Supreme Court; but this, after reviewing the case, declined to interfere. "It would therefore seem that the fair sex are protected by the law in wearing any sort of stays they please, no matter how much they may interfere with health, comfort, and freedom of action, which indeed are matters of secondary consideration to the ordinary female mind, as long as fashion declares in favour of any special model."

NEW INVENTIONS AND IMPROVEMENTS.

RIMMEL'S AROMATIC OZONISER.

IT must assuredly be owing to perverted taste or culpable carelessness if anyone suffers nowadays from bad or dangerous smells, for we are being constantly supplied by chemists and other ingenious inventors with new disinfectants and deodorisers. And in one sense, at any rate, the disinfectants lately provided for us have possessed a great advantage over the older ones. Chlorine and its compounds, sulphurous acid, and carbolic acid, though no doubt valuable and efficacious, are themselves very disagreeable, and salicylic acid is negative as to smell; but sanitas, benzoin, and thymol are actually pleasant to use. And now Mr. Rimmel, the well-known perfumer, has brought out a preparation which, while according to his statements it acts as an aërial disinfectant and absorbs foul and polluted air, is cleanly, requires no preparation, and has a very fragrant, aromatic, and refreshing odour. The "Aromatic Ozoniser" is, apparently, a sawdust of some wood, saturated with the oil of the *Eucalyptus globulus*, and probably some other balsamic and disinfecting odours, which it freely exhales on exposure to the air. We need not remark that it is believed that the eucalyptus oil and the turpentine balsams possess powerful disinfecting and deodorising properties, not merely *covering* bad odours, but destroying them by causing their oxidisation; and on this belief is based the claim of Mr. Rimmel's preparation to disinfecting powers. We are not prepared to assert that the Aromatic Ozoniser does actually destroy obnoxious smells; but it is certain that it is a very agreeable and handy preparation. A small quantity of it, placed in a saucer, sprinkled upon a mantelpiece or any other piece of furniture, or scattered under a bed, scents a room very agreeably. Its being a solid instead of a fluid preparation is a great advantage; and it is likely, we think, to win the popular fancy, and to be extensively tried.

MACKEY'S POTASH SOAP.

MESSRS. MACKEY, SELLERS, AND CO. have lately introduced a potash soap for laundry purposes, which merits a word or two of special commendation. It is said that the soap does not contain anything that can injure the most delicate material, while it cleanses, purifies, and whitens linen very perfectly, at less cost, and with less labour, and less wear to the fabric, than any other soap. It is best used with cold or lukewarm water, and is therefore especially valuable for cleansing woollens and flannels. We have had the soap tried by a skilled laundress, who reports most favourably of its purifying and cleansing properties, only objecting that it has a less pleasant smell than really good yellow soap has.

YARDLEY'S MYXODINE SOAP.

WE have received also from Messrs. Yardley and Co., the well-known soap-makers, a sample of a soap prepared with carrageen, or marine moss. It is pleasant in appearance, and very pleasant to use, being emollient, and making a good lather easily with lukewarm or even cold water. It is well adapted, we think, for children and ladies.

THE BERLIN UNIVERSITY.—To the 2834 matriculated students for the winter session of 1877-78 there were added 617 new students in the summer session of 1878, while 944 quitted the University, leaving 2569 for the summer session, being a considerable increase over the summer session for 1877, when they amounted to 2237. Of the 2569 students, 150 belonged to the Theological Faculty, 888 to that of Law, 346 to the Medical, and 1185 to that of Philosophy. The medical students have increased from 297 in the summer session of 1877, to 346 in the present session. Of these 283 are Prussians, 25 from other parts of Germany, 3 from Austria, 21 from Russia, 3 from Greece, 2 from Roumania, and one each from Holland, Switzerland, and Spain. From America there are 4, and 2 from Africa. Besides these 346 civilian medical students there are also 188 from the military academies, making in all 534. There are also 61 dental and pharmaceutical students, who are comprised in the Faculty of Philosophy.—*Berlin. Klin. Woch.*, July 1.

MEDICAL NEWS.

UNIVERSITY OF DURHAM.—EASTER TERM, 1878.—At the examination for the degree of Doctor in Medicine for practitioners of fifteen years' standing, the following, having undergone the necessary examination, had the degree conferred:—

Fernie, William Thomas, M.R.C.S., L.S.A.
Milson, Richard Hurry, M.R.C.S., L.S.A.
Summerhayes, William, M.R.C.S., L.S.A.

One failed to satisfy the examiners.

The following, having fulfilled the regulations of the University and passed the necessary examinations, were admitted to the degree of M.B.:—

Dixon, James D., M.R.C.S.
Mahony, L. F., M.R.C.S., L.S.A.
Morton, Shadforth, M.R.C.S.
Price, Henry E., B.Sc., M.R.C.S.
Robinson, A. H., M.R.C.S., L.S.A.
Rygate, B. R., M.R.C.S.

One failed to satisfy the examiners.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the usual monthly examinations for the licences of the College, held on Monday, Tuesday, Wednesday, and Thursday, July 8, 9, 10, and 11, the following candidates were successful. For the licence to practise Medicine:—

Previous examination—

Ker, Alice Jane Shanon.

Final examination—

Bagley, Samuel.
Bennett, Edward,
Burnes, Henry Foster.
Davison, James.
Hawkins, John Sneyd.
Pownall, Arthur Edward.
Rutherford, Robert Leonard.
Ryan, Peter.

For the licence to practise Midwifery—

Bagley, Samuel.
Bennett, Edward.
Buchanan, Lewis.
Burnes, Henry Foster.
Carmichael, John.
Davison, James.
Gabbett, Henry Singer.
Hawkins, John Sneyd.
Jacob, James Bostock.
Martyn, Robert Joseph.
O'Neill, John Gregg.
Pownall, Arthur Edward.
Ryan, Peter.
Thompson, Robert Norman.
Wilkinson, William Cleland.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examinations in Anatomy and Physiology at a meeting of the Court of Examiners on the 15th inst., and when eligible will be admitted to the pass examination, viz.:—

Branthwaite, R. Welsh, of the Charing-cross Hospital.
Collingwood, David, of University College Hospital.
Dallmeyer, Andrew W., of University College Hospital.
Goldney, Arthur C. N., of the Charing-cross Hospital.
Hendley, J. Lupton, of St. Bartholomew's Hospital.
Jones, Arthur L., of the London Hospital.
Neatby, Edwin A., of the London Hospital.
Newsholme, H. Wilkinson, of University College Hospital.
Owen, Charles R., of St. George's Hospital.
Reeve, Walter, of St. Bartholomew's Hospital.
Stear, Geoffrey, of St. Bartholomew's Hospital.
Tweedy, Charles, of University College Hospital.
White, H. Freeman, of St. George's Hospital.

The following gentlemen passed on the 16th inst., viz.:—

Bridgeford, J. S. Saunders, of the Charing-cross Hospital.
Bunn, G. Grinling, of the Charing-cross Hospital.
Cotman, John S. E., of the Charing-cross Hospital.
Culling, J. Chislet, of the Charing-Cross Hospital.
Edensor, Arthur, of Guy's Hospital.
Hare, F. W. Everard, of St. Thomas's Hospital.
Harper, James, of St. Bartholomew's Hospital.
Lane, Alexander, of Guy's Hospital.
Lee, Henry, of St. George's Hospital.
Lors, Clement H., of St. Thomas's Hospital.
Lister, J. Herbert, of Guy's Hospital.
Papillon, James W., of St. Thomas's Hospital.
Richardson, J. H. Howard, of the Charing-Cross Hospital.

Fifty-nine candidates out of the 118 examined having failed to acquit themselves to the satisfaction of the Board of Examiners, were referred to their anatomical and physiological studies for three months. The last pass examination for the diploma of Membership for the present session will be commenced this day (Friday).

NAVAL, MILITARY, &c., APPOINTMENTS.

WAR OFFICE.—MEDICAL DEPARTMENT.—Surgeon-Major Francis Leveson Gower Gunn retires on half-pay; Surgeon-Major Richard John William Orton retires on temporary half-pay; Surgeon-Major Samuel Pratt Woodfull retires on temporary half-pay; Surgeon-Major Arthur William Shedden, M.D., resigns his commission; Surgeon-Major Thomas Young Baker, from half-pay, to be Surgeon-Major.

BIRTHS.

BLACKETT.—On July 12, at Wangford, Suffolk, the wife of Edward R. Blackett, M.D., of a son.

FAGGE.—On July 14, at 11, St. Thomas's-street, S.E., the wife of C. Hilton Fagge, M.D., F.R.C.P., of a daughter.

HARRIS.—On July 15, at 50, Cold Harbour-lane, S.E., the wife of Henry Harris, M.R.C.S.E., of a son.

LOVELL.—On July 11, at 53, Wellington-road, St. John's-wood, N.W., the wife of F. Otley Lovell, M.R.C.S., L.R.C.P. Lond., of a daughter.

OWEN.—On July 7, at Haulpe, Beaumaris, the wife of R. Brisco Owen, M.D., of a son.

MARRIAGES.

BAYLIFFE—ELLIOTT.—On July 11, at Chippenham, Alworth Merewether Bayliffe, M.R.C.S.E., of South Brent, Somerset, to Emily Bradley, widow of the late John Elliott, Esq., of South Brent Manor, Devon.

CARPENTER—BUCKTON.—On July 12, at Mill-hill Chapel, Leeds, J. Estlin Carpenter, second son of W. B. Carpenter, M.D., C.B., to Alice Mary, younger daughter of George Buckton, of North Hill, Roundhay, Leeds.

COPE—PHILLIPPO.—On June 14, at Kingston, Jamaica, Thomas Edward Butcher Cope, Navigating Lieut., H.M.S. *Plover*, to Lizzie, eldest daughter of James Cecil Phillippo, M.D., J.P., of Kingston, Jamaica.

HARE—ALPE.—On July 11, at St. George's, Hanover-square, Surgeon Major R. W. Hare, A.B., M.B., to Alice Blanche, eldest daughter of John P. Alpe, of Ballard's-hill, Freshwater, Isle of Wight.

OXLEY—FOX.—On July 6, at Long Bennington, Robert Oxley, M.D., to Eliza Fox, Friarwood Villa, Pontefract.

DEATHS.

FRY, AUGUSTIN B., M.R.C.S., at Harcourt House, Yorktown, Surrey, on July 10, aged 35.

LONGDON, ELEANOR, wife of Edward John Longdon, M.D., at the Priory, Southport, on July 13, aged 41.

ROBERTSON, MONTGOMERY, M.D., at Sele Grange, Hertford, on July 11, in his 74th year.

SCOBELL, THOMAS EDWARD, M.R.C.S. Eng., at Ridgway, Plympton, on July 8, aged 32.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BIRMINGHAM BOROUGH LUNATIC ASYLUM.—Assistant Medical Officer, who must be registered with both medical and surgical qualifications, and unmarried. Applications, with testimonials, to the Clerk, at the Asylum, on or before July 23, addressed to the Committee of Visitors, "Application, etc."

BRADFORD INFIRMARY AND DISPENSARY.—Dispensary-Surgeon and House-Physician. Candidates must be registered as legally qualified medical and surgical practitioners. Applications, stating age and with recent testimonials as to moral character and professional ability, to William Maw, Secretary, on or before July 25. The salary attached to each office is £100 per annum.

BURTON INFIRMARY.—House-Surgeon. Applications, stating age, previous experience, and accompanied by testimonials, to the Hon. Secretary, Mr. J. C. Grinling, Burton-on-Trent, on or before July 25.

CHORLTON-ON-MEDLOCK DISPENSARY.—House-Surgeon. Applications to the Secretary, 53, Princess-street, Manchester.

GENERAL HOSPITAL AND DISPENSARY FOR SICK CHILDREN, PENDLEBURY AND MANCHESTER.—Physician. Candidates must possess either a university diploma or the membership of the College of Physicians of London, or the fellowship of the College of Physicians of Edinburgh. Applications to the Chairman of the Medical Committee at the Hospital, Pendlebury, from whom further information may be obtained on or before July 29.

ROYAL ALBERT EDWARD INFIRMARY, WIGAN.—Junior House-Surgeon. Applications, with recent testimonials, to Wm. Heaton, Hon. Secretary, on or before July 29.

ROYAL ALBERT HOSPITAL, DEVONPORT.—Resident Medical Officer. Candidates must be unmarried, duly registered, and qualified both in medicine and surgery. Applications, stating age and professional qualifications, accompanied by not more than four testimonials as to professional and moral character, to C. A. Shapcote, Secretary, on or before August 2, endorsed "Application for appointment."

ROYAL FREE HOSPITAL, GRAY'S-INN-ROAD.—Junior Resident Medical Officer. Candidates must be possessed of a medical or surgical qualification from one of the examining boards of the United Kingdom. Applications, with testimonials, to the Secretary, on or before July 31.

SOUTHPORT CONVALESCENT HOSPITAL.—Resident Medical Officer. Candidates must possess a medical and surgical qualification recognised by the Medical Act of 1858. Testimonials and qualifications to the Chairman, William Froane, Esq., on or before July 20.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Bakewell Union.—Mr. J. M. Wheler has resigned the Matlock District; area 8673; population 5377; salary £20 per annum.

Machynlleth Union.—The Llanbrynmair District is vacant; population 1903; salary £36 per annum.

West Derby Union.—Mr. W. Little has resigned the Mill-road Workhouse; salary £120 per annum.

APPOINTMENTS.

Bridgwater Union.—John Weller, M.R.C.S. Eng., L.S.A., to the Seventh District.

Bridlington Union.—Charles G. Head, M.R.C.S. Eng., L.S.A., to the Third District.

Depwade Union.—Walter Pratt, M.R.C.S. Eng., L.R.C.P., to the Fourth District.

Liverpool Parish.—Robert Eccles, M.D., C.M. Queen's Univ. Ire., M.R.C.S. Eng., as Assistant Medical Officer at the Workhouse.

Oswestry Incorporation.—John D. Lloyd, M.R.C.S. Eng., L.R.C.P. Edin., to the St. Martin's District.

St. Faith's Union.—John Hawkes, M.D. St. And., M.R.C.S. Eng., L.S.A., to the St. Faith's District and the Workhouse.

St. Leonard's, Shoreditch Parish.—John Davies, M.R.C.S. Eng., L.S.A., to the Hoxton New Town District.

ANOREXIA.—Dr. Fonssagrives recommends the following formula:—Bruised Chinese rhubarb, bruised peel of bitter orange, of each four parts, and water 250 parts. This is to be infused cold during three days. Two or three tablespoonfuls are to be taken daily an hour before dinner. If this does not succeed, he prescribes one or two pills an hour before dinner, each containing one centigramme of alcoholic extract of nux vomica, and twenty centigrammes of extract of gentian, continuing them until the appetite is suitably restored.—*Union Méd.*, July 9.

ERECTILE TUMOURS.—Prof. Verneuil expresses himself in favour of the formula of Dr. Piazza, as employed by M. Auger, for the purpose of injecting nævi. It consists of distilled water and perchloride of iron, of each thirty parts, chloride of sodium five parts. The addition of salt seems to diminish the irritating action of the perchloride. Only three drops of the solution require to be introduced into each of the punctures, the number of which varies with the size of the tumour. M. de St. Germain, of the Hopital des Enfants Malades, employs this formula, viz.:—Water sixty parts, perchloride twenty-five parts, and chloride of sodium fifteen parts.—*Gaz. des Hop.*, May 14.

NORTH-WESTERN, NORTHERN COUNTIES, AND YORKSHIRE ASSOCIATIONS OF MEDICAL OFFICERS OF HEALTH.—A joint meeting of these three Associations will be held at the Council Chamber, Guildhall, York, on Wednesday, July 24, at 1.30 p.m. Papers will be read by S. W. North, York, "On the Registration of Disease"; by H. E. Armstrong, Newcastle-on-Tyne, "On the Regulation of Cow Byres and Dairies"; and by H. H. Vernon, M.D., Southport, "On the Re-distribution of Population as affecting Death-Rates." Mr. Armstrong will also move, in connexion with his paper, "That a joint petition of the three Associations be addressed to Parliament, praying that power be granted to local authorities for the better sanitary regulation of byres, dairies, and milk-shops."

CONTAGION THROUGH BOOKS.—A writer in the *Deutsch illust. Gewerhez* calls attention to the fact that the material of contagion may not only be conveyed by means of water, clothing, the air, dead hair, etc., but also by books. This is the case especially with respect to the books of circulating libraries, and most of all in those of small towns in which books pass for years through the hands of numerous readers, exhibiting plain enough marks of their having been used. Indeed, it is quite remarkable how the most delicate and particular of persons will handle these books without even giving it a thought how often they may have been perused on beds of sickness and bathed in the perspiration of different readers. And yet how possible it is that they may act as the carriers of contagious germs!

FRACTURE OF A RIB BY COUGHING.—Dr. Chenery related to the Suffolk Medical Society the case of a woman, twenty-three years of age, pregnant with her second child, who, in a fit of coughing, felt something give way in her side, attended with a sharp report and severe pain. For two or three weeks she had a spasmodic cough, but on the morning of the accident she was not coughing very hard. She had, however, just had a paroxysm, attended with unusual spasmodic action. It was the lower fixed rib that gave way, so that, the cartilage being carried forward and fixed by the gravid uterus, the action of the muscles was favoured. A broad strip of adhesive plaster was applied three inches to the left of the spine, and carried well round up the cartilages, while hypodermic injections of morphia were employed near the seat of injury. She was confined seven days later, and did well. It being so unusual to meet with such an accident in a young person, Dr. Chenery thought that it might have arisen from an altered condition of the ribs due to pregnancy; and the teeth of the woman, which nineteen months before were very fine ones, began to crumble away soon after conception, so that they had to be replaced by an artificial set.—*Boston Journal*, May 23.

SOUTH LONDON SCHOOL OF PHARMACY.—On Saturday, July 13, the presentation of the medals and certificates to the successful candidates at the last school examinations for the session, held between July 4 and 8, took place at this institution, when Mr. Baxter, the Secretary, announced the awards as follows:—Senior Chemistry Medal, Mr. Phillips; certificate, Mr. Stonham. Junior Chemistry Medal, Mr. Lumley; certificate, Mr. Humfrey. Botany Medal, Mr. Humfrey; certificate, Mr. Lovely. Materia Medica Medal, Mr. Powell; certificate, Mr. Humfrey. Pharmacy Medal, Mr. Lovely; certificate, Mr. Lumley.

MEDICAL GRADUATES OF UNITED STATES IN 1878.—University of Pennsylvania, 127; Jefferson Medical College, Philadelphia, 203; University of the City of New York, 153; Bellevue Hospital Medical College, New York, 130; College of Physicians and Surgeons, New York, 109; Buffalo Medical College, 42; Medical College of Ohio, 102; Cincinnati Medical College, 33; Miami Medical College, Cincinnati, 51; Louisville Hospital Medical College, 17; University of Louisville, 71; Louisville Medical College, 70; Missouri Medical College, 102; St. Louis Medical College, 49; Medical College of Virginia, 12; College of Physicians and Surgeons, Indianapolis, 41; Indiana Medical College, 29.—*Philadelphia Medical Times*, April 27. [One of the most important medical schools in the United States—the Medical Faculty of the Harvard University, Cambridge, Boston—is not included in the above list.]

CATALOGUE OF THE AMERICAN NATIONAL MEDICAL LIBRARY.—As we have already stated, this vast undertaking, which embraces both authors and subjects, and comprises articles in periodicals, as well as substantive works, has now been completed, and is awaiting the decision of Congress as to its being printed in its entirety. The value of the work, if printed, to the entire medical world would be immense, and we regret to find that some doubt still exists as to whether the funds necessary for this will be voted. The estimate supplied by the Treasury to Congress requires a sum of $25,000 for printing and binding 3000 copies of the first two volumes, the whole amount that will be required being about $100,000 spread over four years. "This seems at first sight a large sum," the *Philadelphia Medical Times* observes, "but when it is compared either with the result to be achieved, or with the resources or habitual expenditure of the Government, it becomes trifling. It is not much beyond that which an investigating committee will throw away perhaps on a wrong scent. It does not equal the amount frequently piled into a hopelessly ugly mass of stone in a second-rate post-office. It is not much more than is necessary to raise, equip, and drill a single company of cavalry." Unfortunately we have in our own country the proof that illustrations of this kind seldom touch the consciences of legislators. However, the liberality with which Congress does usually vote large sums for useful publications gives us great hope that the funds necessary for an undertaking of such undoubted utility will be forthcoming.

PENETRATION OF DUST INTO THE LUNGS AFTER TRACHEOTOMY.—M. Balzer calls attention to a condition which he has observed on examining the lungs of children who have died after tracheotomy. He found the sections of the lungs often so loaded with foreign bodies that they resembled those of a lung filled with anthracosis. On examining the sections with a low power, he found the bodies distributed along the course of the bronchi, penetrating the exudations, traversing the walls of the bronchioles, and occupying the alveoli. The larger bodies were free and isolated, but the smallest penetrated the protoplasm of the cells. The number of these foreign bodies varied greatly in different cases. On several occasions they have been mistaken for a pathological change, but when the lung is freed from the blood which flows from the vessels, and especially after maceration in alcohol, the little blackish blocks are easily distinguished. They gain access to the lung through the canula, which does not sift the air as is done when it traverses the natural passages, the child finding itself in much the same condition as an animal in which paralysis of the larynx has been induced by section of the recurrent. This penetration takes place more abundantly in some cases than in others, not only from there being a great amount of foreign bodies in the air, but owing to the dry state of the canula when the child is going on badly. Although it is difficult to appreciate the extent to which

they do so, these foreign bodies may easily induce inflammatory lesions; and it is reasonable to suppose that they may sometimes be the cause of the inflammatory affections of the lung which come on late after the operation. At all events, their admission should be opposed as much as possible; and in this point of view the cravat applied over the canula may be useful, as well as in warming the inspired air. When the rooms in which the children are placed are cleaned, also, their necks should be carefully covered up. Whenever, too, the canula becomes dry it should be moistened by an oily substance so as to enable it to arrest the foreign bodies.—*Revue Méd.*, July 8.

THE JOHN HOPKINS HOSPITAL AT BALTIMORE.—The building of this new Hospital has now begun in earnest, and will occupy, it is said, four years before it is finished, as Mr. Hopkins's will requires that all building be paid for out of the income of the Hospital. It is estimated that it will cost $1,200,000 before it is completed, and therefore averaging $40,000 per bed—a sum that seems enormous for a hospital with only 300 beds. The Hospital, however, is intended to be not only a refuge for the sick, but also a centre of progress for scientific medicine. There will therefore be an elaborate and costly pathological department, with all forms of special wards and arrangements, etc. The dispensary service is also to be very extensive. Apartments are to be provided for twenty-five resident pupils, so as to give to as great a number as possible the advantages of practical study, and also to furnish an abundant supply of clinical clerks, registrars, etc. This feature will add much to the expense, while, as the Hospital is placed on a high hill overlooking Baltimore, it is considered that the front should be of an imposing character, as a memorial, plainly visible from the city, to its generous founder.—*Philadelphia Med. Times*, May 11.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

PREVENTION OF SEA-SICKNESS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—It is now many years since that my brother, Mr. Frederick S. Peppercorne, a civil engineer, at present stationed in New Zealand, discovered, during a tedious voyage to Sydney in a sailing merchant ship, that this disagreeable complaint, to which he was subject, could be quickly relieved, and indeed prevented, by simply buckling firmly round the waist a gentleman's common elastic belt, so as to make some pressure on the epigastrium, or pit of stomach; or, if in want of the belt, a small shawl, or even a strong silk handkerchief, folded up flat to about three or four inches wide, would answer the purpose. As he had many opportunities of testing this remedy since, in long voyages to New Zealand, no doubt that at the present season, when so many hundreds are crossing the Channel or other seas, either for pleasure, health, or business, this information, if made known, may prove very beneficial. I am, &c.,

Craven-street, W.C., June 15. F. PEPPERCORNE, L.R.C.P., M.R.C.S.

"*For what it is Worth.*"—The United Kingdom Temperance Provident Institution, London, has two sections—one for insuring the lives of total abstainers; the other, the lives of moderate drinkers. The experience of the office, as shown in their report for the past year, has been as follows:—The number of deaths expected during the year in the total abstinence section was 179; the actual deaths were 132. The number expected in the moderation section was 291; the actual number was 280. Thus, whilst the total abstainers saved 47 lives out of 179, the moderate drinkers saved only 11 lives out of 291.

Harrogate.—Complaints having been lately made of the contaminated state of the water at Harrogate, an examination to ascertain its source has led to the discovery that the pollution was in the reservoir known as the Harlow Tower Reservoir. The Local Waterworks Company have consequently laid down new pipes for the purpose of conveying the water direct from the upper and larger reservoir in Haverah-park, and the supply of pure water to the town has been restored. The Harlow Tower Reservoir is not now used.

Health of Cambridge.—Tho death-rate of Cambridge for the quarter ended June 30 was only 16 per 1000 per annum.

F.R.C.S., Manchester.—The number of metropolitan and provincial Fellows who recorded their votes at the recent election into the Council of the Royal College of Surgeons amounted to 307; four, however, were invalid. Ninety-one electors attended from provincial towns, some at great distances, as Redruth, Manchester, Liverpool, Hull, Shrewsbury. Even Dublin and North and South Wales sent electors. The total number of plumpers amounted to 68—viz., Mr. Lund, 24; Messrs. Gay and Power, 11 each; Mr. Bryant and Sir H. Thompson, 6 each; Messrs. Wilson and Wood, 3 each; Mr. Holt, 2; and Messrs. Lee and Lister, 1 each.

The Spinoza Memorial.—We understand that the Central Committee at the Hague has now succeeded in obtaining a satisfactory model for the statue of Spinoza. The successful sculptor is M. Fred. Hexamer, of Paris, and the *accessit* has been awarded to Herr Joseph Tüshaus, of Düsseldorf.

The National Sanatorium, Bournemouth.—The recently issued twenty-third report of this institution states that the number of patients treated during the nine months, from April 1 to December 31 last, has been 210, with the following results, namely:—93 were so much benefited that they were mostly able to resume their various occupations; 39 were benefited in a less degree; in 19 little or no change for the better was apparent; 2 died; and 57 remained in the institution on January 1, 1878. Taking the twelve months from January 1 to December 31, 1877, 273 patients were treated—a greater number than in any preceding year. The Committee have again, as in former years, to repeat their regret that so many patients are sent in, in whom the disease has made such great progress that the prospect of any benefit from a residence is all but hopeless, thereby causing a large number of more promising cases to be denied the advantages of the institution from the want of accommodation for them. The inconvenience of the practice of closing the financial year hitherto on March 31, instead of making it coterminous with the civil year, has led the Committee to adopt the latter course, and the receipts and expenditure from April 1 to December 31 last (nine months) show that the total income during that period, including the balance on April 1, amounted to £1828 7s. 6d., and the total expenditure to £1539 19s. 11d. The cost of each patient, inclusive of every charge, was a trifle over 20s. a week—a moderate sum, considering the liberal treatment adopted. The amount received from annual subscribers had been quite equal to that during the previous year. The evident need of such an institution has been testified by the many proofs of confidence and valuable co-operation from the public for upwards of twenty-three years accorded to it.

Extra Rations to Paupers.—The Local Government Board, in reply to a question on this subject by the Board of Guardians of the Letterkenny Union, have refused to sanction the giving of extra rations to paupers for doing extra labour, unless the additional rations were ordered by the medical officer.

Verbally Calling in Medical Aid.—A surgeon of Castleford lately sued several persons in the Pontefract County Court for various sums for medical aid, etc., where he had been called in to attend upon the several defendants' sons or other relations. One case, against a man named Harton, was brought before the Court as a test case, in which the doctor claimed 15s. for midwifery fee. His Honour, on giving verdict in the several cases, said, when a medical man was called in to attend upon any person, the party so calling him in was not liable unless the request was made in writing; and in this way often it was hard upon the medical profession; but it was necessary for them to be very careful in their arrangements. In the case in question the doctor had been spoken to as to attending upon the defendant's wife when required, and had made a memorandum to that effect in his books. He expected to be called in, but was not, and hence the present action. His Honour held that the plaintiff had no right to sue for the amount; for although the doctor might have been told that his services would be required, yet he had no right to sue in such case when his services had not been actually rendered, and he must therefore be nonsuited.

Conjectural Assumptions.—The remark is, that "a village apothecary, and if possible, in a still greater degree an experienced nurse, is seldom able to describe the plainest case without employing a phraseology of which every word is a theory; the simplest narrative of the most illiterate observer involves more or less of hypothesis."

Vaccination at York.—The suggestions of the Local Government Board—to which we lately drew attention—in reference to the improvement of the hitherto unsatisfactory arrangements for vaccination in this city, have been adopted by the Guardians, and henceforth vaccination will be performed by one public officer instead of two; and other and more convenient premises than the present in Castlegate are to be forthwith provided for the purpose.

The Army Medical Service.—It is rumoured that a change of considerable importance in the present Army Medical system is under consideration—namely, the regularly attaching one medical officer to each regiment. How many vacancies there really now are in the Service we do not know, and we can easily understand that the authorities would prefer that they should remain "an unknown quantity"; but it is said that the Department has 200 medical officers less than it had some ten years ago.

A Volunteer, Wimbledon.—Yes; the Private Humphry, of Cambridge University, now making such winning scores in your camp, is a son of Professor Humphry, a Member of the Council and Court of Examiners of the Royal College of Surgeons.

A Provincial Teacher.—At the primary examination for the diploma of Membership of the Royal College of Surgeons, just brought to a close, ten candidates were rejected on the 9th inst., ten on the 10th, fifteen on the 12th, eleven on the 15th, and thirteen on the 16th; a total of 59 out of the 118 examined.

A Peer's Mandate.—The Guardians of the Poor for Govan Parish, Glasgow, have for many years been in the habit of boarding their pauper orphan children, who happened to be affected with scrofula, or were otherwise in delicate health, in the island of Arran, which is owned by the Duke of Hamilton. Of late, complaints have been made as to allowing the pauper children to attend the schools; and, as a result of communications on the subject, the Duke has issued a peremptory order that all the pauper children must leave the islaud. A deputation of the Poor-law Guardians waited on the Duke's factor, and requested that the rule should only apply to children who were diseased or ill-behaved; but the factor said he could not draw the line—all must go; and he even hinted, it is stated, that the order might yet apply to those who were pauper children, but who had grown up and entered into respectable service, and even contracted marriages. The latter proceeding, it was alleged, was deteriorating the population of the island. The people who house the poor children are greatly concerned about the order, but as they hold only yearly leases, they have no option but to obey the mandate intimated.

COMMUNICATIONS have been received from—

Dr. Thomas Barlow, London; Mr. John Chatto, London; Dr. George Ernest Herman, London; Mr. Thomas Bryant, London; Dr. J. Pearson Irvine, London; Mr. J. T. W. Bacot, Seaton, Devon; Mr. T. M. Stone, London; The Secretary of the Yorkshire Association of Medical Officers of Health; The Secretary of the Naval Medical Supplemental Fund; Mr. J. D. Webster, Sheffield; Messrs. Feltoe and Sons, London; Dr. Gillespie, London; Mr. F. Marshall, London; Dr. Ed. Sparks, Crewkerne; Mr. Becher, London; Dr. Dobson, Netley; Dr. Carter, Liverpool; The Secretary of the Medical School of Westminster Hospital; Mr. A. A. Knight, London; The Secretary of the Royal College of Surgeons of London; Dr. L. Armstrong, University of Durham; The Honorary Secretary of the Quekett Microscopical Club; Sir Joseph Fayrer, London; The Registrar-General, Edinburgh; Messrs. Pitt and Scott, London; Mr. W. Baxter, London; Dr. James Sawyer, Birmingham; Mr. J. Peppercorne, London; Dr. J. W. Moore, Dublin; Dr. George Harley, London.

BOOKS AND PAMPHLETS RECEIVED—

Byrom Bramwell, M.D., Case of Aneurism of the Aorta treated by the Iodide of Potassium—Thomas Morris, Hydrosthetics of the Cistern, Drain, and Sewer—Graily Hewitt, M.D. Lond., F.R.C.P., The Mechanical System of Uterine Pathology—Charles Eyre Pascoe, A Practical Handbook to the Principal Professions—Mrs. F. Fenwick Miller, The House of Life: Human Physiology—Luigi Severini, Riserche sulla Innervazione dei Vasi Sanguigni—Edward H. Clarke, M.D., Visions; a Study of False Sight—Transactions of the American Gynecological Society, vol. ii., 1877—George Harley, F.R.S., F.C.S., The Simplification of English Spelling; On National Spelling Reform, a Letter to Lord Beaconsfield.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médicale—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—The Louisville Medical News—Boston Medical and Surgical Journal—Nature—Philadelphia Medical Times—Cincinnati Clinic—Dublin Journal of Medical Science—Guy's Hospital Gazette—Boston Journal of Chemistry—Indian Medical Gazette—Canada Lancet—Chicago Medical Journal and Examiner—Chemist and Druggist—Revue des Sciences Médicales—Medical Examiner.

APPOINTMENTS FOR THE WEEK.

July 20. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

22. Monday.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

23. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

24. Wednesday.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 1½ p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

25. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

26. Friday.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

Quekett Microscopical Club, 8 p.m. Annual Meeting.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 13, 1878.

BIRTHS.

Births of Boys, 1222; Girls, 1172; Total, 2394.
Average of 10 corresponding years 1868-77, 2176·5.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	864	725	1589
Average of the ten years 1868-77	727·5	670·5	1398·0
Average corrected to increased population	...	...	1496
Deaths of people aged 80 and upwards	...	...	34

Note.—The births and deaths registered last week may be compared with the average numbers in the corresponding weeks of the ten years 1868-77 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	7	4	...	11	...	1	1	34
North	751729	3	1	3	1	21	...	2	1	61
Central	334369	...	3	5	1	10	...	...	...	33
East	639111	1	2	4	1	18	...	5	1	55
South	967692	7	3	4	5	25	2	5	1	66
Total	3254260	11	16	20	8	85	2	13	4	249

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·803 in.
Mean temperature	61·9°
Highest point of thermometer	76·1°
Lowest point of thermometer	52·0°
Mean dew-point temperature	52·0°
General direction of wind	Variable.
Whole amount of rain in the week	0·02 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, July 13, 1878, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1878.*	Persons to an Acre. (1878.)	Births Registered during the week ending July 13.	Deaths Registered during the week ending July 13.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3577304	47·5	2394	1589	76·1	52·0	61·9	16·61	0·02	0·05
Brighton	103923	44·1	56	33	74·0	50·8	61·0	16·11	0·16	0·41
Portsmouth	129461	28·9	98	33	...	...	...	...	...	...
Norwich	84620	11·3	41	41	73·5	53·0	59·6	15·34	0·01	0·03
Plymouth	73599	52·8	57	26	71·5	53·0	59·1	15·06	0·76	1·93
Bristol	206419	46·4	113	56	74·4	49·0	59·9	15·50	0·46	1·17
Wolverhampton	74240	21·9	58	19	72·0	47·6	56·8	13·78	0·01	0·03
Birmingham	383117	45·6	326	119	...	...	...	...	...	...
Leicester	121473	38·0	111	62	71·5	45·8	56·0	13·33	0·00	0·00
Nottingham	165267	16·6	142	64	73·7	45·1	58·1	14·50	0·20	0·51
Liverpool	532681	102·2	362	294	64·3	52·4	56·6	13·67	0·07	0·18
Manchester	360514	84·0	259	188	...	...	...	...	...	...
Salford	170251	32·9	143	61	76·5	41·1	55·7	13·17	0·17	0·43
Oldham	107366	23·0	82	47	...	...	...	...	...	...
Bradford	185088	25·6	127	57	72·2	48·0	58·1	14·50	0·08	0·28
Leeds	304948	14·1	204	104	76·0	49·0	59·7	15·39	0·00	0·00
Sheffield	289537	14·7	213	120	72·0	44·7	58·1	14·50	0·02	0·05
Hull	143139	39·4	119	66	73·0	46·0	59·0	15·00	0·03	0·08
Sunderland	112459	34·0	108	51	74·0	50·0	59·9	15·50	0·14	0·36
Newcastle-on-Tyne	144570	26·9	116	57	...	...	...	...	...	...
Edinburgh	222371	53·1	130	88	72·0	48·0	59·9	15·50	0·06	0·15
Glasgow	566940	94·0	357	213	72·0	48·0	62·2	16·78	0·05	0·13
Dublin	314666	31·3	185	137	75·4	40·7	59·9	15·50	0·04	0·10
Total of 23 Townsin United Kingdom	8373953	37·9	5801	3525	76·5	40·7	59·0	15·00	0·13	0·33

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·80 in. The highest reading was 29·98 in. on Monday evening, and the lowest 29·70 in. on Thursday afternoon.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1878 by the addition of seven years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. Nottingham, Salford, and Oldham, however, form exceptions to this rule, as the estimates for these three towns have been revised with the aid of local information as to the rate of increase of inhabited houses. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

LECTURES ON THE DIAGNOSIS AND SURGICAL TREATMENT OF ABDOMINAL TUMOURS.

Delivered at the Royal College of Surgeons of England.

By T. SPENCER WELLS, F.R.C.S.,
Consulting Surgeon to the Samaritan Hospital, etc.

Lecture VI.

(*Concluded from page 66.*)

I will now turn to the last subject mentioned in the programme of these lectures:

"The Surgical Treatment of Uterine Tumours."

The whole of my experience in the surgical treatment of uterine tumours, if I have operated upon them through the abdominal wall, amounts to forty-five cases. I exclude all cases treated by the vagina, such as the removal of fibrous polypi, or attempts to enucleate growths from the uterine walls or the cavity. In twenty-four of these forty-five cases the tumours were completely removed, and in twenty-one cases exploratory incisions only were made, or the tumours were not completely removed after the abdominal wall had been incised. I have arranged all the facts relating to these cases in two series of tables, which I have no doubt will be printed in the journals that have already begun to publish these lectures, so that anyone interested in the subject will have an opportunity of examining all the particulars of each case. In the tables you may see the name of the medical attendant of the patient, the date of the operation, the age and condition of the patient, the nature of the operation performed, the length of the incision, the result, the cause of death if the patient died, and what became of her if she recovered. It would occupy too much time now to go through these cases one by one; but I will give you, in a few words, the result. In some of the twenty-four cases of removal it was found necessary not only to remove the large uterine tumour, but to remove one ovary or both ovaries with it. Sometimes the ovary was closely connected with the tumour; in other cases the broad ligament was so injured that it was better to remove the ovary also. The results of the operation, when compared with ovariotomy, show that the removal of uterine tumours is a much more dangerous operation than the removal of ovarian tumours. Fifteen out of the twenty-four patients died at various intervals (from three hours to fourteen days) after the operation, while only nine recovered; and one of the patients who recovered died six months afterwards of cancer of the remaining portion of the uterus. The other eight are believed to be now in good health. One of them would certainly have died in 1871 if the operation had not been performed, and others have enjoyed good health since 1874-5-6, who, if left without operation, would not be living now, or, if living, instead of being well, as they now are, would be passing their time as hopeless invalids.

Table I.—*Cases of Removal of Fibroid Uterine Tumours.*

No.	Medical attendant.	Date of operation.	Age	Condition.	Adhesions.	Treatment of pedicle.	Weight and nature of tumour.	Length of incision.	Result.	Subsequent history and cause of death.
1	Prof. Pirrie, Aberdeen	1861, Oct.	33	Married	None ...	Ligature brought out of the wound	Fundus and body of uterus, 27 lbs.; both ovaries removed	10 inches	Died 4 days afterwards	Exhaustion.
2	Dr. Sim, Naples ...	1863, Jan.	35	Single	None ...	No pedicle; tumour enucleated	17 lbs. solid; fibroid intramural	About 6 inches	Died in 4 hours	Hæmorrhage and chloroform.
3	Mr. Ellis, Sloane-street	1863, April	53	Single	Omental & parietal ...	Ligature brought out through the wound	Fibroid cystic outgrowth from fundus; solid, 16 lbs.; 26 pints fluid; 4 lbs. clot in cyst; right ovary adherent, and removed with tumour	9 inches	Death in 3 hours	Shock; chloroform (?).
4	Samaritan Hospital	1868, April	40	Married	Omental & mesenteric	Ligature returned	Fibroid, size of cocoanut	5 inches	Died 44 hrs. after operation	Peritonitis.
5	Dr. McMurty, West Bromwich	1869, April	36	Single	Parietal ...	Acupressure ...	Solid tumour, 34 lbs. 10 oz.	11 inches	Died in 40 hours	Peritonitis.
6	Dr. Fuller	1869, May	37	Married	None ...	Ligature	Fundus and body of uterus removed	5 inches	Recovered	Died 6 months afterwards of cancer of cervix.
7	Dr. Brandt, Oporto	1870, June	36	Single	Omental ...	Pin and ligature; extra-peritoneal	Solid myoma, 22 lbs.	9 inches	Died 14th day	Pyæmic pleurisy.
8	Nélaton	1871, June	46	Married	None ...	Pin and ligature; extra-peritoneal	11 lbs. 11 oz. solid; 59 pts. peritoneal fluid	11 inches	Recovered	Well, June, 1878.
9	Dr. ProtheroeSmith	1872, Jan.	38	Single	None ...	Ligature returned	20 lbs.; fibroid removed with left ovary	8 inches	Died 3 days afterwards	Peritonitis.
10	Dr. Conrad, Berlin	1872, Mar.	44	Single	None ...	Pin and ligature...	Uterus and both ovaries, 26 lbs.	10 inches	Died in 2 hours	Hæmorrhage.
11	Dr. Roberts, Rhyl	1872, May	36	Married	... ...	... ...	Uterine fibroid and right ovary removed	...	Died	Suppuration; peritonitis.
12	Mr. Soper, Dartmouth	1874, April	33	Married	Omental ...	Clamp	Fibroid myoma, 11½ lbs.; right ovary	8 inches	Recovered	...
13	Sir W. Jenner, Bart.	1874, Dec.	32	Single	None ...	Ligature returned	Fibroid myoma, 9 lbs.	8 inches	Died in 40 hours	Hæmorrhage.
14	Dr. Schantz, Witten	1875, May	40	Single	Omental ...	Clamp	Fibro-cystic uterine and right ovary, 19 lbs.	6 inches	Recovered	Well in 1878.
15	Dr. Schönfeld, Labes	1875, May	40	Widow	None ...	Ligature & drainage	Fibroma molluscum cysticum, 29 lbs., and right ovary	6 inches	Recovered	Well in 1878.
16	Mr. Peck, Yalding	1876, April	37	Single	Omental & parietal	Clamp	Subperitoneal outgrowth from fundus	7 inches	Recovered	Well in 1878; tumour sent to College.
17	Dr. Playfair ...	1876, Aug.	49	Single	None ...	Clamp	Large uterine fibroid, and both ovaries	9 inches	Died 5th day	Pneumonia.
18	Dr. Kidd, Dublin...	1876, Oct.	36	Single	None ...	Ligature returned	Fibroid subperitoneal removed	4 inches	Recovered	Well in 1878.
19	Dr. Nield, Plymouth	1876, Nov.	40	Single	Peritoneal, omental, mesenteric, & intestinal	Ligature returned	Fibro-cystic; two outgrowths, 2½ lbs.	6 inches	Died 4th day	Peritonitis.
20	Dr. Jack, Hampton Court	1877, Mar.	49	Single	Parietal ...	Clamp	Fibro-cystic, 20 lbs., and left ovary	6 inches	Died in 20 hours	...
21	Dr. Day	1877, April	52	Single	None ...	Ligature returned	Two fibroid outgrowths removed, 4 lbs. 4 oz.	6 inches	Recovered	...
22	Dr. Freeborn, Oxford	1877, July	56	Single	None ...	Ligature returned	Solid fibroid outgrowth from fundus, 5 lbs.	6 inches	Died 6th day	Septic peritonitis.
23	Dr. Netley, Norwood	1877, July	50	Single	None ...	Needle and écraseur-chain; extra-peritoneal	Uterine fibroid, 12 lbs., and both ovaries	8 inches	Died 3rd day	Septic peritonitis.
24	Mr. Symonds, Oxford	1878, Mar.	36	Single	Parietal, mesenteric, & omental	Ligatures returned	Fibro-cellular, 70 lbs.	16 inches	Recovered	Remains well.

TABLE II.—*Cases of Exploratory Incision and Partial Removal of Fibro-Cystic Tumours of the Uterus.*

No.	Medical attendant.	Date of operation.	Age	Condition.	Adhesions and character of tumour.	Incision.	Result.	Subsequent history and cause of death.
1	Dr. Shorthouse, Carshalton	1863, April	33	Single	None; solid tumour punctured; no fluid	Short	Left hospital 10th day	Died sixteen months after operation; the tumour then weighed 25 lbs.; had 34 pints of fluid around it.
2	Dr. Stokes, Dublin	1864, June	45	Single	To intestines and omentum; 30 pints of ascitic fluid; 13 pints of cystic fluid and 20 lbs. fibroid tumour removed	6 inches	Death in 3 hours	Hæmorrhage; portion of tumour not removed, 18 inches in length, 16 in breadth, and 7 in thickness; not weighed. A second tumour, 11 inches broad, 6 inches long, and 6 inches deep.
3	Samaritan Hospital ...	1866, Dec.	39	Married	Ascitic fluid removed; solid uterine tumour punctured	...	Relieved	Died some months afterwards.
4	Dr. Churchill, Dublin ...	1867, Aug.	48	Married	Uterine fibroid punctured ...	5 inches	Suppuration and relief	Patient died in 1871.
5	Dr. Garrod, London ...	1868, Feb.	58	Widow	Parietal; fibro-cystic tumour punctured; 8 pints purulent fluid removed	No note	Recovered	Remained well two years, but died in 1872.
6	Dr. Arthur Farre	1869, Jan.	42	Married	Large uterine fibroid not disturbed	4 inches	Recovered	In fairly good health, June, 1878.
7	Mr. Turner, Hereford ...	1869, Nov.	25	Married	Ascitic fluid only removed; fibroid tumour not disturbed	4 inches	Recovered	...
8	Dr. Marsden...	1870, June	43	Married	Incision only	...	Recovered	Died two years afterwards, 1872.
9	Dr. Whitehead, Manchester	1870, Dec.	35	Single	None; incision only	5 inches	Recovered	Alive in 1878.
10	Dr. Ware	1871, Aug.	63	Married	None; ascitic fluid removed; uterine cyst tapped	5 inches	Died 15 days after operation	...
11	Dr. Sutton, Dover	1872, June	42	Married	Parietal adhesions; incision and removal of 9 pints from uterine cyst	4 inches	Recovered	Died in 1873.
12	Dr. de la Camp, Hamburg	1873, April	36	Married	None; ascitic fluid only removed	4 inches	Recovered	Died in 1877.
13	Dr. Philpot	1873, July	30	Single	Parietal; incision only ...	4 inches	Recovered	Well in 1877.
14	Dr. Gason, Rome	1875	31	Single	Incision only	5 inches	Recovered	Well in 1878.
15	Dr. Hodgson, Hornsea ...	1876, June	33	Married	None; cyst tapped and emptied; solid fibroid not disturbed	5 inches	Recovered	Well in 1878.
16	Dr. Thursfield, Leamington	1876, June	35	Married	Incision only	5 inches	Recovered	Died of diphtheria, Feb., 1878.
17	Dr. Arthur Farre	1876, Oct.	46	Married	Fibro-cystic uterine drained; parietal and omental	5 inches	Recovered	Well in 1878.
18	Dr. Sweeten, King's Lynn	1876, Nov.	38	Married	Incision only	5 inches	Recovered	...
19	Dr. Hall Davis	1876	34	Widow	Incision; ascitic fluid; fibroid tumour untouched	5 inches	Recovered	Died in 1878.
20	Dr. Whitehead, Manchester	1878, Feb.	41	Married	Incision; removal of nodule	5 inches	Recovered	Well in June, 1878.
21	Mr. Claremont, Hampstead-road	1878, May	42	Single	Incision only	4 inches	Recovered	Died July 11, 1878.

Besides the twenty-four cases of complete removal of uterine tumours, I have operated upon twenty-one other patients with uterine tumours: in some, only making an incision in the abdominal wall; in others, puncturing or incising the tumour; and in some removing a larger or smaller portion of the tumour. It is a remarkable fact that of these the death of only one was accelerated by the operation; and it is doubtful whether, if she had been left untouched, she would have lived many days longer. In some cases, evacuation of fluid, or suppuration following the puncture, greatly improved the condition of the patient, and several are still alive. Seven died at various periods, from a few months to four years after the operation. This much at least is proved by these cases: that, if the abdominal wall alone be divided, ascitic fluid removed, or a uterine cyst punctured, and the solid part of the tumour not much interfered with, the risk of the operation is very small. In twenty-one such cases in this table, only one has died—her death (fifteen days after) probably not hastened by the operation; the only death which did immediately follow the operation having been the case of a patient from whom thirty pints of ascitic fluid, thirteen pints of cystic fluid, and twenty pounds of solid fibroid tissue were removed, a large mass still remaining.

The tumours in two of these cases are upon the table. Here is one that I removed in 1871. The patient was a Parisian dressmaker, who was sent to me by M. Nélaton. She was forty-six years of age, and married. Around this tumour, which occupied the lower portion of the abdominal cavity, was a large quantity of ascitic fluid—about fifty-nine pints. This was removed, and an incision in the abdominal wall, eleven inches long, was made; the tumour was then turned out. A pin was passed through a sort of band connecting it with the uterus, and a figure-of-8 ligature was twisted round it. The pin was fixed outside the abdominal cavity, and it acted as a sort of clamp. The patient recovered perfectly, and she is now in full business in London as a fashionable dressmaker. Certainly, if that operation had not been performed, she must have died seven or eight years ago. Here is another tumour which I removed in 1870 from a Portuguese lady, who was sent to me by Dr. Brandt, of Oporto. She was thirty-six years of age, and single. The tumour weighed twenty-two pounds, and it was removed through a long incision in the abdominal wall. You can see where it was cut off from the uterus. It was secured in the same way as that in the case I have just mentioned, by a strong pin, and a piece of silk was twisted round it and the connecting medium with the uterus, and that pin was fastened outside the abdominal wall just as if it were a clamp. The patient went on very well for fourteen days, and then she died with a sort of embolic pneumonia. It was a thing most disappointing to a surgeon; for there was only a small superficial abscess in the abdominal wall, and no other reason to account for the condition of lung which caused death. I dressed the wound every day, and had not noticed any particular hardness, or anything to attract my attention to this collection of pus; but in about thirteen or fourteen days she became feverish, had symptoms of pyæmic pneumonia, and she died owing to this small abscess in the abdominal wall; for inside the peritoneum everything was absolutely healed. There was nothing about the uterus to attract attention; its surface was quite smooth, the peritoneal edges of the incision perfectly united, and no traces whatever of any peritonitis.

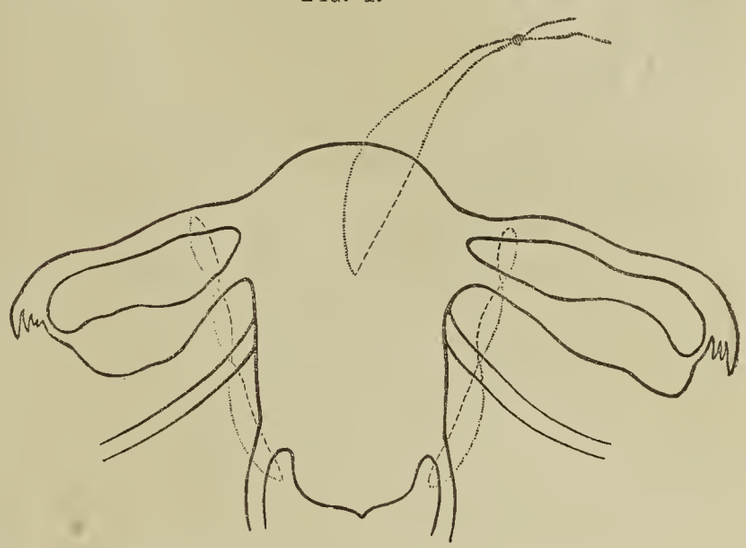
With regard to the mode of operating, the only difference between the removal of these large tumours and the removal of ovarian tumours consists in the longer incision and the somewhat greater difficulty there is in securing the bleeding vessels, the large vessels in the broad ligament, and in any uterine tissue divided, which require careful ligature. It is seldom that the pedicle is sufficiently long or large to admit of extra-peritoneal treatment. The intra-peritoneal treatment by ligature has not been so successful as the extra-peritoneal treatment; and, when it has been possible to secure the pedicle and fix it outside the wound in the abdominal wall, the result has been much more satisfactory. I believe it is chiefly the difficulty of treating these pedicles, or the medium of connexion between the tumour and the uterus, extra-peritoneally, that leads to the greater danger of

this operation as compared with ovariotomy, although, in several cases which have been recorded, the intra-peritoneal treatment by ligature either of the pedicle or of the separate vessels has been followed by very good results. There are several preparations here of cases in which uterine tumours have been removed. Here is one that I removed by enucleation. It was an extremely unpromising case; but the patient was very anxious that some attempt to save her life should be made, and, considering the whole circumstances of the case, I thought it was one in which I might try to enucleate this growth. After exposing the uterus, I made the long incision which you see in the anterior surface. There was a very thin shell of uterine tissue. Without much difficulty, I shelled out this mass. There was difficulty in stopping the bleeding, and the patient died, principally, I believe, from hæmorrhage, though partly from chloroform, a few hours after the operation. Here is a specimen from the Hunterian collection, showing remarkably well how only one lip of the cervix uteri may become so enlarged as to form a considerable tumour, while the other lip, the body, and the fundus remain of their normal size. Here is a uterus with a fibroid tumour, which was removed during life by Mr. Nunneley, of Leeds. Here, also, is another specimen, extremely interesting as regards diagnosis. Full particulars of the case have been sent by Mr. Wheelhouse, of Leeds. The difficulty in diagnosis arose from what is not very well shown in the specimen: the length of the pedicle or connexion between the tumour and the uterus. The band here appears to be short; but Mr. Wheelhouse informs me that, when it was first removed, before it was shrunk by the action of the spirit, it was as long as the breadth of a large hand—say three or four inches. The tumour was felt high up in the epigastrium. The uterus was large, and there were a great many different opinions expressed about it. The woman was in the hospital, and, while an operation was under discussion, she died. This shows as complete a pedicle as we meet with in these uterine tumours, or rather fibroid outgrowths from the uterus. Here is a calcified fibroid which obstructed labour. It was taken from a patient of my colleague, Dr. Wynn Williams, who has published particulars of the case.

I must not conclude without a few words about a very great improvement which has been recently introduced by Dr. Freund, of Breslau, in the mode of removing entirely a cancerous uterus. Here is a specimen from a patient of mine, who died of cancer of the uterus. I sent it to the museum, that it might remain as evidence to show how cancer may destroy the cervix uteri and the portion of the vagina immediately in contact with it, and leave the rest of the uterus perfectly healthy. But I exhibit the specimen more particularly to assist in the explanation of this improved mode of removing the entire uterus, as shown by these three diagrams. Some years ago, Dr. Blundell, in four cases, removed a cancer of the entire uterus through the vagina, pulling down the cervix uteri, then cutting through the roof of the vagina, cutting close to the cervix all round it—first on one side, then in front, then behind, then on the other side,—and securing the vessels in the best way he could. But only one of these four patients recovered; and the operation has fallen into disuse. Professor Freund, of Breslau, has lately sent me his last paper, and tells me that of three cases in which his operation has been performed, two have completely recovered, and the one in which it was not successful was not performed in accordance with his rules.

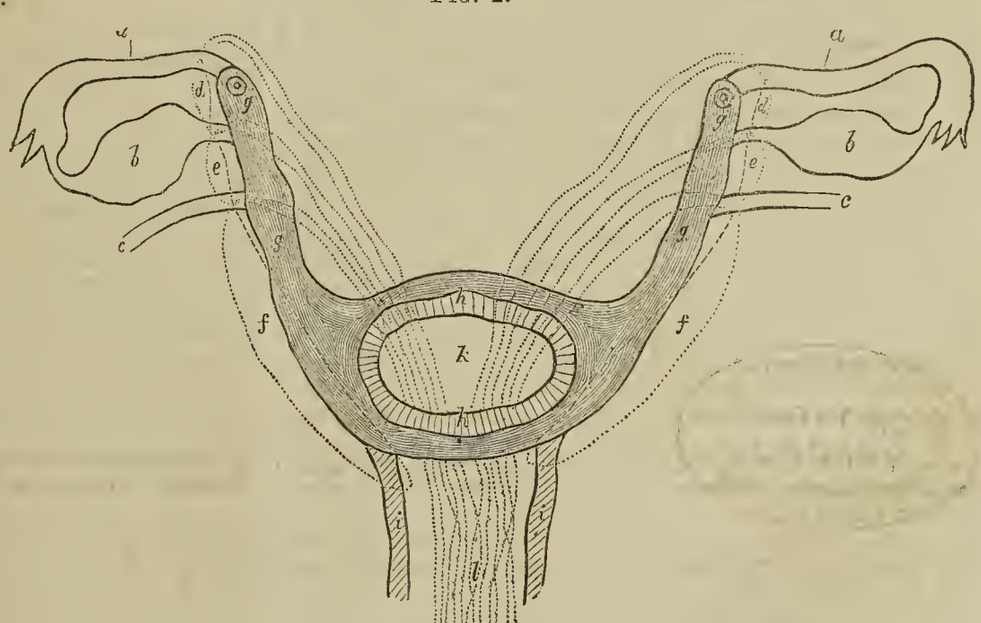
In performing this operation after Freund's method, the patient is placed in a position very different from that in ovariotomy. Her head is placed towards the light, with the shoulders low and the hips raised, the light falling upon the pelvis. An incision is made in the abdominal wall, then the intestines are drawn up out of the pelvis and protected by a carbolised cloth. Next, a needle and thread are carried through the fundus of the uterus and tied in a loop which serves to draw the uterus up out of the pelvis. Then three ligatures are passed on either side securing the broad ligament in the way shown by the diagram. When that has been done, ligatures are passed on each side of the uterus.

Fig. 1.



They are seen in the first drawing before, and in the second after, the uterus has been cut away. Suppose *a a* to be the Fallopian tubes; *b b* the ovaries; *c c* the round ligaments; *d d*, *e e*, and *f f*, the upper, middle, and lower loops of the ligatures, which are all brought out together through the opening *k* left at the upper part of the vagina by the removal of the uterus. At *i i* the walls of the vagina are represented; *hh* the raw surface left by division of these walls; and *g g g g* the divided surfaces of the broad ligaments. In the third drawing we have a front or transverse view of the condition after completion of the operation. *a a* are the Fallopian tubes; *b b* the ovaries; *c c* the round ligaments. The tied ends are brought down to the vaginal opening by the tied loops *f* of the ligatures. The vaginal walls *e e* are folded

Fig. 2.

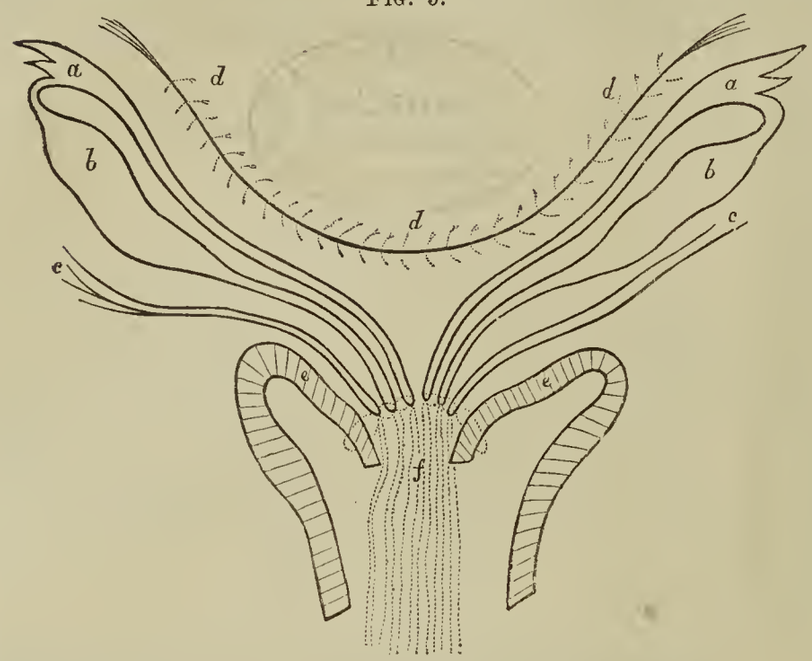


together by the tightened ligatures so as to make a sort of prolapse into the vaginal canal, resembling a soft small vaginal portion of the cervix uteri. The peritoneal edges of the divided broad ligaments are brought together by a line of sutures *d d d*, so as to protect the peritoneal cavity from the entrance of anything upwards from the vagina.

I cannot take up more of your time with this subject, but I do say that should it, in some cases (no doubt they would be rare), be deemed desirable and justifiable to remove an

entire uterus affected by cancer, this appears to me to be the best way hitherto described of doing it with a reasonable hope of success.

Fig. 3.



The hour is nearly complete, but I cannot conclude the very hasty and imperfect review which I have been able to condense in six lectures of the subject of abdominal tumours, and the operation now accepted as the only effectual means of relief in cases of ovarian tumours especially, and of the results which have been obtained in alleviating distress and prolonging valuable life, without some reference to the man who is justly looked upon as the "father of ovariotomy." McDowell was wise, practical, and prophetic. He carefully studied the subject which filled his mind; did with an enviable success what his opportunities permitted; and looked with an anxious eye on the prospect opening up to his successors. We, more happy in our opportunities, have entered into full possession of what to him was little more than a promised land; and, speaking personally, I feel it my greatest happiness to have been able—chiefly through the encouragement of professional brethren (which at one time I had little reason to anticipate)—to reach the point at which McDowell aimed. I have not only attained the amount of operative success which he gave as the standard; I have not only the almost daily gratification to see some living and enduring evidences that my labours have not been in vain; but I have, for the rest of my days, the satisfaction of knowing that my example has encouraged others, and will be the means of still further extending to human suffering the consolatory assurance of the prospect of relief and the certainty of its realisation by the many skilful hands which are now betaking themselves to the work. This is a lot which falls to but few innovators. It is not given to everyone to see the fruit of his labours; but the surest way of gaining that end is by studying the words and following the counsels of wisdom. The wish to do well what others have done, is not all that is wanted. Step by step their course must be followed, difficult still, but somewhat easier from the result of experience; and, while I content myself with a warning to aspirants that a fancied inspiration will not alone carry them on to success, I feel that I cannot quit them and the subject better than by repeating the words of McDowell, who, though better known in the open rugged field of practice than in the paths of literature, was a man of broad and elevated views, and they expressed the advanced opinions he had already formed respecting the operation he had inaugurated after years of patient waiting and zealous preparation. He strove to make ovariotomy a boon to humanity. He had reason to believe it had proved so, but he foresaw the dangers of its abuse from rash and indiscriminate rivalry amongst his followers. Listen to his own words:—"I think my description of the mode of operating, and of the anatomy of the parts concerned, clear enough to enable any good anatomist, possessing the judgment requisite for a surgeon, to operate with safety. I hope no operator of any other description may ever attempt it. It is my most ardent wish that this operation may remain to the mechanical surgeon for ever incomprehensible. Such have been the bane of the science, intruding themselves into the ranks of the profession with no other qualification but boldness in undertaking, ignorance of their responsibility, and indifference to the lives of their patients; proceeding according to the special dictate of some author as mechanical as themselves, they cut and tear with fearless indifference, utterly incapable of exercising any judgment of their own in cases of emergency, and sometimes without possessing the slightest knowledge of the anatomy of the parts concerned. The preposterous and injurious attempts of such pretenders can seldom fail to prove destructive to the patients and disgraceful to the science. It is by such this noble science has been degraded, in the minds of many, to the rank of an art."

In conclusion, allow me to read a sentence or two from one of those able reviews which make one regret that the day of the medical quarterlies is passed. (*British and Foreign Medical Review*, April, 1873.) "All honour to McDowell of Kentucky, who, to use the words of Hufeland, 'looked upon his profession as a high and holy office, who exercised it purely, not for his own advancement, not for his own honour, but for the glory of God and the good of his neighbour, and who, long since called to give an account of it, is no doubt reaping the reward of his faithful stewardship.'"

THE LUMLEIAN LECTURES
ON
INSANITY IN ITS LEGAL RELATIONS.

Delivered at the Royal College of Physicians, London.

By J. C. BUCKNILL, M.D., F.R.C.P., F.R.S.,
Late Lord Chancellor's Visitor in Lunacy, and Medical Superintendent of Devon County Asylum.

Lecture II.—Part II.

The "moral insanity" of Prichard must not be treated in the lecture-room with that disdain which it has received in the courts. Homicidal insanity has been invented, but moral insanity, unfortunate as the term is, has only been misrepresented. It may be that the substratum of fact which underlies the theory of moral insanity is more interesting and important to schoolmasters and the trainers of youth than to lawyers; but as the latter are not unfrequently required to consider the theory, and are sometimes even compelled to deal with the reality of moral perversion, more or less the result of abnormal organisation, I cannot avoid the duty of some attempt to winnow this subject as far as my time and knowledge will permit.

I like sometimes to commence an argument by stating my conclusion, and my conviction is, that under the misnomer of moral insanity a very important, but little observed, form of insanity has been indicated, which I propose to designate as *Evolutional Insanity*—that is to say, insanity which has originated in some primeval vice of the organism, the characteristics of which during the earlier stages of its development are more manifested by moral perverseness and defect than by abnormal conditions of the intelligence. We must all have met with children who are strangely vicious from an early age—lying, thieving, cruel, violent, the despair of parents and pedagogues. Very often they have been born to a bad heritage, from a line of descent from insanity, vice, or crime. At periods of increased physical instability and growth, as at the second dentition, and still more at puberty and adolescence, their moral peculiarities become more marked, and their conduct more outrageous, the intellectual faculties becoming more and more involved, until, at an age varying greatly in different individuals, they eventually enter into a stage of unmistakable insanity, with all the qualities of irresponsibility upon which the most stringent legists can insist. Before this last change has taken place—

and it may not occur until early manhood, or even middle age—it would seem extremely harsh to say that such persons ought to be punished for their offences; and yet the power of self-control, under the fear of pain or the threat of punishment, is to a great extent possessed by them, and to refuse to punish a brutal, cruel, wicked youth because his father was insane would seem to be about the most unwise application of a theory which could be well conceived. Lord Justice Bramwell inculcates just the opposite doctrine when he says that if two boys robbed an orchard, one from a casual temptation and for the first time, and the other because he had a strong disposition to theft, he would admonish the former, and flog the latter severely, if flogging were his mode of punishment. Fortunately, the offences of these persons are not usually great crimes; but when they do commit such offences I can see no reason why their responsibility should not be decided upon by the same rules which apply to offenders whose state of mind has been the product of a more marked condition of disease. Prichard, learned as he was, knew comparatively little of insanity by observation when he wrote his treatise; and if, instead of ranging alienist literature to discover examples of clever lunatics and of eccentric offenders, he had devoted his great ability to the investigation of the real facts of his subject, his conclusions would, I think, have better stood the test of time and inquiry. There can be little doubt that he misunderstood Pinel in affirming that the "*emportement maniaque sans délire*" of the latter is moral insanity. The words of Pinel, which have been quoted by so many authors as proof that he believed in insanity without affection of the intelligence, do not seem to me to strictly bear such a construction:—"I have not been a little surprised," says this father of our speciality, "to see many insane persons who offer at no time any lesion of the understanding, and who are dominated by a kind of furor, as if the affective faculties only had been injured." Now, I apprehend that this remarkable sentence refers rather to acute mania without delusion than to the forms of so-called moral insanity, or impulsive insanity, for whose support it has been claimed in evidence; for in these latter forms there is no furor, while in the former there is, and combined frequently with the most remarkable state of seeming intelligence—a mad intelligence, however, incapable of comprehension and the control of conduct.

Prichard's first example, which he cites from Pinel, is a striking illustration of the refracting medium through which we see things which seem to suit our theory. It has been so often quoted that I shall only repeat the first pregnant lines:—"The only son of a weak and indulgent mother gave himself up habitually to the indulgence of every caprice or passion of which an untutored and violent mind was susceptible. The impetuosity of his disposition increased with his years. The money with which he was largely supplied removed every obstacle to the indulgence of his wild desires. Every instance of opposition roused him to acts of fury," etc. He went storming through life, possessing a seemingly sound judgment, and being fully competent to the management of his estates. At last in a rage he threw a woman into a well, and was condemned to perpetual imprisonment in Bicêtre. It is to be hoped that the word "condemned" indicated that he was treated as a criminal and not as a lunatic, for not one word in Pinel's graphic description indicates the existence of insanity, or of any other mental state more abnormal than overbearing and malignant selfishness and passion. And yet this case continues to be quoted by all our writers on the irresponsibility of the insane as a typical one of moral insanity.

A case of much greater interest in every way was that of William Dove, found guilty and executed for murder at York in 1856. The plea of "Not guilty, on the ground of insanity," was supported by remarkable evidence of the man's passionate, mischievous, and wayward conduct from childhood upwards. At seven years of age, among other malicious actions, it was proved that he twice attempted to set fire to the house, and that he chased his sisters with a red-hot poker; at twelve years of age he got a pistol, with which he told his schoolfellows that he intended to shoot his father. He was expelled from school. As a farming pupil he put vitriol on a number of cows, by which they were seriously damaged; he frightened the servants by turning something alive into the kitchen, which was found to be two kittens with their eyes burnt out by oil of vitriol. As a farmer himself, he did many strange, mischievous, and cruel things to his servants, his horses, and his cattle. He led a wretched, jarring life with his wife, threatening to blow her brains out, so that on two occasions she fled the house. Next door to him lived a widow whom he promised to marry when his wife was dead. With this intention he murdered his wife by the administration of six doses of strychnine, which he had procured in the most cunning manner. A first quantity of strychnine he bought, as he said, for the purpose of poisoning cats, and he did so use it. He subsequently got a second portion and a third, the last of which he stole out of a medical man's surgery. During the time his wife was being slowly poisoned, he wrote hypocritical but quite intelligent letters to her mother about his wife's spasms and danger. It may be truly said if Palmer had used similar forethought and design in obtaining and in the employment of the same means of destruction, there would have been but little probability of his conviction. If, for instance, Palmer had poisoned cats and dogs before he gave the drug to Parsons Cook, and if instead of buying or begging it he had obtained it by an act of theft, who can doubt that he would have escaped punishment? Strychnine, however, was found in the body of Dove's victim, and not in that of Palmer's. There can be no doubt that the circumstances proved at this trial afforded strong evidence that Dove was during his whole life in a state of evolutional insanity, and that if his life had not been cut short the great probability is that he would eventually have become so insane as to be irresponsible. But that he was irresponsible for his scheming, cold-blooded, and malicious murder, either according to the law, to expediency, or to justice, I for one cannot hesitate to deny.

If this case is in itself instructive, the principles of law and of common sense laid down by Baron Bramwell, in his charge to the jury, render it far more so. I have only time to refer to a few leading points, the first of which is the admission that it was proved that Dove was not a sane man. "It is impossible to resist the conclusion," said the judge—as quoted by Sir James F. Stephen,—"which the evidence given above suggests, that Dove was not a sane man. The result of the whole history appears to be, that he was from infancy predisposed (to say the least) to madness; that symptoms indicating that disease displayed themselves at frequent intervals through the whole course of his life, but that they never reached such a pitch as to induce those about him to treat him as a madman. . . . His language and conduct appear at times to have been inconsecutive, capricious, and not capable of being accounted for on any common principles of action; but this was only an occasional state of things. He appears to have acted, as a rule, rationally enough, and to have transacted all the common affairs of life. Did, then, the killing of his wife belong to the rational or the irrational part of his conduct? Every circumstance connected with it referred it to the former. . . . No doubt insanity is strong evidence of innocence, but it is not conclusive evidence; and the question whether or not its existence rebuts the presumption of guilt in any particular case is entirely for the jury." "The questions which by law had to be left to the jury were these—Did he know he was doing wrong? *Could he help it?*" In this last sentence this great judge seems to have anticipated that proposed change in the law which has since received the emphatic sanction of the Lord Chief Justice of England, for the question put to the jury, whether the prisoner could help committing his crime, is, of course, the question of self-control expressed in vernacular phrase. Whether the prisoner could help it was most ably reasoned out in this charge. The crime was committed with every mark of deliberate contrivance and precaution; and it is this setting and keeping the mind in motion towards an object which constitutes the mental part of an act. If Mrs. Dove had met with an accident or disease likely to be fatal, before the poison was given, is there any doubt that it would have been withheld? An uncontrollable propensity, which accidental circumstances or the fear of detection constantly control or divert for a time, is an inconceivable state of mind. Clearly it is not a propensity which cannot be controlled, and must, therefore, be one, as the judge points out, which simply is not controlled.

The verdict of guilty and the execution of this criminal, respecting whom "it was impossible to resist the conclusion that he was not a sane man," gave a stern rebuke to the

prevailing error that insanity of any kind or degree exonerates guilt and averts punishment—an error which arises from the common fallacy of changing the premises, "*a dicto secundum quid ad dictum simpliciter*," and which has contributed more than all other causes combined to the false position which medical witnesses have so often occupied in our courts.

This history and mental state of William Dove I have called typical; and I wish to explain what I mean to convey by the term, for it has an important bearing upon our subject. The word "type," as we know, and as our dictionaries tell us, has several different meanings; but the one in which I here use it is the one in which it is said to be used, in natural history, as that which combines most prominently the several characteristics of a group, as a particular individual who may be the type of a species. It is very important for us to consider whether we can mentally group together, in such a manner that our notions shall correspond with realities, different kinds of insane offenders whom we may refer to typical examples, as I have referred to William Dove as a type of evolutional insanity. I have a dread of propounding any grouping of facts in such a manner that it can be deemed to be an attempt at classification, well knowing the red-rag effect it has upon some minds, who take a class not to be a notional assent to certain possibilities, but for a real thing, and not unfrequently also for an attack upon some other notion supposed to be even more real. But is it not simply true that some insane offenders resemble certain other offenders, and differ from the remainder, so that by studying those resemblances and differences we come to have a better knowledge of each individual case? No one, I think, who has given much attention to this subject can doubt that the answer must be in the affirmative, or deny that the points of likeness include not only the cause and history, the physical symptoms and mental states, but also the kind of offence and manner of committing it. How remarkable is the resemblance of this case of William Dove and that quoted from Pinel, with many other examples of so-called moral insanity recorded by various authors! There is almost constantly heredity, which may or may not be noted; there is good physical health; there are the malice, mischief, and cruelty of early age, with or without intellectual stupidity, but with no idiotic defect of intelligence; there is the remarkable variation of reason with unreason in the conduct of life; and there is, up to a late period of the history, the power of self-control, under the fear of detection or the threat of punishment. The offence is always malicious, and often cruel, in cold blood, thereby differing from the apparent cruelty of epileptic furor. I examined a very remarkable instance of the group at Boston, in the United States—a young man named Jesse Pomeroy, who had been sent to a reformatory in his boyhood for torturing animals. After his early release on account of good conduct, he tortured two children to death, with the interval of a year between the crimes. Of the last, he told me that he sat upon the child and stabbed him with his penknife-blade until he thought he could feel no longer; then he opened the longer blade of his knife and cut his victim's throat at the angle of the jaw, because he knew that the bloodvessels were nearest the surface there. It had been suggested that he was epileptic, and I think this had come to his knowledge, for he told me that he often felt a sensation like that which would be produced by a wet feather being drawn across his forehead from one temple to the other. I thought at the time, and shall still think so until I know to the contrary, that an epileptic aura takes the course of the nerves, and is never transverse to them. This youth was quick in intelligence, and he told me that his crimes were suggested to him by reading what he called "blood-and-thunder novels." He was under sentence of death when I examined him, but he has not been executed.

How different is this to the idiotic group, in which there is really want of self-control corresponding with intellectual defect, and ranging from the zero of cases I have already cited to the slight imbecility which does not exempt from the punishment due to minor offences! How different, again, are the epileptics, that most homicidal group of all, and with the least control over conduct, whose history of early life is commonly normal! The mental state of criminal epileptics, however, differs greatly. One commits homicide automatically; another in a state of morbid fury combined with stupor, which places him in a state of incomprehension which is equivalent to ignorance; and yet another commits it under the influence of hallucination or delusion. Another distinct and well-recognised group of insane homicides is that of puerperal women with all the physical signs of their condition, which cannot be overlooked or ignored. Peevish, feverish, irritable, and capricious, they know to a certain extent what they are doing, and although the motive for infanticide may be absurdly trivial, still there is a motive, and not an amiable one. Another noteworthy group is that of climacteric women, and sometimes of men, who, with the marked history and physical symptoms of melancholia, are so subject to the dangerous delusions of persecution; but who also sometimes commit murder from stupidity and incomprehension alone, as in the instructive case quoted by Dr. Orange in his most valuable address to the Reading Branch of the British Medical Association. This woman killed with a shovel an aged neighbour whom she said she had often thought of killing. She probably killed her because she did not like her, and because her mental state rendered her incapable of comprehending the consequences of her act. She was convicted and sentenced. Dr. Orange found her suffering from climacteric insanity of a most decided and pronounced character, and she was wretchedly haggard, worn, and emaciated. She died in convulsions shortly after her admission to Broadmoor, and cerebral lesions were found resulting from subacute meningitis.

The paresic group also is a remarkable one, with very distinct history and distinguishing group of symptoms, both physical and mental. These insane very rarely commit homicide, but very frequently theft, and the theft is of a peculiar character. They appropriate the property of others under the belief that it belongs to themselves. I saw such a man lately, who appropriated a cask of ale, rolling it along the street in open daylight. He thought the brewery from which he fetched it, and all its contents, belonged to him. Prichard makes a mistake in attributing an instance of this kind to moral insanity, but the thieving propensities of general paralysis had not been observed when he wrote. He says that a wealthy gentleman joined a lady friend in the shop of a draper, who found himself robbed of a silk shawl, and charged the lady with the theft. The shawl was found in the pocket of the gentleman's great-coat hanging in his hall. It was "one of the gentleman's peculiarities" to do such things: he had general paralysis. I could add several more well-known groups from our present information on the subject, which is far from full and satisfactory. The truth is that the search for information on this especial subject has hardly commenced. Dr. John Gray, the experienced and accomplished physician to the State Asylum of New York, has published most valuable material for such an investigation in brief histories of the great number of insane criminals who have come under his observation; but I do not know that he has yet attempted to distil the mass. I had the pleasure of hearing one of these papers read before a medical association in America, and to observe that "when Dr. Gray brings forward such a great array of well-observed cases, and proves that so many people have committed such and such crimes, labelled with certain distinctive marks, and instigated by such and such conditions and motives, and then proceeds to show that the new case under consideration is fundamentally like a class of cases in his record, he is quite likely to succeed in any court in establishing the fullest consideration for his evidence." For, notwithstanding the strict limitation of our duty in the witness-box to diagnosis, we should be wrong indeed to forget that law-breach of all kinds is one of the symptoms of insanity, and in these inquiries often the very symptom which is most characteristic. It is our task to discover, and demonstrate if we can, when it is a symptom of disease, and not a sign of selfishness and malice.

It is a happy circumstance for us professionally that we have not often to give direct evidence of crime. It is painful enough to give negative evidence which is incriminating. The most remarkable case in which I have been concerned, not even excepting that of Victor Townley, was the case of Constance Kent, who murdered her young brother, and escaped detection. After an interval of several years, a truly conscientious motive led her to confess, and the most painful and interesting duty fell to my lot of examining her for the purpose of ascertaining whether it would be right to enter the plea of "Not guilty on the ground of insanity." I was compelled to advise against it. By her own wish, and

that of her relatives, I published a letter in the *Times*, describing the material facts of the crime, but to save the feelings of those who were alive at that time I did not make known the motive, and on this account it has been that the strange portent has remained in the history of our social life that a young girl, not insane, should have been capable of murdering her beautiful boy-brother in cold blood and without motive. I think the right time and opportunity has come for me to explain away this apparent monstrosity of conduct. She avowed to me that real motive did exist. The girl's own mother, having become partially demented, was left by her husband to live in the seclusion of her own room, while the management of the household was taken over the heads of grown-up daughters by a high-spirited governess, who, after the decease of the first Mrs. Kent, and a decent interval, became Constance Kent's step-mother. In this position she was unwise enough to make disparaging remarks about her predecessor, little dreaming, poor lady, of the fund of rage and revengeful feeling she was storing up in the heart of her young step-daughter. To escape from her hated presence, Constance once ran away from home, but was brought back; and after this she only thought of the most efficient manner of wreaking her vengeance. She thought of poisoning her step-mother, but that, on reflection, she felt would be no real punishment, and then it was that she determined to murder the poor lady's boy, her only son. A dreadful story this,—but who can fail to pity the depths of household misery which it denotes? At her arraignment Constance Kent persisted in pleading "Guilty." Had the plea been "Not guilty," it would, I suppose, have been my most painful duty to have told the court the tragic history which I now tell to you, in the belief that it can give no pain to those concerned in it, and that it is mischievous that so great and notorious a crime should remain unexplained.

ORIGINAL COMMUNICATIONS.

THE STRUCTURE AND FUNCTIONS OF THE NERVOUS SYSTEM.

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THE ENCEPHALON.

(*Continued from page 586 of last volume.*)

And now one word with respect to the connexions between the optic thalamus and corpus striatum. The thalamus gives off large round bundles of fibres from its anterior and outer margins, which follow the direction of the radiating fibres of the tegmentum. These fibres pass beneath the caudate nucleus, and some of them terminate in its substance. The external margin of the thalamus is separated from the lenticular nucleus by the whole breadth of the internal capsule; but fibres from the thalamus pass round the anterior margin of the capsule to reach the nucleus. Again, posteriorly the thalamus curves round the crus, and gives off a bundle of fibres which proceed forwards in the roof of the descending cornu of the lateral ventricle to join the grey matter of the lenticular nucleus; other fibres pass transversely between the thalamus and lenticular nucleus, interlacing in their course with the ascending fibres of the internal capsule. The thalamus, therefore, is intimately connected with both segments of the corpus striatum.

Leaving for the present the further consideration of the distribution of the fibres of the corona radiata to the cerebral convolutions, let us examine the functions of the basal ganglia. The most generally received hypothesis with respect to the functions of these ganglia, especially in England, is that the optic thalami are concerned in the upward transmission and elaboration of centripetal impulses; and the corpora striata in the downward transmission and elaboration of centrifugal impulses. These impulses elaborated by the thalami may either be transmitted anteriorly and laterally to the corpora striata, or upwards to the grey matter of the cortex, while the incitement to action may come to the corpora striata either from the thalami directly or from the cortex. When the impulses are transmitted directly from the thalami to the corpora striata, and from the latter downwards to the cord, then the basal ganglia may be regarded as the superordinates of the central grey tube; but when the impulses are transmitted from the thalami to the cortex, and from the latter to the corpora striata, the basal ganglia, although still the superordinates of the central grey tube, are the subordinates of the grey matter of the cortex. Very serious objections were urged against the view that the thalamus was the sensory ganglion of the opposite half of the body, but these have been fairly answered by Dr. Broadbent, to whose writings we are indebted for two most fruitful discoveries in the application of physiological principles to the elucidation of the phenomena of diseases of the nervous system.

The first objection is, that lesion of the thalamus does not impair sensation in the same degree that motor paralysis is caused by injury of the corpus striatum; but the reply is, that centripetal currents are more diffusely conducted than centrifugal currents, and that this feature is as characteristic of the grey matter of the posterior horns of the cord as it is of the thalamus. Another objection is, that if the thalamus be the common sensory ganglion, lesion of it ought to cause not only hemianæsthesia, but also unilateral blindness and deafness. To this objection Dr. Broadbent replies by extending his principle of the bilateral association of the nerve-nuclei of muscles bilaterally associated in action to the action of the nerves of special sense. Bilateral association of sensation ought to involve fusion of sensory nuclei; and the combination of sounds reaching the ears, and of light reaching the retinæ, being completely fused into one sensation, the two auditory and the two optic nuclei ought to be fused practically into one nucleus for each couple sending fibres to the two thalami, so that unilateral deafness or blindness from injury to one thalamus would be impossible. A final objection to this view is, that while lesion of the thalamus is frequently unaccompanied with complete hemianæsthesia, it is sometimes accompanied with motor paralysis of the opposite side of the body; hence it has been argued that the thalamus is a superior centre for reflex action. But the most recent anatomical investigations enable us not only to dispose of this objection, but give us also the key to the interpretation of the most important phenomena connected with both sensory and motor paralysis from brain disease. Some of the fibres of the crusta ascend through the internal capsule without being connected with the basal ganglia; and it is now proved, as has been already stated, that these fibres connect the central convolutions of the cortex with the central grey tube of the cord; and before a cerebral lesion gives rise to paralysis, the conduction through these fibres must be interrupted. In a post-mortem on a man who died a few hours after being run over by a cab whilst crossing a street, I found that the left lenticular nucleus had completely disappeared, and its position was occupied by a pseudo-cystic cavity filled with serous fluid, the result, I presume, of an old hæmorrhage. There could not, therefore, have been paralysis of the leg of the opposite side; and the reason was, that the fibres which connect the cortex of the brain and the cord were uninjured. On the other hand, the reason that disease of the lenticular nucleus is so frequently associated with hemiplegia of the opposite side of the body, is that these fibres are so liable to be injured by the same lesion which injures the nucleus. But the pyramidal fibres of the external capsule lie almost immediately external and inferior to the thalamus, so that disease of the latter may also implicate the former; and when that occurs, paralysis will result.

It is, indeed, doubtful whether disease of the thalamus alone would produce loss of cutaneous sensibility on the opposite side of the body. True hemianæsthesia does not result unless the posterior fibres of the internal capsule, which bend backwards to be distributed to the convolutions of the occipital lobe, are interrupted at their origin in the tegmentum or in their course; and when they are injured, not only tactile sensibility, but all forms of special sensibility, are affected on the side opposite the lesion. Dr. Hughlings-Jackson has called attention to the occurrence of hemiopia with hemianæsthesia, due to lesion in or near the thalamus; but this symptom does not appear to be a direct result of disease of the thalamus itself. That there is a semi-decussation of the fibres of the optic nerves in the chiasma is a conclusion which is forced upon us by various converging lines of evidence. From this it results that the fibres coming from the left halves of both retinæ occupy the left optic tract as it passes under the crus to reach the corpora geniculata

It is quite possible that a tumour, or even hæmorrhage, of the thalamus might interrupt the conducting power of the fibres of the optic tract as it winds round the crus; but the most probable cause of the hemiopia is implication of the external geniculate body in the disease.

The hypothesis, therefore, that the thalamus is a centre for the compound co-ordination of centripetal impulses is not liable to any insuperable objections, and accords better with facts than any other theory of its function. The compound co-ordinated centripetal impressions may be transmitted directly to the corpus striatum, and reflected downwards to the anterior horns and anterior root-zones of the cord, thus causing a compound reflex action, or upwards to the cortex of the brain, where the impressions become correlated with feeling. There are no good grounds for believing that the activity of the thalamus implies consciousness, even of the most rudimentary kind. A compound differs from a simple reflex action not simply in being more complex, but also in consisting of a succession of different actions. The act of sucking in a child is a complex act, but it consists of a series of *similar* complex actions in response to a series of similar impressions; and this action may be taken as a good example of reflex actions in general. But when a chicken has just burst the shell, and almost immediately begins to pick grains of food off the ground, the necessary actions are not only complex, but consist of a succession of *different* complex actions in response to a very complex impression. There is no reason to believe that the action of the chicken in picking food is a conscious one, any more than is sucking in a child; but while the latter is a simple reflex act, and co-ordinated in the central grey tube, the former is a compound reflex act, and co-ordinated in the basal ganglia acting in association with the central grey tube, and probably also with the cerebellum. When impressions are made upon a large number of the end organs of the afferent nerves, these, after being first co-ordinated in the posterior part of the grey matter of the central grey tube, undergo, on ascending, a second co-ordination in the thalami, whereby they are integrated in various ways, and reduced to something like serial order. When the disturbances so arranged are transmitted to the corpora striata, and reflected downwards, they give rise to a succession of delicate muscular adjustments; and when they are transmitted to the cortex—which is, as we have already remarked, the organ of doubly compound co-ordination in time—and become the correlatives of feeling, their serial order adapts them for evoking that regulated succession of sensations and perceptions which constitutes what has been variously called the "stream" or "thread of consciousness."

The corpus striatum, on the other hand, is a centre for the compound co-ordination of centrifugal impulses for the opposite half of the body. When it acts in obedience to impulses received from the optic thalamus, it is an organ of compound reflex action. All the actions which are regarded as inherited instincts, or which through long-continued repetition have assumed the character of acquired instincts, are of the nature of compound reflex actions; they are independent of consciousness, and are co-ordinated in the basal ganglia. But the corpus striatum acts in obedience to impulses received through the cortex of the brain. We have already seen that there is an uninterrupted connexion between the cortex and grey matter of the cord by means of the pyramidal fibres, and we must now endeavour to differentiate the functions of the cortex when it acts through the latter fibres and the corpus striatum respectively. A simple illustration will make this clear. When a child is learning to write, the muscles of the thumb, index and middle fingers are moved in separate groups, so that the hand is ultimately brought to a proper attitude for holding the pen. Subsequently separate groups of muscles are brought successively into action, by which the point of the pen is moved upwards, downwards, and laterally, so as to produce the elementary strokes of writing. These actions, described in subjective terms, are not simply conscious, but involve that active consciousness which constitutes attention; and they are also deliberate, the outward sign of this deliberation being slowness of execution. The centrifugal impulses which initiated these movements may be presumed to have passed through the pyramidal fibres. After long-continued habit, however, the actions involved in writing are to a large extent, if not wholly, unconscious, and demand no deliberation; and this want of deliberation is accompanied by extreme quickness of execution. The centrifugal impulses regulating these actions are co-ordinated in the corpus striatum, under the guidance of a relatively small number of impulses from the cortex. This illustration also shows that the progress of education is from actions which are at first regulated through the pyramidal fibres, to actions which are regulated through the corpus striatum.

The characteristics of the actions regulated through the pyramidal fibres are, that they are complex, slowly executed, and grouped in an unusual manner; while the characteristics of the actions which are regulated through the corpus striatum are, that they are quickly executed, and grouped in modes which are frequently repeated. Now, the slowly executed movements grouped in unusual ways precede in the order of development the quickly executed and habitual movements; and the structural correlative of this fact is, that in the course of the development of the nervous system the pyramidal fibres assume a medullary sheath some time before the fibres in the crusta which connect the cord with the corpus striatum. But the movements which are organised in the individual by means of education, as those concerned in writing and speech, are not the only ones which are regulated through the corpus striatum under the guidance of the cortex. All the complex movements which animals manifest in response to emotional disturbances are organised in the corpora striata. The attitude expressive of fear and anger assumed by a cat when threatened by a dog, may be taken as a familiar example of such actions. Mr. Darwin's description of this attitude is that the cat "arches its back in a surprising manner, erects its hair, opens its mouth and spits." The regulation of the muscular movements concerned in producing this attitude are organised mainly in the corpora striata; but the incitement to the action of these centres in such a case comes from the cortex. During the execution of complex actions like the one just described the entire nervous system is in a state of excitement; and when, therefore, it is said that the regulation of the movements concerned is organised in the corpora striata, this must only be understood to mean that the principal nervous currents pass through and are reduced to order in these centres.

To illustrate the functions of the basal ganglia, let us suppose that an impression is made on the retina by a minute object, such as a fly, approaching the eye. The eyelids immediately close. This action is purely reflex, and is determined by the corpora quadrigemina and cord, and not influenced by the basal ganglia. Part of the disturbance, however, is conveyed to the optic thalami, and by them co-ordinated in such a way that on reaching the cortex of the brain they give rise to a sensation, or even to an indistinct perception; but this closure of the lids was quite independent of, or even prior in time to, the sensation or perception. Let us now suppose that the impression on both retinæ is made by a larger body, such as a cricket-ball, at a considerable distance from the eyes, but moving towards them. The disturbances produced are conducted inwards by the optic nerves and the afferent nerves of the ocular muscles, and after being elaborated by the sensory part of the grey matter of the pons and by the corpora quadrigemina, the greater portion are conducted to the thalami, and after undergoing a second elaboration and being reduced to something like serial order, they are transmitted to the cortex. The mental correlative of the cortical disturbance is a perception of the object and of its position in space, and of the rate and direction of its motion. Centrifugal impulses may now be sent from the cortex to the inferior centres, which will eventuate in a series of movements being executed, either to catch the ball or to avoid collision with it. One man, in whom no special aptitude has been organised with respect to the motion of the ball, may simply move his head to one side to avoid collision. The slower the action, and the more sure we are that it has not been frequently repeated in the previous experience of the individual, the more certain we are that the action has been what we call deliberate, and determined by conscious and volitional impulses. In such a case the volitional or centrifugal impulses are conducted outwards through the pyramidal fibres, and the corpora striata have had nothing to do with it. Another man, or rather a woman, on seeing the ball may exhibit the outward manifestations of alarm by facial expression or screaming, and execute a series of locomotive actions far greater than necessary to avoid collision

with the ball; and the greater these outward manifestations are, the more certain are we that the sensory impressions on reaching the cortex have caused a profound emotional disturbance, and that the centrifugal impulses reach the periphery through the corpora striata. But a third man, instead of endeavouring to avoid collision, may put up both hands in such a way that he catches the ball. Now, the centrifugal impulses may pass in this case either through the pyramidal fibres or corpora striata, according to circumstances. If the action has been frequently repeated so that it is done with precision, and without a feeling of conscious effort, its regulation is organised in the corpora striata; and if it is done awkwardly, and with the inward feeling and outward manifestation of a conscious effort, then the centrifugal impulses have passed through the pyramidal fibres.

Let us now suppose, lastly, that the cricket-ball, when first seen, is close to the eye, so that no time is given for a true perception to be formed. One man will duck down his head in order to avoid collision; another will put up one or both hands to protect the face; and a third will put up one hand and catch the ball. The actions made in response to the impressions vary according to the nature and organisation of the individual; they are compound reflex actions, and the brain has had nothing to do with their performance, since they only come into consciousness after being completed. The centripetal impressions in these instances are directly transmitted from the optic thalami to the corpora striata. How little consciousness has had to do with such actions as these is well illustrated by an experiment made by Mr. Darwin. "I put my face," he says, "close to the thick glass-plate in front of a puff-adder in the Zoological Gardens, with the firm determination of not starting back if the snake struck at me; but, as soon as the blow was struck, my resolution went for nothing, and I jumped a yard or two backwards with astonishing rapidity."

THE INFLUENCE OF MALARIA ON THE LIVER.

By JOHN SULLIVAN, M.D., M.R.C.P. Lond.

Marsh miasma, when absorbed, infects, impregnates, and poisons the blood, and this modified blood is the cause of the anatomical lesions which we may subsequently observe in the organs of circulation, more especially in the spleen and liver, the two organs most directly concerned in the formation and depuration of the blood. Still, no lesion may be found characteristic of the condition of these organs in marsh fever, and this may arise from the mysterious and occult nature of malaria, which may direct its immediate energy to the very principle of life itself, rather than to the organs by which the functions essential to life are performed.

Blood-poisoning, and the consequent modification it produces in the nervous and vascular systems, in the vital organs, both as to their colour and consistence, is the primary and essential effect of the poison of marsh malaria on the human body. The corpuscles of the blood and albumen are diminished in quantity, that of the fibrin is not increased; there is loss of solid, and increase of watery matter. Hence the anæmic condition of the blood, the loss of muscular power, the serous infiltrations, the tendency to hæmorrhages and extravasations of blood, which often produce softening, with enlargement and even rupture of the spleen.

The venerable founders of the art and science of medicine, so profoundly accurate in their observations and descriptions of disease, based upon the study of nature and nature's laws, have always regarded the liver as an organ of primary importance in the animal economy, by reason of its size, situation, and important connexions. They have described it as an organ not intended for the secretion of bile only, but also for sanguification, depuration of the blood, and generation of heat.

The researches of Magendie, Tiedemann, and more recently of Claude Bernard and other eminent physiologists, have proved to demonstration that the absorption of nutritious matter from the intestinal canal is not confined to the lacteals and thoracic duct solely, but that part is conveyed by the portal vein to the liver, where it undergoes important changes before it enters the circulation.

It is of importance to examine and inquire into the evidence on which the liver founds its claims to be regarded as an organ, independent of bile secretion, of sanguification, and depuration; because on the supposition of the truth and reality of such evidence are we able to explain the nature and origin of the most important symptoms and sequelæ peculiar to marsh fever and marsh cachexia.

The liver is capable of separating from the starch, sugar, and albumen of the food a substance—glycogen—which is a transition or modification of glucose, convertible into sugar when brought into contact with an animal ferment, as saliva, blood, etc. This glycogen is deposited in the secreting cells of the liver, and is consumed by the tissues during the intervals of fasting. It has been proved that no part of this glycogen passes through the biliary ducts, for bile contains neither glucose nor sugar. One portion passes as sugar to the right heart through the hepatic vein, from thence to the lungs, to be consumed in the process of respiration. The remaining portion of this glycogenic body contributes to the formation of cell-growth, and of the white corpuscles of the blood. Wherever cell-growth is active, whether in the animal or vegetable kingdom, glucose may be always detected. Hence blood taken from the hepatic vein abounds more in colourless corpuscles than when taken from the portal vein after it leaves than before it enters the liver. The elaboration of glycogen may therefore be considered as the first stage in the assimilation of the starch, sugar, and albumen of the food. Therefore sanguification is one important function of the liver.

Secondly, the liver is an organ of depuration: it removes from the products of digestion certain nitrogenous matters, which it disintegrates and converts into a soluble urea, to be eliminated by the kidneys. Blood in the portal contains far more fibrin than the blood of the hepatic vein. It has been calculated that more than sixty ounces of fibrin are subtracted in the course of twenty-four hours from the blood during its passage through the liver and the digestive organs. The liver disintegrates this fibrin. Whenever this disintegrating and depurative function is impaired, fibrin accumulates in the blood, as may be observed in some diseases, as rheumatic fever, characterised by an excess of fibrin in the blood.

Owing to the solvent properties of the bile acids, the red corpuscles of the blood part with their colouring matter, or hæmoglobin, which is excreted by the urine. The variety of shade in colour which the nitrogenous ingredients of the urine present depends, according to Bence Jones, "on the different degrees of oxidation in the pigment of the bile." The urea becomes variously tinged with the colouring matter of the blood. Urea is the product of the disintegration of nitrogenous matter in the liver. If this disintegrating function be interrupted, then the oxidation necessary towards the formation of urea is insufficient, and instead of a perfectly formed urea we have a deposit of lithic acid or lithates in the urine. These urinary deposits will vary according to the peculiar diathesis of the constitution, or to the degree of oxidation which the organic powers may be capable of maintaining. Whatever causes, therefore, calculated to interfere with the function of the liver, or to damage its structure, such as frequently occur in the diseases of hot climates, in those especially derived from the influences of marsh malaria, will give rise to an incomplete metamorphosis of nitrogenous matter, and consequently to an incomplete urea.

If the texture of the liver be diseased or destroyed, we may have a total suppression of urea, and any brain or nervous symptoms that may subsequently follow must be attributed to uremic poisoning, not to the absorption of bile, since we know from experience that the blood may be charged with bile, and nevertheless all nervous symptoms be absent.

When the liver is irritated or congested, with an increased activity of its secreting cells, we may have an increase in the function of disintegration, increased oxidation, and increased heat, and consequently an increase in the amount of urea and the lithates. Phenomena of a like nature may be observed in the spleen when first exposed to the action of marsh malaria. The organ becomes congested, and enlarged in volume; its function is over-stimulated, and the appetite is voracious. But if the spleen be exposed to the repeated and persistent influence of the poison, by which its texture becomes altered and degenerated, there will be loss of

appetite from paralysed function, and an incurable dyspepsia. Baccelli, the distinguished Professor of Clinical Medicine in the University of Rome, believes that the spleen acts a very important part in the process of digestion, by supplying to the pepsine glands of the stomach, through the venæ breves, the hydro-carbon materials necessary for their secretion.

The influence of malaria acts differently on the tissues of the liver and of the spleen. The first becomes congested, enlarged, hypertrophied, but indurated; the second, enlarged but softened. In the former, induration is the rule, softening the exception; and softening in the liver corresponds with diminution in volume. In marsh cachexia the tissue of the liver assumes a variety of shades of colour, the effect rather of altered secretion than of circulation. In such cases we find large quantities of pigmentum nigrum, which gives origin frequently to dysentery and diarrhœa. According to Griesinger, diminution in size of the liver is the result of pigmentary embolism, and sometimes of fatty degeneration. Depuration of the blood is therefore another recognised function of the liver.

Now, all these various processes of disintegration, bile formation, and oxidation must be accompanied with an evolution of heat. Hence we find that the temperature of the liver exceeds that of the average temperature of the body. The temperature of blood in the hepatic is considerably above that in the portal vein. As heat is given off during the process of disorganisation, and absorbed in that of organisation, it follows, as Dr. Murchison says, in his classical and highly practical lectures on the "Functional Diseases of the Liver," the disintegrative processes in the liver are in excess of the formative. The liver, therefore, is a great centre of heat. Hence, we may conclude that the opinion entertained by some among the fathers of medicine, that the liver is not only a bile-secreting organ, but also an organ for assimilation, blood depuration, and the generation of heat, has been confirmed by the experiments and investigations of the most distinguished physiologists of modern times. The mechanism of a gland so complex in its organisation, with functions so varied, is easily deranged when exposed to the influence of the poison of malaria which determines to that blood in the formation and preservation of which the liver is so essentially concerned. This subtle emanation from vegetable decay and fermentation cannot be appreciated by the senses; it evades all physical inquiries and chemical analysis. The human system is the only field for its energy. It is by the series of disorders which it produces in this system, constant though varied, that we are enabled by induction to attribute their origin to the influence of marsh malaria. Exposure to this poison is followed by vaso-motor irritation with arterial contraction, succeeded by vaso-motor paralysis and arterial dilatation.

These phenomena produce a febrile explosion represented by three stages, each one being the natural sequence of the preceding. In the first or cold stage, or that of concentration or congestion from arterial contraction, the blood is determined from the periphery to internal organs, the spleen suffers from hyperæmia, is enlarged and softened, the liver is congested, enlarged, and indurated, bile is detained from contraction of the bile-ducts, the portal and venous system is obstructed and clogged. Thus the materials which go to supply the liver for the due performance of its functions are cut off, the function of depuration and disintegration is arrested; the surface of the body is cold, pale, and livid; the patient feels a sense of weight and oppression, he shivers and trembles all over.

To this succeeds the second, or stage of heat and reaction from nerve-paralysis with arterial dilatation. The detained blood bursts its barrier, flows with violence, giving rise to tension and pain in the head, increased respiration and oxidation, to increase of heat and increase in the functions of the liver, and general pyrexia.

In the third, or stage of elimination, nerve-paralysis is exaggerated; to capillary exhaustion succeeds sweating and restoration of the function of all the vital organs, until a fresh accumulation of the poison takes place, either from continued exposure, or from its action in a latent or masked form. Should contact with this poison be repeated or continued, should it be concentrated or intensified by climate or endemic causes, then to hyperæmia will succeed hypertrophy of the liver, or a specific inflammation may result, to terminate in abscess, suppuration, cell-destruction, or acute atrophy.

I have never yet been able to trace inflammation or abscess of the liver in marsh fever, unless there had existed previously some recognised hepatic disease. A healthy man in a tropical climate may fall a victim to an aggravated form of malarial fever, and yet have no affection of the liver although constant exposure to malarial causes and to great heat will predispose the liver to disease. The physiological conditions which retained the blood in its normal state, suited to a cold, are broken when exposed to a hot climate. It follows that all previous conditions of health become greatly modified, or a source of danger, on our removal to the tropical zone. Certain functions, as those of respiration and digestion, are diminished; while others, as those of the skin and of the liver, are increased. From an increase in the functional activity of the liver results the frequency of its lesions; and no morbid cause is more capable of increasing this functional activity than a constant exposure to great heat.

The poison of malaria affects the texture and functions of the liver. The subject of marsh cachexia is jaundiced, because the normal metamorphosis of the bile is interfered with. He is pale and anæmic; his heart beats with a sense of suffocation and giddiness; his gait is slow and painful; he is sad and careworn; he labours under ascites or serous infiltrations; he is subject to alternations of heat and chills, because the process of oxygenation in the liver and the functions of sanguification and of depuration of the blood are interrupted.

A patient who suffers from a structural or functional disease of the liver through the continued, but slow and insidious, operation of marsh malaria, may drag on a painful existence for months and years. He relapses, he declines, and finally succumbs to the influence of a melancholy cachexia.

London.

SURGERY IN SPAIN.

By RICHARD BALLOTA TAYLOR, L.R.C.P.

The Spanish language being comparatively little spoken in England, may account for the imperfect acquaintance the profession in our country has of the present advanced state of surgery in Spain. The successful issues of several important operations reported in the Spanish medical journals, not having met in other countries with the publicity they deserve, I am induced to give a brief abstract of the most important of those lately performed.

Ovariotomy, although practised several years ago, has, until the present time, met with neither favour nor success. Matters have now changed, and the operation promises fair to be established with the same enthusiasm and to render as fruitful results as in most other countries. On February 24, Dr. Creus, formerly of Granada, and now of the Madrid University Clinic, operated successfully on a widow thirty-four years of age, who had been suffering two years and a half from an ovarian tumour. The umbilical girth of the patient measured seventy-six centimetres; the operation was performed antiseptically; an incision in the median line fifteen centimetres long was made two centimetres below the umbilicus, terminating at the same distance from the pubis. The tumour being semi-solid, containing only an ounce of thick greenish fluid, could not be drawn through the wound, which was consequently enlarged one centimetre downwards, and rather more than two upwards. The pedicle was dealt with on the extra-peritoneal method; the patient left her bed for the first time on the twenty-first day, and went from hospital cured on the twenty-sixth.

Dr. Gomez Torres, of Granada, has also performed ovariotomy with complete success on a young unmarried woman aged twenty-five, who during the last five years had been suffering from an abdominal tumour. On removal, the cyst was found to contain a small quantity of pus, several bones and cartilages, and above a hundred teeth (incisors, canines, and molars). The patient left the hospital, cured, on the thirty-third day.

Dr. Encinas, of Madrid, likewise performed extirpation of an ovarian tumour a short time since, but the details and the issue of the case have not yet been published.

But the most noteworthy surgical operation, and one which will leave its impress on the history of capital operations, is the total extirpation of the larynx, performed on

May 11 by Dr. Fred. Rubio, of Madrid. The patient, a bricklayer, aged forty-one, had suffered from hoarseness since childhood. In March, 1877, an abscess formed in the left side of the neck, opened into the larynx, and was followed by dysphagia and complete loss of voice. In February of the present year another abscess formed in the laryngo-tracheal region, which opened externally, leaving a fistulous channel communicating with the cricoid cartilage in a state of caries. The patient's condition became so desperate, owing to difficulty of swallowing and breathing, and incessant cough accompanied by profuse expectoration, that the extirpation of the larynx and the application of an artificial substitute was deemed to be the only procedure which offered any chance of recovery or amelioration. The operation —the twelfth of its kind in the annals of surgery—was begun and completed in the most masterly manner conceivable. Warned by the experience of other operators, one of Dr. Rubio's chief aims consisted in the avoidance and prevention of hæmorrhage. His efforts were so far crowned with success that during the whole operation—a most patient, calm, and painstaking dissection lasting two hours and a half—there was not a single jet of blood; not one vascular twig or branch requiring to be tied or twisted. The diseased parts were presented *en bloc* to the Academy of Medicine on May 23. The patient recovered from the operation admirably well, and the wound began to heal kindly, especially at its upper portion. The cough, however, increased in frequency and intensity; expectoration became more and more copious and difficult, breathing more laborious, and finally death took place on the 16th, five days after the operation, which, surgically considered, may be regarded as one of the most dexterous and scientifically performed of its kind.

Santillana.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GUY'S HOSPITAL.

A CASE OF GANGRENE OF THE FOOT, AFTER THE APPLICATION OF AN INTERRUPTED ELASTIC BANDAGE FOR THE CURE OF A POPLITEAL ANEURISM.

(Under the care of Mr. BRYANT.)

[Reported by Mr. G. F. Dixon.]

Daniel G., aged forty-five, the driver of a coal van, was admitted on March 12, 1877, into Job ward, under Mr. Bryant's care, with a tumour as large as an apple occupying the whole of the right popliteal space, and pulsating distinctly. It was soft, and expanded laterally on each pulsation. The pulsation could be stopped by pressure on the femoral vessels, but the pressure caused pain. Pulsation could also be felt in the posterior tibial artery. The heart-sounds were clear and normal, and the radial pulsations perfect. The patient's health was fair. Tongue slightly coated; pulse 68; temperature 98·8°. His family history was good; no hereditary disease known. He is a married man, but had no children. He had cholera about seven years before, and was treated at Bethnal-green Hospital, and shortly after that he had rheumatic fever; he had never had syphilis. About four or five weeks before admission he discovered by accident a small lump in the right popliteal space, which was painful and throbbed, causing a shooting pain down the leg. It increased in size for a fortnight, when it became harder, and a little less. He gave up work, and rested at home. He then went to Dr. Kellock, of Stamford-hill, who sent him to Mr. Bryant.

Mr. Bryant saw him on the afternoon of his admission, and, finding the sac of the aneurism very thin and apparently ready to give way, advised immediate treatment. Under these circumstances it was determined to try the effects of Esmarch's bandage to the limb, the man being quite unable to tolerate digital pressure for even a minute. At about 3 p.m. the bandage was consequently applied from the toes upwards to the aneurism. Gentle pressure was then applied over the aneurism for purposes of support, and, with the aneurismal sac full of blood, the bandage was bound firmly round the thigh. The circulation was thus completely arrested through the limb while the aneurismal sac was full of blood. A subcutaneous injection of a quarter of a grain of the acetate of morphia was then administered. The pulsation in the tumour ceased, and it was thought that the sac became harder; the pain, however, was much complained of. The bandage was consequently taken away at about half-past five o'clock, when the aneurism was hard and pulsated but little. Digital pressure upon the afferent artery was attempted, but the man could not bear it. 5.30 p.m.: A quarter of a grain of acetate of morphia was injected. He was much quieter; but the pain returned two hours later, and was very severe. 10.30 p.m.: Another subcutaneous injection was given, and he had a good night.

March 13.—The tumour was certainly much smaller, but pulsated distinctly. Temperature 98·4°; pulse 64.

14th.—Two subcutaneous injections were given during the night, and he slept well; but complained of great headache in the morning, and felt sick. The aneurism was undoubtedly smaller and harder, but still pulsated distinctly. He had no pain in the leg, which was rather colder below the knee. Temperature 98·2°; pulse 65. Urine was clear, and contained no albumen.

15th.—3 p.m.: The aneurism has clearly increased in size during the last twenty-four hours, and Mr. Bryant is confident that it is much softer. Under these circumstances Esmarch's bandage was again applied in the same way as it had been two days before. The man, however, opposed the treatment greatly, he being most intolerant of pain. A subcutaneous injection of morphia was given before its application, and chloroform subsequently. The influence of the anæsthetic was kept up more or less for three hours. After the lapse of this time the bandage was removed, the foot feeling very cold and pale. These measures did not, however, have any decidedly good effect upon the disease.

16th.—The patient passed a good night, and was free from pain. The aneurism was slightly smaller, but pulsated plainly. Temperature 99·2°; pulse 75. The man continued in the same condition for a few days, the dread of the bandage being re-applied making him ill. He suffered from tonsillitis, but it disappeared; and as the aneurism continued in the same state, although possibly as a whole smaller and harder than when admitted, yet in one spot the pulsation was very prominent, and the skin seemed very thin; in fact, it was clear that it would soon rupture.

27th.—The femoral artery was tied. An incision was made about four inches long in the middle third of the thigh, rather more internally than externally. The artery was then exposed, and a ligature put round it (carbolised gut with the ends cut short off). The wound was then brought together and strapping applied, and over that a pad of lint, with another piece of strapping. The leg from the wound downwards was then wrapped up in flannel and cotton-wool, and the patient removed. The patient was very sick after the chloroform; he had a quarter of a grain of acetate of morphia.

28th.—The patient had slept well, and was free from pain, but he had a "scraping sensation like" in his foot. He had feeling down to the ankle, but no lower. Temperature 100·2°; pulse 75. 5.30 p.m.: His toes were cold and mottled; they were wrapped in oiled cotton-wool, and layers of cotton-wool over that. 9.30 p.m.: The foot was cold up to the instep; there was no sensation in that part of the foot, and he was in no pain.

29th.—One grain of opium was given. He said he felt comfortable; there was no increase of area of coldness, and he fancied he had a little more sensation in foot. Temperature 98°; pulse 76, regular and full.

30th.—The patient passed a fairly good night, waking only with the gnawing sensation in his foot. He said the coldness extended to the ankle-joint. His bowels were open; his tongue was coated, and he felt sick, so refrained from taking anything but milk.

31st.—He passed the first part of the night badly; he had then an injection of morphia, after which he slept well. The coldness of foot had not extended.

April 2.—The patient had been about the same, but complained now of feeling very queer; he still had the numb sensation and pain all up the right leg. He was ordered tinct. gent. co. ℥ss., pot. chlor. gr. x., aq. ad ℥j., ter die. Temperature 99·2°; pulsation 78.

3rd.—He still complained of feeling very ill; his leg pained

him a good deal, and the foot was much the same; his appetite was still bad. He was ordered half an ounce of brandy in milk with an egg every six hours.

4th.—The wound had not caused the slightest uneasiness; the dressings had not been removed.

6th.—He was very ill; the pain in the foot was worse, the line of demarcation beginning to show just over the ankle.

7th.—The pain in foot extended to the knee; the foot itself was just the same—cold, but darker; the wound in thigh was not at all painful. Temperature 99°; pulsation 75.

14th.—There had been no change in the patient; the pain in foot was the same, extending a little; he had been rather sick, and brought up a quantity of bile; the wound in the thigh was dressed for the first time, and was found to have healed, leaving only a scar; his sleep at night was a good deal disturbed by the pain, and the gangrene seemed to be extending up the leg for about an inch on the fibula side; the aneurism was smaller, still soft and rather painful on pressure. (This was the eighteenth day after the operation.)

23rd.—The patient was very low; there was over the outer malleolus a sore from which flowed a bloody serous discharge; the foot was beginning to swell a little. His health had not been good for some days.

24th.—The foot was amputated at the junction of the lower with the middle third of the leg; anterior and posterior flaps were made; there was no bleeding from the posterior tibial vessels, and no vessels to secure; the stump was wrapped in cotton-wool, as the circulation had not been very good. He passed a fairly good night after the operation; the pain in the leg was not very much. Temperature 99·8°; pulse 74.

26th.—The stump was going on well; it was perfectly warm, and there was not a sign of gangrene. The patient looked slightly yellow, and his urine was very high coloured, but tongue was clean. Mist. ammon. efferv. ℥j. ter die was ordered.

May 2.—He had been complaining the last few days of the pain in his leg, and it did not look healthy; the posterior flap where the bone rested was sloughing, and there was very little sign of union taking place. Temperature 100·1°; pulse 82.

4th.—The patient was decidedly better; he said the upper part of his leg just below the ligature felt as if it were frost-bitten, and ached a good deal.

7th.—He was stronger; the leg was still painful, but more healthy than it was.

8th.—The patient's appetite had been bad for some days, but he now ate considerably more. The wound was healthier, the sloughing having stopped; there was about an inch of tibia protruding from it; there was a good deal of discharge. Temperature 97°; pulse 96.

11th.—Healing took place very slowly; the whole of the bottom of the leg was, as it were, open, the tibia and fibula protruding from an inch to an inch and a half.

13th.—On account of the stump not healing at the bottom it was suspended in a small iron splint; it was very comfortable.

18th.—The leg was looking very healthy; there was a large granulating margin around, and the whole of the bottom was filling up well.

23rd.—The ends of the tibia and fibula that protruded were dead; the aneurism had nearly gone—it was quite hard; there was no pain on pressure.

26th.—The leg was covered with granulations; it was syringed with Condy's solution and dressed with terebine and olive oil.

June 2.—The sloughs were all off; stump healthy.

21st.—The dead end of the fibula was pulled away—it was about three inches long; the stump was very healthy.

July 14.—The dead piece of tibia was removed.

August 3.—The patient's leg had been rather painful, especially at night; he now suffered from tonsillitis, but gargling with alum soon relieved it; and with the exception of the pain he progressed favourably.

14th.—The wound was dressed with chloral lotion, which seemed to suit it, and it had nearly healed by the 30th.

September 10.—He contrived to go about with crutches, and on the 21st was able to leave the hospital.

Two months later the stump had fairly healed, and it was a good one. He could get about upon it with his wooden leg.

LONDON HOSPITAL.

POPLITEAL ANEURISM—FLEXION—DIGITAL COMPRESSION—CURE.

(Under the care of Mr. MAUNDER.)

We are indebted to Mr. S. H. Fisher, who conducted the treatment, for this report.

Ann L. was admitted into the London Hospital on November 7, 1876, under the care of Mr. Maunder. On examination there is a large, hard, tense tumour in the right popliteal region, pulsating perceptibly. The stethoscope reveals a decided single bruit, a short interval after the radial pulse. When the femoral artery is compressed, the tumour perceptibly lessens, ceases to pulsate, and becomes soft. On releasing the femoral the tumour immediately swells, and becomes hard and pulsating. The blood causes a thrill when it rushes in. The tibial pulse on the right side cannot be felt. On the left it is well marked.

Previous History.—The beginning of April last she noticed a slight pain in the calf of the right leg over the site of the tumour. A day or two after she noticed a small swelling. This was at first quite soft. The skin was not reddened, and she could feel the pulsation very distinctly. This was sometimes so violent as to prevent her sleeping. This pulsation was noticed from the very first. As soon as she found out this swelling the patient went to the Infirmary, St. George's-in-the-East. She was in there seven weeks—kept in bed; and at the end of this time both the swelling and the pulsation had quite gone. She says nothing was done for her beyond having some medicine. She was at home three months, during which time, with the exception of the last three weeks, she felt her leg quite strong, and nothing the matter with it. Then the pain came on again in the old place, but this time it was more severe than before, and the swelling was hard. The pulsation was again noticed, but not so much as on the previous occasion. The swelling has not increased in size much, but it has got much harder. She went into the Infirmary again, and was there four months. The swelling was poulticed for a month, and after that nothing was done. She came straight from the Infirmary here. The patient cannot at all account for the swelling coming on; never had a blow there, and never hurt herself. There is no history of tumours, syphilis, or rheumatism.

November 13 (11.30 a.m.).—A belt was put round the waist, and a slipper on the right foot, to the heel of which was sewn a bandage. The bandage was tied to the belt, and the heel drawn up till the pulsation in the tumour ceased. One-third of a grain of morphia was administered by the mouth, but she was sick immediately afterwards. At 1 p.m. the pain was so intense that she was raving like a maniac, shouting and yelling. She was put under chloroform, and one-third of a grain of morphia administered hypodermically. She slept for two or three hours in the afternoon. The tumour was pulsating, notwithstanding the flexion. In the evening, at 8.30, she was put under chloroform again, and a lithotomy shoe put on, a long bandage put round the thigh, and the end split and tied to both sides of the shoe, drawing up the foot. One-third of a grain of morphia administered again. She was quiet during the night. There was some pulsation at twelve o'clock at night. She was in great pain.

14th.—Chloroform was again administered at 11 a.m., and half a grain of morphia administered under the skin. The bandage was pulled up very tightly, and pulsation completely stopped. There had been slight pulsation when seen first in the morning. The pain seemed to be excruciating. The limb was kept in this position for fourteen hours without the slightest pulsation. About 1 a.m. the bandage was relaxed, and slight pulsation returned.

15th.—There is no tension on the bandage, and only the slightest pulsation can be felt on very careful examination. The skin on the outside is black. She slept last night under the influence of morphia. There appears to be no lateral expansion.

16th.—There was a good deal of pain last night. At 7 p.m. the bandage was removed. The pulsation returned, but in less degree than before. To-day the skin is still black. Pulsation is distinct; there is a bruit more distinct and rougher, as if better conducted. There is a good deal of

pain about the knee; superficial veins enlarged; feeling of numbness in the foot; the posterior tibial artery cannot be felt; she prefers to keep the limb semi-flexed. On compressing the femoral the pulsation ceases; the tumour is less flaccid than formerly; on relaxing the pressure the tumour does not swell so rapidly.

20th.—The skin over the tumour is not so discoloured; she complains of some pain in the right ankle, which is somewhat swollen. The pulsation, size, and condition of the tumour remain as before.

19th.—The aneurismal sac has greatly increased in size, and extends upwards between the flexor muscles in the cavity of the popliteal space; the pulsation is very distinct, and a very loud blowing bruit is audible.

22nd.—Mr. Maunder suggested that flexion had been conducted too energetically, and that the sac had yielded to a small extent at some spot. He advised digital compression before ligaturing the femoral. At 11 a.m. digital compression of the femoral artery was commenced, and kept up till 11 p.m., when the pulsation in the tumour had ceased. At first the patient was very restless, and complained very much of the pain; but after a hypodermic injection of morphia she became much quieter. After the compression was commenced the leg soon became very cold to the feel, and the ankle was a little swollen. This continued throughout the day; but towards the evening the leg became warmer. At 11 p.m. it was confidently believed that the aneurism had been cured.

23rd.—The tumour is much reduced in size, and on examination pulsation at first appears to be absent; but on closer manipulation there is one spot at which it can be distinctly felt. But the area of the pulsation is now quite small, whereas it before extended over a large space. Pulsation is also plainly perceptible in many other places, *e.g.*, over the patella. At a spot corresponding in position to the internal condyle of the femur a large single bruit is audible. At the site of compression the skin is red and tender, and there are the remains of a blister. Patient says her leg feels numb. The pulsation in different places is accounted for by the dilatation of the articular arteries given off above the point of plugging of the popliteal. There is no expansive pulsation of the tumour as before.

24th.—Pulsation over the site of yesterday's bruit is perceptibly smaller, and the murmur itself is much less distinct. The limb is still rather numb.

25th.—To-day it is not possible to detect either murmur or pulsation where both were quite evident the day before yesterday. A few superficial arteries, probably enlarged, are felt pulsating; but in the tumour itself there is absolutely no motion. The limb is regaining its sensation.

27th.—There is no change in the limb. The tumour is hard, and there is no pulsation whatever. Patient says she cannot move her toes, and there is still some numbness.

30th.—The extensor and flexor muscles of the right leg are paralysed. Patient says this has been so since she went to the Infirmary the second time. She cannot extend her toes nor put her tibialis anticus into action. Sensation is returning in the limb by degrees, and the tumour in the ham is contracting, thus allowing the patient to extend her leg a little more. Ordered to rub her leg upwards two or three times daily.

December 1.—The patient complains of pain on pressure over one spot in the tumour, and over the patella. There is nothing in the appearance of the part to attract attention.

2nd.—She can flex her toes slightly to-day.

5th.—The right leg was galvanised to-day. The current caused no muscular action at all in the right leg, although the muscles of the left leg acted powerfully to the same stimulus.

8th.—The battery caused no movement to-day, but after its use there was a perceptible improvement in the power of mobility of the toes and foot. The tumour is *in statu quo* as regards size.

In due time the patient went out convalescent.

The Irish Graduates' Association.—In our advertising columns will be found an announcement that the annual meeting of the Irish Graduates' Association will be held at Bath on Friday, August 9. The President is Dr. B. Foster, of Birmingham; and Mr. W. Mac Cormac, F.R.C.S.I., of St. Thomas's Hospital, is the President-elect.

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The Medical Times and Gazette *is published on Friday morning: Advertisments must therefore be sent to the Publishing Office not later than One o'clock on Thursday.*

Medical Times and Gazette.

SATURDAY, JULY 27, 1878.

MEDICAL LEGISLATION.

The Dental Practitioners Bill, which has passed through both Houses of Parliament and has received the Royal Assent, has necessitated the removal of the clauses relating to the same subjects that are contained in the Medical Bill of the Government. The Dental Practitioners Act will virtually saddle the General Medical Council with duties nearly as heavy in the regulation of dental education and examinations and of the registration and general ethical control of the dental profession, as those which the Council at present labours in vain to carry out for practitioners of medicine and surgery. We are not aware that the General Medical Council has been asked whether it would or could undertake fresh responsibilities and great additions to its business. What the effect of the Dental Act will be in this respect remains to be seen. At present the matter appears to be a fresh proof of the complete want of understanding—we may almost say the chaotic confusion—that prevails in the region of medical politics.

The manner in which the Dental Bill has been carried through Parliament reflects the greatest credit upon the tact and perseverance of its promoters. We regret that we cannot say as much for the Government and its Medical Bill. There seems to be a general impression that the Bill is now hopelessly lost this session, and will have to be sacrificed, with other "innocents," in view of the lateness of the session and the press of more urgent business. We believe, however, that the Government is determined to carry the Bill this session at all costs, and that, unless very serious or worrying opposition be made to it, it will be passed in some shape. What its shape will be depends in a great measure upon that opposition; but we may safely anticipate that the leading principles for which we have contended during the past three or four months will be secured. First, a Conjoint Board will certainly be established in each of the three divisions of the kingdom. Secondly, we have

the best authority for believing that the Government will drop Lord Ripon's objectionable amendment, and will require the registration of degrees or diplomas along with the registration of the qualifying certificate. Thirdly, the Universities and Corporations will not be compelled to admit to their membership women who may have passed the examinations of the Conjoint Board. And, lastly, we confidently trust that the Government will either settle the vexed question of women candidates and uniformity of qualification, by providing separate examinations and a separate register for them: or will drop the women's clauses entirely for the time, and provide the public at once with a legislative measure for which there is most urgent necessity, untrammeled by doubtful provisions, which can perfectly well be postponed for separate consideration another year.

ANIMAL VACCINATION.

We have already explained what is properly meant by animal vaccination: that it is real cow-pox transmitted through the heifer, and that such a thing as syphilis is not possible in connexion with it. Now, there is nothing more striking with regard to this artificial disease—for such we must call it—than the description given by Jenner of it as produced by him, and that with which we are now familiar. The ordinary form of vaccine, as seen by us, is but the matter of a few days, but in Jenner's time it lasted at least three weeks—sometimes four or more. A papilla was formed in about three or four days, a vesicle about the fifth, an areola not before the ninth day, and this sometimes did not ripen till the end of the first fortnight. Moreover, Jenner never thought that vaccination had been properly done, and taken due effect, except where there was such an amount of fever that nowadays would make us half frightened; nevertheless, it was then looked upon as quite necessary. Well, everyone knows that in children there is always a certain amount of pyrexia after vaccination; but with children pyrexia is easily caused: and Jenner had not always to deal with children; adults were those with whom he made his experimental trials. Everything points to the fact that the vaccine virus now in use has deteriorated in potency; though we believe that nowhere has it been more carefully looked after than in the National Vaccine Institution of this country.

It is, however, plain that we want something more than this continued breeding in and in. We want to go back to an original stock; and this ought to be kept up at the national expense. If only to quiet the cry of the anti-vaccinators the cost would be worth incurring. But as Mr. Greene has said, and Mr. Ceely has shown, it is not possible for a private individual to do this, except he gives up his whole time, makes it a business, and invests much capital in it. It is quite true that this plan is most in accordance with our institutions, and Dr. Martin has shown that it can be so carried out in America; but we hold that if the preservation of good vaccine lymph of the ordinary kind is of sufficient importance to be a national concern, a little care and attention might be devoted to perpetuating a stock which can under no circumstances convey with it the seeds of disease. What we would urge would be the institution of a regularly organised system of animal vaccination, worked by an efficient superintendent, who should make this his sole occupation. Moreover, we have pointed out that the means of so doing are all ready to our hand. We have at Hampton Court a thoroughly effete institution for breeding horses. As now carried on this is a disgrace to the nation, for the horses bred there never fetch more than an old song. Well, were this got rid of, and a truly national vaccine institution put in its place, the cost would be reduced rather than increased. It is well known that the present head of the Medical Department at the Local Government Board is opposed to animal vaccination, and insists on the perfect efficiency and complete security of vaccination by humanised lymph. This cannot have failed to retard the introduction of an alternative which is practically free from risk, which any or every one is justified in demanding, and which we hold that the exigency of the case demands. Nevertheless, even official stolidity has been moved, and a certain number of experiments have, we believe, been made —unfortunately with no very satisfactory results as yet. Probably a little more enthusiasm in the cause would have brought things to another pass, but we are not without hope that matters may be mended. The small, active, and mischievous anti-vaccination party is on the increase, and something will have to be done to stop its clamour. The only way, we hold, to do this is to afford such conscientious persons the alternative of animal vaccination.

THE BRIGHTON ABORTION CASE.

At the recent Lewes Assizes a case came on for trial which has more than one point of interest for our profession. Its first, and to us by far the most serious, feature is that it relates to a member of our own profession, who, together with a chemist, pleaded guilty to an indictment charging them with the administration of a noxious drug to a woman for felonious purposes, and who were both sentenced to long terms of penal servitude.

Briefly, as far as we remember, the facts were these. A young woman, unmarried, had become pregnant, and applied to one Darley, a chemist, for the purpose of procuring something which would rid her of her burthen. Certain medicines were supplied, but without the desired effect; and the chemist then told her that she might, by paying a large sum, secure the services of a medical practitioner who never failed in these cases. Money passed between them, and in the end the young woman saw Moon, and, as far as could be made out, submitted to "an operation." The result was the discharge of a fœtus and the death of the woman, who, previously to her death, made a statement implicating the two prisoners. The two were put on their trial for the offence of wilful murder, but this count was rejected by Lord Justice Thesiger on the grounds that there was no evidence connecting the death of the deceased with what had been done by the prisoners. This ruling is highly important. There could not be the slightest moral doubt of the agency of the accused in causing the woman's death, but the only evidence obtainable was that of the prisoner Moon, and of the woman herself, who was *particeps criminis*. On the same grounds, in another trial at the same assizes, the same judge held that there was no case to go to a jury. Here a herbalist was concerned; and a woman, who had procured drugs intended to bring about abortion from the accused appeared against him. We repeat that these rulings are of the very highest importance—in one way, it is true, opening up the road to serious malpractices; but, at the same time, standing in the way of false accusations against respectable members of society.

We ought not to conclude without injustice saying a word as regards a highly respectable member of our profession. Dr. Henry Moon, of the Old Steyne, Brighton, is a Fellow of the College of Physicians, and a man highly esteemed in his profession. But we must deeply regret that the Robert Charles Moon now convicted on his own confession of such foul practices, and who moreover appears to have made a trade of so doing, is one whose name and work we have been wont to praise. He, we believe, was with the late Zachariah Lawrence the author of one of the best books of

its time, "A Handy-Book of Ophthalmic Surgery," and was himself no mean authority on ophthalmic practice. It is not often that men in our profession go persistently wrong without cause; far too often that cause is the *res angustæ domi*. How much unpaid work is done by solicitors and barristers?

THE WEEK.

TOPICS OF THE DAY.

The returns obtained by the Society of Arts, from the different medical officers of health throughout the country, on the subject of the water-supply of the several localities, show somewhat startling results. Altogether some 106 replies have been received from all parts of the country, from towns and rural districts, from manufacturing, agricultural, and mining districts. Certain questions were propounded by the Society of Arts in their circular, and to the first of these, the source of the water-supply of the district, the replies are very various; the second question, seeking information as to the daily amount of supply per head, elicited particulars which will surprise many who have the advantage of living in large towns. The supply is stated to vary from 4½ gallons per head per diem to 40 gallons. The lowest supplies, according to the returns, are found at Pudsey, 4½ gallons per head per diem; Leigh, 5 (for domestic purposes); Morley, 6; Colne and Marsden, 5 (with the comment of "very uncertain," and a statement that notices are exhibited forbidding "swilling steps, cleaning windows, etc."); Orsett, 10; St. Helen's, 12½; and Whitby, 15. The majority of the returns, however, give the daily supply as ranging from 20 to 30 gallons per head per diem. The next question, inviting observations on the spread of epidemic diseases, as referred to sewage-polluted water, has produced replies which conclusively prove that cases of illness have been satisfactorily traced to the water-supply, these illnesses terminating when the water was changed. The Medical Officer of Chadderton, near Oldham, communicated in his return that he found a cesspool near a pump, and asked the farmer, to whom the property belonged, what he did with the contents of the former; he was informed that, singularly enough, it never required to be emptied! In this case the liquid excrement was found to filter into the well, with the (at length) necessary consequence—an outbreak of typhoid epidemic.

In the tropical weather which has suddenly come upon us, it is satisfactory to note that the managers of the London, Brighton, and South Coast Railway have given notice of a reform which will be hailed with gratification by those who are compelled, by business or pleasure, to travel on their line. This is no less than an order directing that during the summer and autumn months a supply of fresh iced drinking-water will be provided for passengers at certain stations. Attendants will walk along by the side of the train, and serve out glasses of iced water at a charge of one penny per glass. It is to be hoped, for the sake of humanity, that other lines will imitate such an excellent example.

His Royal Highness the Prince of Wales, who appears to be interesting himself in business of all descriptions in Paris, last week visited the ambulances of the Society for Relieving Wounded Soldiers in War Time. The Prince was shown through all the models of field and railway hospitals by the Duc de Nemours and M. Berger, Director of the Foreign Section of the Exhibition.

An appeal has been made on behalf of Lady Strangford's hospitals for the Turkish sick and wounded at Scutari. Her ladyship has now two hospitals—one of 108 beds for wounded soldiers, nearly all of them being cases of from seven to nine months' duration; the other containing between forty and fifty cots for children, who were brought from long distances in the winter, their parents having died on the road. The condition of these children is described as being deplorable in the extreme, and Lady Strangford, fearing that the money at her disposal will not last beyond four weeks, is most anxious to keep the hospitals open for two months longer, as that time would see a large proportion of the cases nearly recovered. For this purpose a sum of £500 is required, and it is hoped that the public will respond to this appeal. With the exception of the hospital at Gallipoli, those of Lady Strangford are the only ones now at work in Turkey. Donations for the hospitals are to be sent to the London and Westminster Bank, St. James's-square.

It is reported that the Noxious Vapours Commission have concluded their sittings for the consideration of their report, which will shortly be presented and laid before Parliament.

A correspondent writing to the *Times* makes the not new observation that it would appear from the obituary published in that paper of the 19th inst., that if extremely cold weather is prejudicial to the health of the aged, excessively hot weather has the same fatal effect upon them, as the deaths of eight persons are recorded, four of each sex, whose united ages amount to 674 years, giving an average of eighty-four years and three months to each. The oldest was a gentleman who had reached the ripe age of ninety-two years, the youngest of the same sex being eighty. Of the ladies the oldest was eighty-five, and the youngest eighty-one years of age. There were the same number of septuagenarians also, whose ages ranged from seventy-one to seventy-eight, four of each sex, and averaged rather more than seventy-four years and four months each.

There is but too much reason to fear that "violet powder" is very commonly adulterated, not always or often perhaps with such direct poisons as arsenic, but with other deleterious matters. Prosecutions for this offence are becoming frequent, and last week a number of chemists at Salford, Manchester, were fined twenty shillings each and costs for selling violet powder of a deleterious nature. For the present, at least, the public would do well to purchase this household necessary from those firms only who may be supposed to be above suspicion of making an extra profit through the employment of cheap materials, or to leave it alone and use simple starch. The Salford article was proved, on the evidence of the borough analyst, to contain no starch, but to consist principally of sulphate of lime.

The report of the Water Examiners on the quality of the water delivered for consumption in the metropolis by the different companies during the month of June is not of a satisfactory description. The water in the Thames, at the source from whence so many of the companies draw their supply, was indifferent from the 1st to the 3rd, when it slightly improved until the 17th, on which date it became turbid and coloured, and remained so until the 20th, when it again improved. Dr. Frankland reports that, taking the average amount of organic impurity contained in a given volume of the Kent Company's water during the nine years ending December, 1876, as unity, the proportional amount contained in an equal volume of water supplied by each of the Metropolitan Water Companies was—Kent, 1·4; Colne Valley, 1·6; New River, 4·2; Chelsea, 4·3; East London, 4·3; Southwark, 4·4; Grand Junction, 5·5; West Middlesex, 5·6; and Lambeth, 5·6. Dr. Frankland further reports that during the month of June the Thames and Lea have been much swollen by heavy rains, and the water drawn by seven out of the eight companies supplying London was so much polluted by organic matter as to be unfit for dietetic

purposes. Such intense pollution rarely occurs in summer, and several of the companies seem to have been quite unprepared for it, as they failed to filter the water effectually before delivery.

A report, for which the Secretary for War admits that there is some foundation, has reached this country from Malta, that about forty soldiers of the Indian contingent, belonging to the Bengal Cavalry, have been nearly poisoned through carbolic acid having been administered to them in mistake for lime-juice. It is said that the jars or bottles containing the acid were labelled "Lime-juice," and that the fault lies at the door of the contractor; but there must also have been carelessness in serving out the liquid. We have several times commented on the number of instances in which carbolic acid has been swallowed in mistake for beer, gin, medicine, etc., and we have always expressed our wonder that, with the peculiarly pungent odour of the acid, such mistakes should be possible. But Professor Wanklyn, in a letter to the leading journal, goes so far as to say that carbolic acid ought to be forbidden to be used for general disinfection, and he adds that there can be no question as to the extreme danger attending the popular use of this agent. Without entering into any discussion as to its merits for disinfecting purposes, we must again express an opinion that its smell alone, unless greatly diluted, ought to warn off all but persons of the most careless type of character. Government will, of course, institute a very searching inquiry into the occurrence at Malta.

THE CHANGES IN THE SMALL BLOODVESSELS IN BRIGHT'S DISEASE.

Dr. A. Ewald has lately published in Virchow's *Archiv*, Band. lxxi., the result of a long investigation on the above subject. Like Dr. George Johnson, and Drs. Gull and Sutton, he microscopically examined the vessels of the pia mater covering the pons in a considerable number of cases of various forms of nephritis; but he was unable to discover those alterations of the arterial coats which the latter authors have described as "arterio-capillary fibrosis," whereas he was able to confirm Johnson's statement that the muscular coat of the arterioles is hypertrophied in the great majority of the cases of contracted kidney associated with cardiac hypertrophy. Ewald regards the "hyaline-fibroid" arterial degeneration of Gull and Sutton as mainly the result of their method of microscopical preparation. He found that the normal relation of the lumen of the arterioles to the section of their coat is as 1 : 0·1—1·3, and he assumed that there was hypertrophy present when this relation rose to 1 : 0·5—1·2. The alteration in the muscular coat which gives rise to the hypertrophy consists, according to Ewald, in a simple enlargement of the normal cells and of their intercellular substance. Ewald has tabulated sixty-two cases of renal disease in which the condition of the heart, the vessels, and the kidneys was carefully noted at the post-mortem examination. The general conclusion arrived at is, that hypertrophy of the heart and the arterioles is most frequently met with in the advanced forms of granular contracted kidney, though the relationship between the two conditions is an intimate one in all the stages of interstitial nephritis. In those cases where interstitial and parenchymatous (epithelial) degeneration occur in combination, though the former change predominates, two-thirds of the cases present cardiac and arterial hypertrophy, and one-third cardiac hypertrophy only. On the other hand, where the parenchymatous degeneration prevails over the interstitial, all the cases are accompanied with hypertrophy of the heart, and none with that of the arterioles. The cases of pure parenchymatous degeneration, sixteen in number, which Ewald examined, were all free from vascular change, and somewhat less than a third of them were associated with simple hypertrophy of the heart. Nephritis, secondary to such diseases as phthisis, leukæmia, and heart disease, was, as a rule, unassociated with hypertrophy of the muscular coats of the arterioles. Ewald agrees with those English authors who assert that both ventricles of the heart are not unfrequently hypertrophied in interstitial nephritis, the right ventricle, according to him, being affected in half the cases. He explains this fact by the protracted course of the disease, and he points out the analogy to cases of unilateral valvular lesion, where the dilatation of the left side of the heart finally extends to the right.

The theoretical explanation of the hypertrophy of the heart and of the coats of the arterioles to which Ewald inclines is the following:—The blood becomes altered in its composition by the renal disease, and excites increased resistance in the capillaries. Increased tension in the arterial system is the result, and then first hypertrophy of the heart, and later on arterial hypertrophy. The latter he regards as of purely mechanical origin, and dependent on the persistently increased contraction of their muscular coats which is necessary to prevent their extreme dilatation under the abnormally high lateral pressure to which they are subjected. He believes that this contraction of the arterioles is not dependent on the influence of the vaso-motor centre. The reason why hypertrophy of the small vessels is absent in renal disease complicating heart disease, in atheromatous degeneration of the large bloodvessels with cardiac hypertrophy, and in uncomplicated valvular disease, is probably that here the arterial tension is not *uninterruptedly* high, as it is in interstitial nephritis with contracting kidney.

PROFESSOR VIRCHOW.

There are few persons belonging to our profession, either in this country or abroad, that will not appreciate the importance to medicine and science generally of the following words, addressed by Professor Virchow to his late parliamentary constituents. Professor Virchow has decided not to stand again for his seat in the Reichstag, where he was a leading member of the *Fortschritt*, or Radical party; and to retire from active political life. His address is thus reported by the *Times*:—"There are people who say I do not wish to go back to the Reichstag out of pure dislike to the Empire. Certainly, I am one of those who combated the present Imperial laws at their creation, as being inadequate and injurious. But now that they exist, I resign myself to the hard reality, and stand as firmly as anyone by the Emperor and the Empire. I cannot accept a seat in the Reichstag simply because it would be incompatible with my scientific labours to do so, and would inevitably lead to my abandoning them altogether. Perhaps you think me a good-enough politician, but for myself I think I am a better *savant*. I am convinced that in this my real province I can be more useful than in the Reichstag." Those who are acquainted with the present tone of scientific feeling in Germany will best understand with how much satisfaction this announcement will have been received in every University in that country. During the last few years we have heard less and less of Virchow as a pathologist, and more and more of him as a politician. In the latter capacity he has, indeed, taken the very foremost place in all questions relating to Sanitation and State Medicine; but such work—for example, the drainage of Berlin—even if it far surpassed in its immediate importance the results of years of pathological investigation, did not find favour with the *savants* of Germany. It has been almost amusing to listen to the complaints made by young German pathologists of Virchow's behaviour in deserting his science, and taking so unaccountably to politics. So far, however, the feeling was reasonable. What is sorely

wanted in Germany in these days is a man like Virchow, who will guide the investigations and criticise the results of the many young pathologists, who are conscious that without years of experience and thought they cannot hope to advance their special branch of science. We do not expect or wish to hear that Professor Virchow has returned to the active labours of the post-mortem room, or to the class of practical morbid histology at Berlin; and we trust that he may be relieved of the burthensome duties of examiner hitherto inseparable from the chair of Pathological Anatomy there. But Virchow must have within him the means of gathering into something like order the vast number of results that have been accumulating during the last few years in physiology and pathology, and which are so sadly in want of that criticism and control which can be looked for only from the hand of a master. May we hope that the days that preceded the appearance of the "Cellular Pathology" have revived, and that Virchow will soon prove himself to be "a better *savant*" than ever?

DEATH OF ROKITANSKY.

Wherever scientific medicine is now studied or practised throughout the world, it will be heard with regret that Rokitansky is no more. For many years he was the prime ornament of the great Vienna School, and, though a poor lecturer, and the writer of a book which broke the hearts of translators, he may be said to have rendered modern pathology possible. It was he, it has been said, who fixed the piles upon which Virchow founded his bridge. And his foundations were sure, for even now there is no book of reference to which the investigator can turn with so much safety for all naked-eye appearances as Rokitansky's great work. We hope soon to be able to give a fuller account of his life and doings.

THE TREATMENT OF SORE NIPPLES.

Dr. Haussmann, of Berlin (*Berliner Klin. Wochenschrift*, No. 14, 1878), recommends compresses soaked in a 5 per cent. solution of carbolic acid, and changed every two or three hours, as the best remedy for sore nipples. If both breasts are affected, and nevertheless suckling has to be carried on, the nipples must be carefully washed each time, before the infant is put to them, to prevent poisoning with the acid. The great advantage of the latter over all other applications is, according to Haussmann, its capability not only of reaching and superficially cauterising the open mouths of the finest lymphatic vessels laid bare in the wound, but also of *penetrating completely* into them so as to destroy any parasitic germs or infectious organic bodies of any kind which may be brought to the nipple by the child's mouth, the hands of the mother, doctor, or nurse, or in any other way, and so prevent the development of various forms of inflammation in the breast itself. The application of carbolic acid is not nearly so painful as that of nitrate of silver, and a cure is obtained more quickly with the former than the latter drug. A strong (5 per cent.) solution seems to be decidedly more efficacious than a weaker 2 per cent. solution.

ANOTHER ROYAL VISIT TO THE LONDON HOSPITAL.

If Royal patronage could insure success for a public hospital, then ought the London Hospital to be the most prosperous institution of its kind in the metropolis. In 1864 the Prince and Princess of Wales graciously condescended to lay the first stone of a new wing of the building. More recently her Most Gracious Majesty the Queen visited the charity in semi-state, and on Monday last the Prince and Princess of Wales again paid an informal visit to the charity. The present visit had been kindly proposed by the Prince as a compensation for his unavoidable absence from the great meeting which was held last April at the Mansion House, in aid of the establishment of a fund for the maintenance of the institution during the next five years. The Royal party were received by the Treasurer, Mr. H. H. Gibbs, the Chairman of the Committee, Mr. J. H. Buxton, and a number of the Vice-Presidents, officers, and supporters of the institution. The Royal visit extended over an hour, during which time several of the wards were visited, and many kind expressions of condolence were vouchsafed to several of the suffering inmates. Before leaving, Miss Swift, the matron, had the honour of being presented to the Princess, who graciously congratulated her on the perfect cleanliness and comfort of the wards; and the Prince was pleased to enter on the Hospital register the following remark:—"July 22, 1878.—I have great pleasure in giving as satisfactory an account of this Hospital as I did fourteen years ago.—(Signed) Albert Edward P."

ANNUAL REPORT OF THE THAMES CONSERVATORS.

The annual report of the Conservators of the Thames, just issued, states that dredging has been carried on to a far greater extent than for some years past, and the materials raised have been instantly removed. The principal operations have been carried on off Deptford and Cubitt Town, and in Woolwich Reach. In the upper part of the tideway the shallow channels near Richmond, Kew, and Hammersmith have been deepened. The annual surveys of the river near the great sewage outfalls at Barking and Crossness having shown that accretions are taking place in the river both above and below these outfalls, the Conservators deemed it advisable that the facts brought to light by these annual surveys, and by the analyses of the materials taken from this part of the river, should be thoroughly investigated. This inquiry was entrusted to Captain Calver, R.N., F.R.S., and his report, and the reply to it received from the Metropolitan Board of Works, are now under consideration. Owing to the high floods early in the year, the sewage works at Oxford have been delayed, but the Conservators trust that before long these works will be completed. Owing also to an unforeseen difficulty, the Windsor sewage works are not quite, though very nearly, completed. With these exceptions, all the sewage formerly flowing into the river above the intakes of the water companies has, so far as the Conservators have been able to discover, now been diverted from the river. In the districts below the intakes of the water companies and above the western limits of the metropolis, a Joint Board uniting the local Sanitary Authorities has been formed, with powers extending over three years, exempting them from any penalties under the Conservancy Acts with respect to sewage flowing into the river; the Conservators therefore express a hope that the measures now being taken by this Joint Board for the diversion of sewage may ultimately prove thoroughly successful.

SANITARY IMPROVEMENTS IN SHEFFIELD.

In presenting his fifth annual report on the health of the borough of Sheffield for the year 1877, Dr. Griffiths, the Medical Officer for the district, prefaces his details with some very pertinent remarks on the results recorded. He shows that the death-rate for the year under notice is much lower than it has ever been since civil registration was begun in Sheffield in 1861; and that if the average death-rate of the past years had been maintained, 1435 more deaths would have occurred than actually took place. The decrease has occurred among persons of all ages, and from all causes, and, apart from sentiment, Dr. Griffiths thinks the mere money value of the lives saved adds considerably to the natural wealth of the town. Life preserved, however, he adds, is not so much appreciated or felt for as when life is lost; and if the same number of lives saved had instead been lost by

terrible disease, a much stronger impression would have been made upon the public mind, and the authorities and their officers would barcly have escaped censure. This is, no doubt, true, and in the common order of things, for censure, as a rule, is more liberally dealt out than praise. The careful working of the Public Health Acts has, Dr. Griffiths admits, indirectly assisted in this prolongation of human life; but a lower death-rate is not the entire measure of the whole result. Diminished mortality implies less sickness and less suffering, whilst the vigour of the living is increased, and posterity is rendered less liable to disease. In conclusion, Dr. Griffiths expresses a hope that even better results may be obtained, if the conditions of health which have led to the present improvement in sanitary organisation are still maintained.

CAMPHOR AS A NARCOTIC FOR FEMALE LUNATICS.

According to Dr. Eugene Wittich (*Berl. Klin. Wochenschrift*, No. 11, 1878), camphor is an excellent remedy for the sleeplessness of a certain class of female lunatics with melancholia, accompanied by extreme anxiety, hallucinations of a terrible nature, and a low state of general nutrition. The ordinary drugs, such as chloral, morphia, and bromide of potassium, as well as various kinds of baths, all fail to inducc sleep, whereas, after the subcutaneous injection of 0·1 to 0·2 gramme camphor, the patient quickly becomes drowsy, and soon goes off into a sleep of several hours' duration. The camphor is dissolved in sweet almond oil (1·0 in 10·0 grammes) and the injection is less painful than one of morphia. The canula must be rather wide, otherwise the oil does not flow readily. Abscesses never occur, even though the injections are often repeated. It is important to begin with the smaller dose of 0·1, for cases have been met with where a dose of 0·2 failed to narcotise, whereas 0·1 succeeded admirably.

TESTIMONIAL TO MR. A. B. STIRLING, OF EDINBURGH UNIVERSITY.

Old students of Edinburgh University, and others interested in microscopical and zoological studies, will learn with pleasure that a very successful movement was lately inaugurated to present a testimonial to Mr. A. B. Stirling, who, as Assistant-Curator of the Anatomical Museum in the University of Edinburgh, has rendered most valuable services to science as well as to the University during the last five-and-twenty years. The invention of the microtome, and his researches on the *Salmonidæ* and on the fungous diseases to which fishes are liable, are some of the most generally known of Mr. Stirling's extra-official services to science. The movement we have referred to was under the patronage of the Medical Professors of the University and others who had at different times been brought into contact with Mr. Stirling; and in the list of subscribers will be found the names of several gentlemen resident in India, New Zealand, and Canada. The testimonial, which took the appropriate form of a powerful microscope, together with a sum of 500 guineas, was presented at a meeting held last week in the Anatomy Class-room of the University. Sir Robert Christison, Bart., presided, and in making the presentation referred to Mr. Stirling's protracted labours in his special department, and besides enlarging on the great scientific value of his work, eulogised his urbanity and self-denying readiness at all times to communicate information to others.

GREAT NORTHERN HOSPITAL.

The patient—a healthy-looking bricklayer, aged thirty-two—upon whom Mr. Spencer Watson ligatured the external iliac artery for femoral aneurism, on the 17th inst., has made very satisfactory progress since the operation. His temperature only once reached 100°, and is now normal. The temperature of the limb was 95° on the day following the operation, and is now nearly normal. With the exception of the first evening, during which he had severe pain, referred to the heel of the side operated on, and which was relieved by morphia, he has had no pain and has slept well each night. The bowels acted spontaneously on the third day and have since acted several times. The pulse is vibratile in character and has not been higher than 82. The wound is suppurating, but not in its deep aspect. Lister's dressings have been most carefully applied by Mr. Gillam, the House-Surgeon, and the spray (carbolic 1 in 40) has been used every time the dressings have been changed. The diet has been ordinary milk diet till within the last two days, when a slice of meat has been given in addition.

MEDICAL PARLIAMENTARY AFFAIRS.

The Medical Faculty at the Oxford University.—Dr. Cameron inquired whether, during the past twelve years, the Regius Professor of Medicine at Oxford had delivered a single course of lectures, and also whether the Clinical Professor of Medicine had given a course of clinical instruction. The Chancellor of the Exchequer replied that Dr. Acland had held the office of Regius Professor for many years to the entire satisfaction, he believed, of the University authorities, and no one was more devoted to the public service than Dr. Acland. The question raised was not one to be dealt with by the Government. The University authorities had not yet decided upon the question of publishing the report of the Oxford University Commissioners respecting the present condition of the Medical Faculty of this University and proposed schemes for its amendment.

Contagious Diseases (Animals) Bill.—Day by day the tedious process of consideration of this Bill in Committee with seventy-four clauses has been going on in the House of Commons. The Government have yielded on many of the most important clauses with reference to the proposed exclusion of foreign cattle. The Privy Council will now have power to admit cattle from all countries alike, using their discretion as to excluding importation where there is any chance of importing disease.

On Monday, July 22, Lord Granville complained of the oppressive state of the atmosphere in the House of Lords, and of the deficient ventilation. The Lord Chancellor promised to have inquiries made, with a view to improving the ventilation.

In the House of Commons, Colonel Stanley, replying to Mr. Muntz's inquiry respecting the poisoning of forty-eight soldiers at Malta in consequence of the careless serving-out of carbolic acid instead of lime-juice, said that inquiries would be made and the matter properly cleared up.

Thrombosis of the Veins in its Surgical Relations.—Dr. Azam, of Bordeaux, terminates a paper read at the Société de Chirurgie with these conclusions:—1. Thrombosis is possible after fractures, contusions, phlebites, varices, chronic inflammations in the vicinity of large vessels, accouchements, and through compression exerted on the veins by neighbouring tumours undergoing rapid development. 2. Thrombosis suspected by reason of the œdema of parts situated below is ascertained by direct exploration along the tracks of the efferent veins. 3. The detachment of migratory coagula may be induced by an exaggerated exploration of the veins, by massage of the affected limbs, or by the sudden removal of the compression of a thrombosed vein. 4. The accidents producible by migratory coagula are variable according to the dimensions of these. They may consist in mere uneasiness, pleurisy with limited effusion, partial pneumonia, hæmoptysis, syncope, asphyxia, or sudden death. 5. The surgeon may prevent the formation of venous coagula in avoiding as far as possible the slow compression of large veins, in respecting with the greatest care their inner coat, and in hastening the cure of chronic or deep-seated inflammations situated near veins. 6. When thrombosis is confirmed, he should endeavour to prevent the detachment of coagula by impeding local and general motion, and discharging all collections of liquid near veins so affected.—*Gaz. Hebd.*, July 19.

FROM ABROAD.

Summer Infantile Diarrhœa.

Dr. Lewis Smith delivered an interesting address upon this subject at the New York Academy of Medicine, which is reported in the *New York Medical Record* for May 25.

Summer diarrhœa, as an epidemic, he observes, is confined to the cities of the United States, being scarcely known in the country. In New York it begins in May, the cases increasing during July and August, until the maximum of heat is reached, after which they decline. The mere increase of temperature does not explain its occurrence, or the rural districts would not be exempt. One of the most important causes is the free exhalations from decomposing animal and vegetable matters during the heat; and another is bad diet, bottle-fed children always suffering more severely and far more frequently than others. Dr. Smith has had great opportunities for studying the pathology of the disease, and he has notes of more than eighty autopsies made during the prevalence of epidemics. It is essentially inflammatory in its nature, especially when it has continued a short time, lesions in the intestines, and especially the colon, being found at the end of a week or so. Although vomiting is a very frequent symptom, the stomach is usually quite pale, but sometimes hyperæmia is found in infants of about three months old. The duodenum generally presents no lesions. The ileo-cæcal valve is frequently the seat of severe inflammation, and is sometimes materially thickened. The sigmoid flexure is most affected of all, owing in part to the irritation produced by its longer contact with food. During the whole course of the intestinal canal the solitary glands stand out prominently, ulceration taking place when the disease is protracted. As long as the disease lasts there is always progressive wasting of the whole body. In this the brain participates, and after some time there may be in consequence the spurious hydrocephalus described by Gooch and Marshall Hall. Spurious meningitis would be a better term for the hydrocephaloid disease associated with entero-colitis, and which is hardly ever met with except so associated or resulting from it. Congestion of the posterior part of the lungs is another complication not infrequently met with, resulting from the enfeebled state of the child's heart. It is this which gives rise to the dry, hacking cough met with in so many of these children. If the child has lived long enough, hypostatic pneumonia is often met with at post-mortems, the lungs being sometimes inflatable, and sometimes not.

The diarrhœa usually begins very gradually, and, under the idea that it is due to dentition, it is often allowed to increase unchecked. In fact, the younger infants suffer most from it, and dentition has little to do with it. Vomiting is not usually one of the initial symptoms, unless the attack is directly attributable to some indigestible article of food; but ordinarily vomiting only sets in after the diarrhœa has lasted a week or two, the most severe form of the disease being known as "cholera infantum," which is merely an aggravated form of the entero-colitis. The skin to the touch does not indicate febrile action, but the thermometer will show 105°, 106°, or even 107°. When the more urgent symptoms are relieved, the case may become one of ordinary entero-colitis. The stools vary greatly, being sometimes yellow, and at others brown or green, this latter colour having often been thought to be due to disorder of the liver, calling for calomel. Dr. Smith has not given calomel in these cases for years; and as the result of examining the liver in thirty or forty cases in which death occurred from entero-colitis, he was unable to detect anything abnormal. Moreover, he had never observed this green discoloration at the point where the bile is poured into the intestine, nor until several feet below this. Stools which are yellow when passed become green on standing, especially if in contact with the urine; and the green colour is now in general admitted to be due to acidity. It is a fact that the kidneys are more apt to become affected in entero-colitis than the liver; and Dr. Smith thinks it highly probable that the persistent vomiting in some cases may be attributed to uræmia, in consequence of disturbance in the kidneys.

In regard to treatment, before the hydrocephalic stage is reached, Dr. Smith almost confines himself to opium and bismuth. In ordinary cases the bismuth should be given in doses of ten or twelve grains, combined with compound powder of chalk or Dover's powder. For general use he thinks it best to give the bismuth in suspension, for which this is an admirable formula:—℞. Tr. opii deodoratæ gtt. xvj.; bismuth ʒij., syrupi ʒss., aquæ ʒiss.; a teaspoonful for a child a year old. This is retained, and has the effect of both an antiseptic and an astringent. Almost all the cases require stimulants, and brandy is the best, of which three drops may be given for every month of the child's age (when under a year) every two or three hours. When the hydrocephaloid stage is reached, opium must be withdrawn, or given very cautiously, the bismuth being continued. At this period, however, tonics and astringents must most be relied upon, and one of the best of these is liq. ferri nitratis—viz., tr. calumbæ ʒij., liq. ferri nit. gtt. xviij., syrupi ʒij. A teaspoonful for a dose, continuing the brandy. Diet is of the utmost importance. If the child is under a year, no artificial food should be allowed; or, if this is unavoidable, the best cow's milk should be allowed to stand for some time, and then only the upper third employed. In this way the larger part of the sugar and butter is obtained, and the indigestible casein is avoided. As to farinaceous substances, Dr. Smith prefers Mellin's Liebig's food, which, added to cow's milk, makes as good a substitute for human milk as has yet been obtained. After six months, infants can digest a certain amount of starchy food, and then Robinson's barley, if sufficiently boiled, may be used with advantage. As a rule, however, Dr. Smith prefers Ridge's food, Nestlé's being too laxative when the bowels are affected. In cases of habitual constipation in young infants, which is often a very perplexing condition, he has found it of very great service.

In the discussion which followed, Dr. A. A. Smith stated that he considered the control of the high temperature which prevailed, by means of cold, of great importance, so that when this reaches 103° or more he employs sponging or the wet-pack, cold baths entailing too much muscular exertion. This allays nervous irritation and tends to produce sleep. Of late years he has used the bromides with good effect, and at a later stage, say after four or five weeks, when the child was suffering more from the results of the disease than anything else, he has found the external application of animal oils very beneficial—cod-liver oil probably being the best. Internally he has given salicin with advantage, the dose being half a grain for a young infant, and a grain and a half for a child of a year. Dr. Porter called attention to the importance of early treatment in these cases, as shown by the good effects of the house-to-house service of the Board of Health. He had been disappointed both with the bromides and salicin, and placed most reliance in bismuth and opium. Dr. Sell said that many of these cases depended upon ill-regulated suckling or diet. He did not like to use opium for a child less than a year old, and only employed it very cautiously afterwards. He considered that gelseminum could be employed with much greater safety, and had the effect of lowering the temperature, diminishing the rapidity of the pulse, controlling nervous excitement, and fulfilling the other indications of opium. He orders from two to eight drops of the concentrated solution to be placed in a teacupful of water, the child taking a teaspoonful every hour or half-hour. Dr. Lewis Smith, in reply, said that he believed nothing could take the place of opium, and that, given with care, it was quite safe under the age of a year. He had frequently given half a drop of laudanum to a child six months old for a long period. He believed also that bismuth exerted more than the local effect attributed to it by some. The blackening of the stools which occurs during its employment is probably due to the action of sulphurous acid in the stomach and intestines, as the sulphide of bismuth is of this black colour. It is a good disinfectant, the stools becoming less offensive under its use.

Malpraxis in Midwifery.

Prof. Hermann Friedberg, of Breslau, narrates in Eulenberg's *Vierteljahrschrift für Gerichtliche Medicin.* for April the particulars of a remarkable case of injury done to an infant during delivery, which he was requested to report upon as an expert.

A woman twenty-three years of age, taken in labour with her third child on March 16, 1877, sent for an unauthorised midwife, whom she had engaged to attend her. About twelve o'clock at night this woman discovered a hand presentation, and made repeated violent traction on the hand and arm at

intervals until two o'clock in the morning, when the arm came away. The midwife then introduced her hand, and worked it about for about five minutes, causing great pain to the mother, who, unable to bear it, sprang out of bed. While she was sitting on the edge of her bed, the child was rapidly and easily expelled by the breech without any assistance. The cause of the child's death now became the subject of a legal investigation, which was consigned to Prof. Friedberg. At the autopsy it was found to be a full-timed, strong, healthy infant, the general surface of the body being remarkably pale. The left arm and shoulder-blade were separated from the body with much laceration of muscle and effusion of partly coagulated blood, the acromion and coracoid process, however, not having been fractured. The fifth to the ninth ribs were fractured near their anterior ends, coagulated blood adhering to the fractured parts and ruptured muscles. The lungs immediately sank in water, and no air issued on dividing them under water. An abnormal movability on the left side of the spine was found to arise from fracture of the necks of the seven upper ribs, accompanied by much effusion.

The autopsy is reported at much greater length, but these are the points that seem of most interest. From it Prof. Friedberg concluded that the child was a full-timed infant, which had never breathed, and therefore had never lived after its birth. Its death arose from the hæmorrhage and contusion which had occurred during its birth, and which were caused by the violent manœuvres adopted by the midwife. As to the question whether the child was alive during the progress of the labour, Prof. Friedberg reports in the affirmative, not only because the patient and the midwife repeatedly affirmed that it moved, but from the condition of the blood observed after death, this being in a coagulated state in the vicinity of all the lacerated soft parts, while the separated arm by its violaceous colour, tumefaction, and distension by red effusion, indicated that its circulation had been obstructed during life. The last point, that the death of the child was caused by the violent manipulation of the midwife, is demonstrated at what would seem almost needless length.

Prof. Friedberg rightly observes that this case stands alone in literature, and it would seem incredible, until the case had been carefully examined, that the woman here inculpated could, unaided by instruments, have torn off the arm and shoulder-blade and fractured numerous ribs of a strong and healthy child. To those in this country who are justly lamenting the want of regulations for midwives, it does seem surprising that in Prussia, where regulations of all kinds abound, this malpraxis could have been perpetrated by a woman "unauthorised to practise as a midwife," who yet had carried on such practice for nine years, during which she had delivered 347 women, many of whom no doubt have suffered more or less at the hands of one whom Prof. Friedberg stigmatises somewhat mildly as a *Pfuscherin* or bungler.

The same number of the *Viertelsjahrschrift* contains a report by Kreisphysikus Eberts on a somewhat similar case occurring at Weilburg. A maid-servant having become pregnant by her master, was delivered by a woman seventy-one years old, who, formerly a district midwife, had not attended a case for thirty years. She slept with her patient in the next room to that occupied by the father of the child and his wife, so that everything had to be managed as quietly as possible. The woman was delivered, and resumed her occupation next day, but a child's body having afterwards been discovered, she was apprehended. On examination the child was found full-time and viable, but it had never breathed since its birth. With the child its separated arm was found wrapped up in a cloth, and this had been divided at the mid-part of the humerus, the upper portion still remaining covered with a portion of the muscles. The left clavicle was also dislocated. The examination led to the death of the child, which was in a very bloodless state, being attributed to hæmorrhage. A cutting instrument had evidently been used. The exact circumstances of the labour could not be known, as none but the midwife and patient were present, both of whom declared that the separation was spontaneous. The theory of the prosecution was that the presentation was a cross one, and that the midwife, in order to end it as soon as possible (a circumstance of importance in order to avoid detection), had seized hold of the hand instead of the foot, and made such violent traction as to dislocate the clavicle. Finding her efforts unsuccessful, she divided the arm with a knife, and then succeeded in turning, or a spontaneous evolution might have taken place.

REVIEWS.

Lectures on Clinical Surgery. By Jonathan Hutchinson, F.R.C.S., Senior Surgeon to the London Hospital, etc. Volume I., Part 1. London: J. and A. Churchill. 1878.

This first instalment of Mr. Hutchinson's "Lectures on Clinical Surgery" deals with "certain rare diseases of the skin," and is a valuable contribution to dermatological literature. Some of the lectures—for instance, No. 4, "Can Arsenic cure Pemphigus?" No. 10, "On the Nails and the Diseases to which they are liable"; and, if we remember rightly, one or two of those dealing with the sub-divisions of Prurigo—have already been published in this journal, and others have appeared elsewhere; but this will not detract from their value, and in their collected form they are more likely to attract the attention they deserve. The first lecture, "On Molluscum Contagiosum," is all that can be desired, except where it maintains that molluscum contagiosum is a sebaceous disease. After Lukomski's careful researches on this subject, the fact that all observers do not hold this view should at any rate have been referred to, and the other theories refuted—if possible. If the contents of a molluscum consist of sebum, it is sebum altered in a most extraordinary manner. Sebum that does not contain a single oil globule, and that remains unaltered by soaking for weeks in ether, is peculiar stuff; and why do mollusca contagiosa sometimes become pedunculated, when true sebaceous accumulations, such as comedones and acne papules, never do? Mr. Hutchinson admits that the disease presents "a problem as regards cause, which has as yet baffled our microscopists." Will he not admit that they have been baffled as to its structure too?

Mr. Hutchinson's speculations on the origin of true leprosy at page 47 are most suggestive, and deserve to be carefully examined. It would be remarkable if leprosy turned out to be, like syphilis, dependent on an external poison, and to resemble it further in being hereditarily transmitted. By the study of the specific action of arsenic on pemphigus, Mr. Hutchinson has rendered himself a real benefactor to mankind. A painful and protracted disease has been robbed of its terrors; and much that has been written as to the incurability of pemphigus, especially by Hebra, becomes scarcely worth the paper on which it was written. We can confirm Mr. Hutchinson's statements by our own experience. No less is Mr. Hutchinson to be thanked for his untiring attempts to bring order and arrangement into the subject of "Prurigo." He does not recognise the existence of Hebra's prurigo (a disease beginning in infancy and lasting a lifetime) in England; but he shows that there are several clinically defined varieties of prurigo met with in this country, each resembling Hebra's in certain particulars, but not in all. These are—1. Lichen infantûm, a well-recognised affection, to be met with at times in every out-patient room; 2. Prurigo senilis, occurring after middle life; 3. Varicella-prurigo, following chicken-pox, vaccination, or measles; 4. Summer prurigo, or acne-prurigo, a disease of adolescents and adults (the two latter forms described first by Mr. Hutchinson himself); and lastly 5. Winter prurigo, a well-defined but long unrecognised affection, described almost simultaneously by Duhring and Hutchinson.

Several lectures are devoted to the consideration of these varieties, the study of which we cannot too strongly urge on our readers. As the author says (page 125)—"Prurigo may easily spoil the happiness and mar the usefulness of a large part of a life; and if we can succeed in any degree in increasing our knowledge of its causes and the modes of its prevention, neither our time nor our trouble ought to be grudged."

The other lectures, except that on diseases of the nails—a subject by no means fully worked out—are of less general interest; but Mr. Hutchinson knows how to make even the dullest topics attractive, and whether he is discussing the identity of leucoderma and white leprosy, or descanting on the various features of ichthyosis, he cannot fail to impress his hearers or readers by his profound observation and clear

and vigorous English. We hope the appearance of Part 2 of the present volume will not be long delayed.

Atlas of the Diseases of the Skin. Part I. By BALMANNO SQUIRE, M.B., Surgeon to the British Hospital for Diseases of the Skin. London: J. and A. Churchill. 1878.

THE aim of the author in publishing this Atlas has been, he states, to exhibit the disease on a larger scale than usual, while, at the same time, keeping the size of the page that which is most convenient for library use, and which is met with in the majority of books, viz., the octavo demy page. Hence, the drawings are only intended to represent "a limited area of the disease, as nearly life-size as possible," and not to show the whole eruption on a reduced scale. The diseases illustrated in Part I. are Nævus vascularis (two plates), and Psoriasis diffusa (two plates), and of these we are inclined to regard the first two, and especially No. II., as the best. The colouring has evidently been very carefully copied, though, from an artistic point of view, some exception might be taken to the drawing of the hair in Plate III. After all, we scarcely see the need of illustrations of so easily recognised a disease as "Nævus vascularis planus" or "port-wine mark." The object of plates is to render diagnosis easier, and though, no doubt, the complication of molluscum fibrosum with nævus, as represented in Plate II., is very interesting, yet it would have been surely better to have given us a plate showing the results obtained by Mr. Squire's method of treating port-wine mark, which it is evidently the object of the plates to introduce. At any rate, instead of showing us what a patient who has had psoriasis diffusa looks like when cured—and everyone knows that his skin recovers its normal appearance—why not have substituted such a plate as we suggest? which would have been of real value in the case of so intractable a disease as nævus planus. We believe that Mr. Squire's method of "multiple (linear) scarification" is a great advance in the therapeutics of this form of nævus. Full details are given in the letterpress accompanying the plates, with woodcuts of the instruments used.

The description of psoriasis includes a clear account of its main varieties, with their diagnosis and treatment. Mr. Squire enters at some length into the differences between simple and syphilitic psoriasis of the palms and soles, and he defines the position he takes on this subject as follows (page 61):—"I do *not* think that the isolated presence of psoriasis in these regions is a strong presumption of its syphilitic nature." Moreover, he admits as syphilitic psoriasis of the palms and soles only "the yellow-brown discoid syphilide"; and, as we understand him, denies the existence of a late secondary or early tertiary psoriasis. In taking this view he would certainly find himself in opposition to many good syphilologists; for example, Zeissl, who says ("Lehrbuch der Syphilis," Band II., s. 134; 1875), "the so-called 'psoriasis palmaris et plantaris' relapses very frequently, and may return years after the first attack; indeed, it often is the only symptom of relapsing syphilis, except the defluvium capillorum and the glandular enlargements." One diagnostic point, which we believe Mr. Hutchinson has insisted on in the late syphilitic palmar and plantar eruptions—their limitation to one side of the body—Mr. Squire does not allude to. We object, also, to any eruption on the palms and soles being diagnosed as psoriasis (simplex), unless it occurs in a patient who is known to have had true psoriasis diffusa of the body (knees, elbows, etc.) coincidently with it at some time or another, or who is affected with it when the case is seen. Non-syphilitic "psoriasis" palmaris occurring as an isolated symptom in a person who has never had true general psoriasis, we should prefer to call "tilosis," or to use any sort of indifferent expression rather than assume a relationship which possibly does not exist.

With these reservations our views agree in the main with those of Mr. Squire.

Essays on the Treatment of Skin Diseases. No. IV. On the Treatment of Psoriasis by an Ointment of Chrysophanic Acid. By BALMANNO SQUIRE, M.B., etc. London: J. and A. Churchill. 1878.

IN this "Essay" Mr. Squire sums up his matured experience of the now well-known derivative of Goa powder as a remedy for various skin diseases, especially psoriasis. His verdict is decidedly in its favour, and, with certain precautions in using it, he asserts that "it is a much more efficacious remedy for psoriasis than the remedies ordinarily in vogue for treating this disease." Its effects are rapid, it has no smell, and the chief drawback to it is the trick it has of dyeing the hair, nails, skin, and underclothing, of various tints of yellow and purplish-brown. However, attention to certain rules which Mr. Squire lays down will obviate much of the inconvenience of this aspect of the treatment by chrysophanic acid. We should certainly advise practitioners, who have troublesome cases of psoriasis to treat, to read the evidence in its favour here brought forward. An "Appendix of Comments by Various Authors" is subjoined. The "comments" are chiefly articles contributed to medical journals, many of them by Mr. Squire himself, and they necessarily involve a great deal of repetition. The most interesting of the reprints, to our mind, is Dr. Ashburton Thompson's article on Chrysarobin.

Bericht über die Saison rätischer Bäder u. Kurorte im Jahre 1877. Chur, 1878.

Report on the Rhœtian Baths and Health-Resorts during the Season 1877. Published by the Graubünd Section of the Central Swiss Medical Association. Coire: Hetz and Hail's Library.

THIS *brochure* contains the most recent information with regard to the health-resorts of the Engadine, of late years so popular with our countrymen in the summer months. The reports are drawn up by the resident physicians, and indicate the several characters of each place, the accommodation procurable, the treatment adopted, and the class of cases which have been found to be benefited by a sojourn in the particular locality. Detailed analyses of the waters of Alvenu-bad, Fideris, Peiden, St. Moritz, Tarasp, and Val Sinestra, are given; and the sanatoria of Churwalden, Pontresina, and Davos, especially the latter, are carefully treated. Dr. Spengler's observations on the indications for Davos in phthisis are well worthy of attention just now, when this health-resort is being brought rather prominently into notice by Dr. Allbutt, Mr. Addington Symonds, and others. Davos is no place for the more acute or far advanced forms of this disease, and it appears to be mainly suited to the early stages of "chronic catarrhal pneumonia."

Some of the reports have meteorological tables, and also tables of the nationalities of the visitors appended to them. In many ways, therefore, this little work will be of value to the student of climate.

Die idiopathischen Schleimpantplaques der Mundhöhle. Von Dr. ERNST SCHWIMMER, Universitäts-Docent in Buda-Pest.

The Idiopathic Mucous Patches of the Oral Cavity. By Dr. ERNST SCHWIMMER, Docent in the University of Pesth. Vienna: Wilhelm Braumüller. 1878.

THIS is a careful monograph on a disease which excited some attention in this country in 1874, and which has been variously named "Psoriasis Linguæ," "Ichthyosis Linguæ," "Psoriasis Buccal," etc. Dr. Schwimmer has himself observed the large number of twenty cases of this affection, and the main features of each are described in the work before us. The author does not throw much new light on the subject. He, however, calls attention to the occurrence of circumscribed patches of erythema in some cases, which precede the development of the white "plaques," and form their substructure. He shows conclusively that neither smoking nor syphilis are necessary to the causation of the disease. He doubts its termination in epithelioma in the majority of cases, and he rejects the terms "ichthyosis" and "psoriasis" as inconsistent with the histological characters of the patches, and based on a merely superficial analogy; and suggests instead the harmless epithet "leucoplakia buccalis," which seems to us as good as any which have been brought forward. The monograph is accompanied with four excellent chromo-lithographs of typical cases, and with a plate representing the microscopical appearances. The references to the literature of the subject are full and exhaustive, and those interested in the subject cannot do better than consult Dr. Schwimmer's work.

Stanford's Library Map of London and its Environs. Geologically coloured. By James B. Jordan. London: Stanford.

This map is far and away the best of its kind we have seen. It is constructed on the scale of six inches to the mile, which, though apparently small for the central parts of London, is nevertheless exceedingly good even there; but when we come to the neglected suburbs, it is, as far as we know, unsurpassed. *Experto crede;* we have tried it. Under its guidance we attempted a path in certain parts but rarely frequented, and the only difficulty we encountered arose from the peculiar characteristics of the inhabitants of the region through which we had to pass in part of our way; but this is surely no fault of the map! Many who are, like ourselves, given to long country walks when the tide of business will admit, would gladly welcome an extension of the same series for, say, twenty miles round London. Most men who are walkers have ceased to begin their tramp over the dreary waste of London pavements, hard and heating to the feet. They take their train (third class, we have almost invariably observed), get well beyond the smoke, and then begin the day's excursion, in most cases carefully planned beforehand. To such men, lovers of the sights and sounds of nature, maps like this now before us are invaluable. We might add that they may also prove of much purely sanitary service.

The map, or rather maps, for there are twenty-four sections, are coloured geologically; but this is in strict geological fashion, which is not always intelligible to ordinary mortals. Were it marked on them, "Here is good building soil, never too wet in winter, but troublesomely dry in summer," there would be a clue to house-seekers. Again: "Here the soil is flat, damp, and undrained, full of rheumatic pains in winter, and gnats in summer." Samples of each we know well. Here again is another geological indication rarely encountered: "The ditches are open sewers." Still another example might be cited: "Here the natural soil has been removed, and loose rubbish of all kinds has been shot"; or worse: "Here the dry gravel of the soil has been removed, and in its place all the available mud in the parish has been deposited." We fear that such a map is for the future; but each curious instance we could readily verify, to say nothing of the delights of pigstyes and dung-heaps well within the radius of Stanford's map. Therefore, to conclude, we advise all the more strongly a separate issue of maps relating to the parts immediately adjoining the series now issued. If they are as well done—and colouring is of no value here—they will prove a real boon.

Society for Relief of Widows and Orphans of Medical Men.—A Quarterly Court of the directors of the Society was held on Wednesday, July 10; Sir George Burrows, President, in the chair. A sum of £1253 was granted to be distributed, according to their circumstances, among fifty-eight widows, eleven orphans, and three orphans on the Copeland Fund. The expenses of the quarter amounted to £51 12s. 3d. Three new members were elected, and the deaths of two members were reported. There were no fresh applications for grants.

Sudden Death of a Surgeon.—We regret to announce the death of Mr. Richard Coles, of Raleigh, Essex. On the morning of the 13th inst., between two and three o'clock, he was called to attend a patient at Battles Bridge, Rawreth, and when he arrived about the centre of the town the horse he was riding was heard to stop suddenly, and a sound as of some one falling followed, which aroused the lady of the house opposite. Mr. Coles had fallen to the ground, and the horse was standing by him. Assistance was immediately procured, Mr. Grayson, a surgeon in the town, being quickly on the spot. Mr. Coles breathed heavily two or three times and expired. He had not been quite well for some little time, but had continued to discharge his professional duties. It was known that he suffered from disease of the heart. Mr. Grayson, who saw the deceased before he expired, expressed the opinion that the cause of death was disease of the heart, and the coroner has dispensed with an inquest on the body. Mr. Coles pursued his medical studies at Guy's, became M.R.C.S. and L.M. in 1856, and L.S.A. 1856. He was the Medical Officer of Raleigh District, Rochford Union. He had an extensive practice, and was greatly respected.

PROVINCIAL CORRESPONDENCE.

LIVERPOOL.

July 15.

Pauper Lunatics and Masters of Workhouses—The Liverpool Burial-Grounds—Exposing of Infected Articles.

In the *Medical Times and Gazette* for February 9 of the present year I reported a case in which the Master of the West Derby Workhouse and a relieving officer and medical officers of West Derby were subjected to an action-at-law for having caused a patient, who was alleged to be at the time suffering from delirium tremens, to be confined within the workhouse hospital as a lunatic against his will. Shortly after this case was reported in the local papers, it happened that an epileptic patient in the Royal Southern Hospital became suddenly maniacal, and on that account unfit to be retained within its wards. There was no alternative, therefore, but to obtain an order for the man's removal to the lunacy wards of the workhouse of Toxteth-park, in which township the Royal Southern Hospital is situated. The order was obtained, and the patient removed; but the Master, probably with the West Derby case fresh in his mind, and influenced by a wholesome dread of being subjected to an action-at-law merely for doing his duty, refused to admit him. Thereupon the matter was submitted to the Local Government Board, who, in a reply dated July 4, 1878, consider that the Master was not justified in his "non-compliance with the order of the relieving officer" on the sole ground that the patient was a lunatic. Thus, then, masters of workhouses seem at present to be in the unhappy dilemma of having possibly to defend an action-at-law, and perhaps pay damages, if in compliance with a relieving officer's order they admit one who is certified to be a lunatic; or to receive a reprimand from the Local Government Board, and so jeopardise their position, if they decline to do so.

The single point on which it was most desirable that the Board should offer an explicit opinion was one on which, with more of discretion than generosity, they kept silence. That point was the refusal of the man to enter the workhouse, and his denial that he was a lunatic. This refusal voluntarily to go was advanced in each case; and, commenting on that of the patient alleged to have been suffering from delirium tremens, Mr. Justice Denman remarked that, "If anybody laid hands upon a person who, at the time, was capable of exercising his senses, and of saying 'No,' and took him against his will to a place where lunatics were confined, he did so at his peril." Unless, therefore, the "No" of an alleged lunatic who has been the subject of epileptic mania is invalid as an objection against *his* being detained, while that of one who has been the subject of delirium tremens is valid, the Master of the Toxteth Workhouse has been reprimanded by the Local Government Board for refusing to do the very act which the Master of the neighbouring Workhouse of West Derby was mulcted in damages for doing.

Attention has just recently been directed to the sanitary evil of burial within the borough. At a meeting of the Health Committee on April 11, it was resolved that the Medical Officer of Health and Borough Engineer report as to the burial-grounds in the borough which have not been ordered to be wholly or partly closed, with such particulars as would enable the Health Committee to consider the advisability of recommending the Council to apply for an order in council to close the same. In accordance with this resolution a report has been drawn up, from which it appears that there are on an average 2290 burials annually in such burial-grounds, namely, seventy-one in grounds attached to churches and chapels, and 2219 in cemeteries. The report goes on to remark that whereas when the application for the orders which are at present in force was made the population was equal to seventy-two per acre, it is now equal to 119 per acre, and to allege this as a good reason for its recommendation that all intramural burial-grounds shall be gradually closed, the reason itself being founded on the following general conclusion come to by the Commission appointed to inquire into the practice of interments in towns, viz.:—"That all interments in towns, where bodies decompose, contribute to the mass of atmospheric impurity

which is injurious to the public health." Founded on this report, two resolutions were passed by the Council, having for their object the application for powers to carry out its recommendations. One of the most crowded of the cemeteries in question has within it a clear spring, which is resorted to by not a few, under the belief that its waters are beneficial for ophthalmic complaints. I am not aware that this fact was alluded to in the report or the discussion that arose upon it; but it would be as well if the use of the water were at once interdicted.

A wholesome lesson in public health law was given to bailiffs generally, and to Mr. Joseph Kirby, bailiff, in particular, a few days since by the Liverpool stipendiary magistrate. A tailor residing at 65, Seacome-street had fallen in arrears with his rent, whereupon the landlord obtained a warrant, and committed its execution into the hands of the tender Mr. Kirby. This officer was informed that the tailor had had ten children, that two of them had just died of scarlatina, and that five or six were still down with the same complaint. But considerations of this nature do not weigh with bailiffs. It is not, perhaps, much to be wondered at, therefore, that Mr. Kirby simply replied that he did not care; he had come to distrain, and distrain he wouldor—something to that effect; and, according to the testimony of the tailor's wife, that he "would not have a bit of mercy." Thereupon he took a sofa that had been used as a bed, and a sofa-pillow that had been used as a pillow by the sick children, and conveyed them through the public streets; for which act of imprudence he was fined 40s. and costs.

GENERAL CORRESPONDENCE.

VINDICATION OF HUMAN NATURE.

[To the Editor of the Medical Times and Gazette.]

Sir,—I have read with pleasure the "Vindication of Wine," by Dr. Druitt, in your issue of the 13th inst. Allow me to go a little further, and vindicate "human nature." These are the "dog-days," and it seems to me that they, and the brute creation generally, are having it too much their own way. There is no doubt that we can learn much by considering the habits, manners, and customs of the beasts of the field and of the forest; and there are also sermons to be found in stones, and lessons to be learnt from the flowers of the field. But may it not be, that while we study the brute creation or the vegetable world, we may find much "to avoid," as well as something "to imitate"? Not long ago I read an able article, in a journal devoted to medicine, on the best means of resisting the heat-languor which oppresses our population when the sun inflames the English breezes until they rival the hot-air blasts which wither the plains of Hindostan. I was about to don my thinnest garments of a light grey colour, when I found my attention called, as is the fashion nowadays, to the wild beasts of the tropics, and I was bid to consider that they wore coats of fur and of dark colour. The lesson intended to be taught was, I suppose, that when the thermometer was 90° in the shade and 140° in the sun, I should sally forth in my thickest and darkest-coloured "Ulster." I will, in justice to the medical writer, acknowledge that he did not confine his illustrations to examples drawn from wild beasts. He directed my attention to negroes, and particularly to the oily nature of their skins, but he left me under the impression that two courses only were open to me in hot weather—I might, as I said before, try and make a beast of myself by wearing a fur coat in the dog-days; or I might remain a man by adopting the disguise of a "Christy Minstrel." I shall not consider this alternative, because I think the writer drew a wrong conclusion with regard to the inhabitants of the jungle, and so is no longer trustworthy. In my opinion, the wild beasts of hot climates teach us what to avoid rather than what to practise. If tigers paraded about in the daylight, enjoying the heat, it would be very well for us to imitate them, but they do not do so. "The sun ariseth, and they get them away together and lay them down in their dens." I should rather draw the conclusion that men should avoid furs and dark coats in hot weather for the reason that they are not beasts and cannot retire to their dens, but have to go forth to work and labour "until the evening." The difficulty in learning lessons from the lower creation lies, I think, in the modern tendency to ignore the spiritual and dwell too much upon the brutal nature of our own race. A wild beast, endowed with philosophic intellect, would, doubtless, get shaved or clipped during the hot season, and then, being free from oppressive garments, quit its jungle-den and work havoc and destruction upon poor humanity, day and night. Alas for the man who had, with perverted judgment, put on the greatcoat which the tiger had dispensed with. He would at last, and too late, have learned "what to avoid." An eminent philosopher frequently remarked that the value of his observations lay in the application of the same; and this wise utterance was lately strongly impressed upon my mind, when, being unable to come to any conclusion as to what I ought to wear in England, I turned to the consideration of what I ought to eat. I took up the *Dietetic Reformer* for June, and was dismayed by considering the consequences of too closely imitating the habits of the lower animals in the matter of food. It is a terrible sign of the times that the writer of an essay in that paper, himself a clergyman, and the leader of a flock of sheep apparently, accepts as a matter of course the results I shudder at! The reverend gentleman says—"Another question which seems to me to press for consideration is that of the frequency of meals. On this question there seems to be a great variety both in opinion and in practice. I myself incline to think that vegetarians require to eat more frequently than those who use the ordinary kinds of food; and in support of this I would refer to all the frugivorous animals which are continually eating, and especially those whose digestive organs and general habits most closely resemble those of men." Has it come to this? Are we all, as a matter of duty—nay, of religious duty—to go about chewing the cud the whole day? Can it be possible that nibbling carrots or turnips is the whole duty of man? As to the animals which most resemble men, I hesitate to reflect upon their food. Imagine a nut diet! Barcelona nuts for the poor, Brazil nuts for the middle-classes, cocoa nuts for the aristocracy! I reject such teaching as this. I would rather learn what to avoid in the way of diet by studying the animals most resembling man now assembled in large numbers in the Zoological Gardens. Wild beasts may wear furs and monkeys may crack nuts for ever, but I will follow my own common sense, while philosophers discard it altogether in the matters of dress and food. Thank goodness! one man, of science and of common sense combined, will approve my determination to stick to light wines in hot weather. I am, &c.,

Your Heated Correspondent.

A MIDWIFERY DIPLOMA.

[To the Editor of the Medical Times and Gazette.]

Sir,—I send for insertion, if you approve, a form of licence for a midwife, extracted from Atthill's "Middleham Church." When the practice began, or when it ceased, does not appear; but it probably ceased before the present century commenced. I am, &c., J. S.

Lucas Cotes, clericus, artium magister, decanus ecclesiæ collegiatæ de Middleham, legitimè fulcitus, universis Christi fidelibus ad quos hoc præsens scriptum pervenerit salutem. Vobis harum serie notum volumus quod nos Mariam Stott uxorem Thomæ Stott de Middleham prædicata, propter ipsius peritiam, scientiam, et industriám circa mulieres in summo periculo tempore puerperii, prout nóbis ex parte sua per certificatorium sub manibus quarundem matronarum apparet, ad exercendum igitur et practicandum artem sive industriam obstetricis in et per totum decanatum de Middleham prædicta, prout res postulaverit et opus fuerit, approbamus, eidemque Mariæ Stott quantum in nobis est et de jure possimus licentiam ac liberam facultatem damus et concedimus per præsentes quamdiu se bene gesserit et donec habuerit in mandatis nostris. Datum sub sigillo officii nostri (quo in talibus utimur) vicesimo sexto die mensis Augusti anno Domini 1721. Johannes Waite, Notarius Publ.

Lu. Cotes (L.S.), Decanus de Middleham.

(On a 10s. stamp.)

OBITUARY.

WRIGLEY GRIMSHAW, F.R.C.S.I.

We have to record the death of this highly esteemed and venerable member of the profession in Ireland. Mr. Grimshaw died at his residence at Bray, near Dublin, on June 16, aged seventy-six years. His father was a member of an old Lancashire family, a branch of which settled near Belfast in the middle of the last century, being among the first promoters of the great linen trade of the North of Ireland. He was born at Whitehouse, near Belfast, on December 1, 1801, and received his education at the Moravian School at Gracehill, in the County Antrim. In due time he entered Trinity College, Dublin, but abandoned the arts course, chiefly on account of his health, which was always more or less precarious.

Having adopted the profession of medicine, Mr. Grimshaw became an apprentice of Robert Harrison, the eminent anatomist. He was the second apprentice Harrison had. He received his professional education at Steevens's Hospital, the School of the Royal College of Surgeons, and the School of Physic in Ireland. In 1828 he became a Licentiate of the Royal College of Surgeons, and on May 6, 1833, was admitted as a Fellow of the College, in company with O'Bryen Bellingham, Francis l'Estrange, William Jameson, and other well, but less familiarly, known Irish surgeons. He was thus a link between the past and the present, and was, we believe, the sixth on the roll of his College at the time of his death.

He commenced his professional career as a demonstrator of anatomy in the School of the College of Surgeons. In this capacity he made many preparations for the College museum, and was the constant companion and assistant of Abraham Colles in preparing and arranging the materials for his lectures. He always took a great interest in chemical and physical science—so much so, indeed, that at the commencement of his last illness he was engaged in experiments with a view of obtaining improved photographs of the sun. In 1842 he was elected a member of the Royal Irish Academy. He was one of Professor Apjohn's earliest assistants, and aided that distinguished chemist in many of his most important researches. Mr. Grimshaw was also an excellent amateur mechanic, so that he was able to construct many pieces of apparatus for chemical and physical investigations. At this time he resided in York-street, Dublin, in a house which he afterwards transferred to his friend and contemporary, the celebrated William Stokes.

Some years previously (in 1831), Mr. Grimshaw abandoned the practice of general surgery, and became a partner of Mr. Samuel McClean, who was at that time at the head of the dental profession in Ireland. From this period he pursued the practice of dental surgery, and soon became one of the leaders in that branch of the profession in Dublin. When the Medical School connected with Steevens's Hospital was established, he was requested to become Surgeon-Dentist to the Hospital, and to undertake the duty of Lecturer on Dental Surgery in the School. In 1859 Mr. Grimshaw delivered a course of lectures on Dental Surgery—the first course of its kind in Dublin—in Steevens's Hospital. Mr. Grimshaw continued to work actively until the year 1865, from which time he gradually began to decline practice, and finally retired from professional life about six years before his death. He was always opposed to the practice of dentistry by any but fully qualified surgeons. Mr. Grimshaw was twice married. By his first wife he had two children—a son, Dr. Thomas Wrigley Grimshaw, a highly distinguished physician, and a daughter. By his second marriage he leaves two sons, who are both very young.

WILLIAM WATSON, M.R.C.S., L.S.A.

The medical faculty of the old town of Lancaster have recently sustained a severe loss in the death of one of its most skilful and energetic surgeons, Mr. William Watson, who died on the 24th ult. at the early age of forty years. He was the second son of Mr. Dawson Watson, a well-known solicitor of Sedbergh, and brother to Mr. J. D. Watson, the eminent artist. Mr. Watson was educated at the Sedbergh Grammar School, and commenced his medical career as an apprentice to Mr. Burrow, of Settle. He afterwards entered as a student of University College and Hospital in London, where the professors and medical staff soon recognised in him a promising student and acute observer, and this opinion was fully realised during his medical curriculum. He passed with credit his various examinations, and in April, 1861, became a Member of the Royal College of Surgeons, and Licentiate of the Apothecaries' Company of London. In January of the following year he succeeded Mr. Clarkson in practice in Lancaster, where he soon became known as a kind and skilful practitioner of the healing art and science, and one on whose judgment his compeers always placed great reliance. He more particularly distinguished himself as an operating surgeon, and in the practice of obstetrics, in which he acquired a deserved reputation. Amongst other appointments he held those of Honorary Surgeon to the Lancaster Infirmary, and Medical Officer of Health to the Borough of Lancaster and to the Lunesdale Union. When returning from a medical meeting at the Infirmary on May 16, he was suddenly seized with hæmoptysis, and finally sank on June 24, having been engaged for sixteen years in the active and harassing duties of an extensive practice.

MEDICAL NEWS.

Royal College of Surgeons of England.—The following gentlemen having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 23rd inst., viz.:—

Cheetham, Walter H., Horsforth, Yorkshire, student of the Leeds School.
Child, Warwick L., Belsize-park, of the Manchester School.
Clarke, Henry J., M.B. Edin., Doncaster, of the Edinburgh School.
Coleman, Gerald E., L.R.C.P. Edin., Pontefract, of the Leeds School.
Dixson, Craig, M.B. Edin., Sydney, New South Wales, of the Edinburgh School.
Guillemard, Bernard J., M.B. Edin., Hythe, Southampton, of the Edinburgh School.
Handford, Henry, M.B. Edin., Atherstone, Warwickshire, of the Edinburgh School.
Jackson, Arthur, L.S.A., Grays, Essex, of St. Bartholomew's Hospital.
Jones, Robert, Liverpool, of the Liverpool School.
Langley, Pershouse W. L., M.D. Queen's Univ. Ire., Tramore, Co. Waterford, of the Dublin School.
Leak, Hector, Winsford, Cheshire, of the Manchester School.
Lloyd, George J., L.S.A., Birmingham, of the Birmingham School.
Mouritz, Arthur A., Runcorn, of the Liverpool School.
Rennie, Samuel J., Workington, Cumberland, of the Sheffield School.
Rowe, George H., York, of the Leeds School
Swann, Alfred, M.D. Brussels and L.S.A., Bradford, Yorkshire, of the Birmingham School.
Walter, Ernest W., L.R.C.P. Edin., Broadstairs, of St. Bartholomew's Hospital.
Williams, Miles M., Chorley, of the Manchester School.

Eight candidates were rejected. The following gentlemen passed on the 24th inst., viz.:—

Aitken, Ewing McG., Glasgow, student of the Glasgow School.
Barton, George H., Market Rasen, Lincolnshire, of the Leeds School.
Birch, Richard C., Manchester, of the Manchester School.
Casement, Brabazon N., M.B. Dub., Ballycastle, Co. Antrim.
Chisholm, John M., M.B. Edin., Edinburgh, of the Edinburgh School.
King, Henry W., M.B. Edin., Great Barton, near Bury St. Edmunds, of the Edinburgh School.
Knox, Charles, L.S.A., Birkenhead, of the Liverpool School.
Lofthouse, John, Rochdale, of the Manchester School.
Moore, Joseph W., Birmingham, of the Birmingham School.
Newton, Richard A., L.S.A., Birmingham, of the Birmingham School.
Nixon, Thomas A., Middlesboro-on-Tees, of the Newcastle School.
Osborn, William H., L.S.A., Birmingham, of the Birmingham School.
Pughe, T. W. O., Liverpool, of the Liverpool School.
Stone, Arthur W., Knottingley, Yorkshire, of the Leeds School.
Wheeler, William H., Clifton, of the Bristol School.

Nine candidates were rejected.

Apothecaries' Hall, London.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, July 18:—

Bennett, Frederick, Linton, Cambridgeshire.
Forsbrook, William Henry Russell, Westminster Hospital
Jackson, Arthur, Chadwell Grays, Essex.
Leadbeater, Thomas Edward, Bromley.
Macgee, John Richard, Bradford, Yorkshire.
May, Thomas Henry, Dover-street, Piccadilly.
Pritchard, Samuel Evan, Beaumaris.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Lindeman, Sidney Herbert, St. Bartholomew's Hospital.
Oakeley, John Lewis Bagnall, St. Bartholomew's Hospital.

NAVAL, MILITARY, &c., APPOINTMENTS.

Admiralty.—Staff-Surgeon Ruiso Robert Siccama to Fleet-Surgeon.

Downing-street.—The Queen has been pleased to appoint Robert Hamilton, M.D., to be a Member of the Legislative Council of the Island of Jamaica.

War Office.—Deputy Surgeon-General Sir Anthony Dickson Home, K.C.B., V.C., to have the local rank of Surgeon-General while serving as Principal Medical Officer at Cyprus. Senior Apothecary Lazarus Leopold Dyce, retired list Madras Medical Establishment, to have the honorary and local rank of Surgeon in the East Indies. The restriction as regards "local" rank conferred on Hon. Surgeon-Major J. R. Deane, of the Bengal Subordinate Medical Establishment, is removed.

War Office.—Medical Department.—Surgeon-Major Peter Frederick Newland retires on temporary half-pay; Surgeon George Duncan, half-pay, resigns his commission; Surgeon George Ryan retires on temporary half-pay.

BIRTHS.

Cunningham.—On July 22, at Woolwich, the wife of Surgeon-Major J. P. Cunningham, M.D., of a son.

English.—On July 22, at 128, Fulham-road, S.W., the wife of T. Johnston English, M.R.C.S., of a son.

Iles.—On July 12, at East Gate, Taunton, the wife of Alfred R. Iles, L.R.C.P., of a son.

Madden.—On July 20, at 11½, Hagley-road, Edgbaston, the wife of Edward M. Madden, M.B., of a daughter.

Robathan.—On July 18, at 20, York-villas, Prestonville, Brighton, the wife of G. B. Robathan, M.R.C.S., of a son.

MARRIAGES.

Cheadle–Vinen.—On July 20, at St. Mary Abbott's, Kensington, Robert Wm. Cheadle, F.G.S., of Christ's Hospital, London, to Emily Charlotte (Mimmie), younger daughter of Frederick A. B. Vinen. Esq., of Freshwater, Isle of Wight, and niece of E. Hart Vinen, M.D., of Bayswater.

Garner–Sharples.—On July 11, at Preston, John Edward Garner, M.B., of Winckley-square, Preston, to Annie Elizabeth, elder daughter of George Sharples, of Bank House.

Gaze—Gould.—On July 13, at Trinity Church, Eastbourne, William Henry Gaze, M.D., to Annie, second daughter of Frederick Gould, Esq., J.P., of Elmleigh, Surbiton, Kingston-on-Thames.

Martin—Bushe.—On June 27, at Trinidad, West Indies, Alfred Henry Martin, M.B., Medical Superintendent of the Lunatic Asylum, to Edith Annette, third daughter of the Hon. J. Scott Bushe, C.M.G., Colonial Secretary of Trinidad.

DEATHS.

Beresford, James William, M.R.C.S.E. and L.S.A., at The Cottage, Narborough, Leicestershire, after a few hours' illness, on July 18, aged 62.

Cocks, William P., M.R.C.S., at Falmouth, on July 10, aged 87.

Coles, Richard, M.R.C.S., at Rayleigh, Essex, suddenly on July 13, aged 45.

Dartnell, George Russell, M.R.C.S.E., Inspector-General of Hospitals, at Ardenville, Leamington, on July 22, aged 78.

Fairland, Mabel Alice, eldest child of Dr. Fairland, Staff-Surgeon, at Lucknow, Oude, of diphtheria, on May 28, aged 6 years and 9 months.

Knight, Alice Georgina, the wife of Ambrose Knight, and youngest daughter of the late Samuel Garrod, M.R.C.S., of Hackney, at St. George's House, Clapton-common, on July 22, aged 44.

Lowder, Charles d'Oyley John, M.D., at Lansdowne House, Ryde, on July 20, aged 73.

Makellar, Archibald Forman, Lieutenant Royal Horse Artillery, only son of the late Archibald Makellar, M.D. Edin., at Kirkee, India, after a few hours' illness from apoplexy, on June 27, aged 31.

Sharp, Rachel Stewart, widow of Hugh Sharp, M.R.C.S., Cullen, N.B., at Lansdowne Villa, Sydenham, on July 23, aged 52.

Turner, Ann, the wife of George Turner, Medical Officer of Health, at Argyle Villa, Clarendon-road, Southsea, on July 18, aged 32.

Ward, Alexander, M.R.C.S., at Underhill, Cintra-park, Upper Norwood, on July 20, aged 26.

Webster, Henry, M.R.C.S., late Surgeon Madras Army, fourth son of the late Dr. Webster, J.P., of Dulwich, at Camberwell, on July 20, aged 46.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Braintree Union Rural Sanitary Authority.—Medical Officer of Health. Candidates must possess the necessary qualifications. Salary £25 per annum. Applications, with testimonials, to Fred. Smoothy, Clerk, on or before August 10.

Chorlton-on-Medlock Dispensary.—House-Surgeon. Applications to the Secretary, 53, Princess-street, Manchester.

General Hospital and Dispensary for Sick Children, Pendlebury and Manchester.—Physician. Candidates must possess either a university diploma or the membership of the College of Physicians of London, or the fellowship of the College of Physicians of Edinburgh. Applications to the Chairman of the Medical Committee at the Hospital, Pendlebury, from whom further information may be obtained on or before July 29.

Queen's College, Birmingham.—An additional Professor of Physiology. Applications, with testimonials, to Mr. Joseph Lewis, 21, Paradise-street, Birmingham, not later than August 9.

Royal Albert Edward Infirmary, Wigan.—Junior House-Surgeon. Applications, with recent testimonials, to Wm. Heaton, Hon. Secretary, on or before July 29.

Royal Albert Hospital, Devonport.—Resident Medical Officer. Candidates must be unmarried, duly registered, and qualified both in medicine and surgery. Applications, stating age and professional qualifications, accompanied hy not more than four testimonials as to professional and moral character, to C. A. Shapcote, Secretary, on or before August 2, endorsed "Application for appointment."

Royal Free Hospital, Gray's-inn-road.—Junior Resident Medical Officer. Candidates must be possessed of a medical or surgical qualification from one of the examining hoards of the United Kingdom. Applications, with testimonials, to the Secretary, on or before July 31.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATION.

Dorking Union.—Mr. G. Curtis has resigned the Middle District; salary £80 per annum. Also the Workhouse; salary £15 per annum.

APPOINTMENTS.

Basford Union.—Arthur G. Mickley, M.B. Lond., M.R.C.S. Eng., L.S.A., to the Standard Hill District.

Bideford.—Mr. Alexander W. Blyth as Analyst for the Borough.

Chailey Union.—Richard L. Stokes, M.R.C.S., L.R.C.P., to the Third District.

Daventry Union.—George Harday, M.R.C.S., L.S.A., to the Sixth District.

Manchester Township.—George H. Jackson, M.R.C.S. Eng., L.R.C.P. Edin., as Assistant Resident Medical Officer at the Workhouse Hospital.

North Bierley Union.—Wm. L. Hunter, B.M. and M.C. Dub., to the Third District.

Southam Union.—Thos. Elkington, M.R.C.S. Eng., L.R.C.P. Edin., to the Priors Marston District.

Tamworth Union.—Wm. H. Johnston, B.M. and M.C. Dub., to the Clifton District.

Thrapston Union.—Joseph Bird, L.F.P.&S. Glasg., to the B District.

Royal College of Physicians, Edinburgh.—At a special meeting of the Court of Examiners on the 24th inst., Mr. Thomas Wilson, M.R.C.S. Eng. 1865, having undergone the necessary examinations, was admitted a Licentiate of the College.

Caution respecting Pilocarpin.—M. Duchenne relates a case in which symptoms of poisoning were produced by an exceedingly slight dose of pilocarpin. Of a solution formed of 20 centigrammes (about three grains) of pilocarpin in 200 grammes (about fifty drachms) of water, eight drops were injected, and some hours after a second dose of five drops was employed with the effect of producing the symptoms in question.—*Gaz. Hebd.*, July 19.

Ligatures from Sinew of the Whale.—T. N. Ishiguro (Field-Surgeon, Imperial Japanese Army) states, through Prof. Gross, that, owing to the costliness of the catgut ligature, he wishes to introduce a ligature made of the tendon of the whale beaten up into very fine fibres. It is generally made a metre long, and weighs about 1·8 decigramme or three grains; and although it is as fine as the ordinary silk ligature, it is capable of sustaining 1940 grammes, or 4 lbs. 4 oz. When kept in a wound a week or ten days it is found softened and nearly dissolved. It may be used as the ordinary ligature, and the trials which Dr. Ishiguro has made of it have proved very satisfactory.—*Amer. Jour. of Med. Science*, April. [As an example of the general diffusion which is practicable in our day, we may state that this ligature may be procured of Ichizayemon M. Iwashiya, Honcho, Sanchomé, Tokio, Japan.]

Cinchonia as an Antiperiodic and Tonic.—The advantages of this are, Dr. Ashhurst states, its efficacy, tastelessness, and cheapness, its cost being a sixth less than that of quinia. For children and those persons who object to the bitterness of quinia, it is especially useful; but its insolubility gives it a tendency to remain in the mouth and cling to the teeth, so that eventually, by becoming gradually dissolved in the salivary fluid, bitterness is produced. This may be prevented by adding various substances, of which Dr. Ashhurst prefers sugar of milk. Thus, a powder containing one grain of cinchonia, four grains of sugar of milk, and a tenth of a grain of bicarbonate of soda, possesses only the slightly sweet taste of sugar of milk, and is readily miscible in water or milk, or can easily be swallowed dry. The same doses of cinchonia may be prescribed as of quinia.—*Amer. Jour. of Med. Science*, April.

Pass Examinations.—The following were the questions on Surgical Anatomy and the Principles and Practice of Surgery, and on the Principles and Practice of Medicine, respectively, which were on the 19th and 20th inst. submitted to the 196 candidates now undergoing their examinations for the diploma of membership of the Royal College of Surgeons:—Surgery: 1. Describe the operation of tying the common carotid artery below the omo-hyoid muscle. State how the collateral circulation will be subsequently carried on. 2. Describe the operation for the removal of the head of the humerus. Enumerate in their order the

parts divided in that operation. What vessels will probably require a ligature?—3. What is the state of the pulse in the following conditions? (*a*) Compression of the brain; (*b*) acute peritonitis; (*c*) delirium tremens; (*d*) recurrent hæmorrhage; (*e*) senile gangrene. Give an explanation of the characters of the pulse in each case. 4. What difficulties and complications may occur in, and follow after, the treatment of organic stricture of the urethra by gradual dilatation? How are they to be treated? 5. Trace the pathological changes which occur in a case of hip-joint disease, from its commencement to its termination in spontaneous cure. 6. Describe the different tumours to which the eyelids are liable, and their treatment. Medicine: 1. What are the morbid conditions that induce hypertrophy of the heart? How is the affection recognised, and what are the indications for treatment? 2. Describe an attack of gout; state the pathology of the disease, and give the morbid conditions of internal organs and tissues occurring in gouty subjects. 3. Write a prescription, in full, for an adult affected with pneumonia in the stage of consolidation; and state the medicinal plants of the order *Leguminosæ*, with the pharmacopœial preparations in which they are employed.

Medical Women and the Philadelphia Obstetrical Society.—"Every once in a while we are compelled to chronicle the fall of another medical stronghold before the assaults of the women-doctors. The last battle-field has been our Obstetrical Society; but the results of the conflict are as yet not plainly apparent. It seems at first sight a little glaring that the female physicians, the necessity for whose existence is the asserted impropriety and indelicacy of male attendance upon the conditions and diseases peculiar to women, should strive to enter, as members, a society like the Obstetrical, whose end and aim is the perfecting of male physicians for such duties—their membership, if effected, of necessity implying a surrender of all such opinions, and a hearty approval of the efforts of the male members to gain a deeper insight into this disputed speciality. Had a desperate effort been made to storm the camp, drive the male intruders off the field, and secure the time-honoured Society, its charter, by-laws, and treasury, to themselves, it would have been more consistent. The friends of their admission, believing that the by-laws rendered women ineligible, offered an amendment inserting the word 'female,' which was, however, defeated. The opponents then proposed to insert the word 'male,' so that in future there could be no ambiguity or shadow of doubt; but this was also defeated; and finally, on the proposal of the name of an eminent female practitioner of this city, she failed to be elected. The state of the case at present seems about this: A majority of the Society are in favour of not making women plainly eligible. A majority are in favour of not making males alone plainly eligible. A majority are in favour of not admitting a female physician to membership whose ability is unquestioned, and whose character is spotless. From the above, let some skilful logician declare the real opinion of the Society. We should say, if it were not rude, that this eminent body is still waiting and watching to see which way the wind blows, although hosts of straws have been driving in one direction for at least ten years."—*Philadelphia Med. Times*, May.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dentist.—We have the best authority for saying that there is no foundation for the statement published in the *Monthly Review of Dental Surgery*, as to a patient having died whilst under the influence of an anæsthetic administered by a member of our profession practising dental surgery. We should be sorry to say that there was no patient; but there certainly was no death, and, as far as we know, no anæsthetic.

Mortality, India.—The number of deaths in the North-West Province of India in April last reached the high number of 157,326; the total in the corresponding month of 1877 was 78,408.

A New Asylum for the Borough of Hull.—It is proposed to purchase the De la Pole Farm, near Cottingham, on which to erect the new Asylum. It comprises seventy-four acres and a half of land, and the estimated cost, including the new buildings, is between £12,000 and £13,000. The Commissioners in Lunacy have approved of the site.

A Public Park for Wolverhampton.—The terms of a lease of fifty acres of land, in the vicinity of the race-course, for a public park for Wolverhampton, from the Duke of Cleveland to the Corporation, have been arranged. The land is to be held for sixty-three years, upon an annual rental of £300 for the first forty-two years, and £350 for the residue of the term. The Corporation has the right to purchase the fee-simple for £20,000 at the end of the term, upon giving a year's notice.

An Offensive Trade.—The Metropolitan Board of Works have made an order, under the provisions of the Slaughter-houses, etc. (Metropolis) Act, 1874, confirmed by the Local Government Board, declaring the business of a fat melter or fat extractor, "that is to say, any business in which fat is melted, rendered, extracted from any material, or re-melted," to be an offensive business.

Query, Over-cautious.—The Stepney Board of Guardians have lately had before them the case of a woman—the mother, it was stated, of six children—who had been certified by three doctors to be insane, but was refused admission to an asylum, the magistrate declining to certify to her insanity. It was understood that she had attempted suicide, and it was apprehended that dangerous consequences might ensue if she was permitted to have her liberty. The Clerk informed the Guardians that, having brought before the magistrate the doctors' certificates, and he having refused to act upon them, they had performed their duty in the matter. It was decided, after some consideration, to allow the woman to remain in the workhouse for the present, and that the attention of the magistrate should be again called to the case. Meanwhile, the opinion of the three doctors is, at least, superseded by the magistrate's decision; but surely, under the circumstances, a serious responsibility is thereby incurred.

The Cabdrivers' Benevolent Association.—From the eighth annual report of this Association we find that the financial position of the Society had materially improved; but it appears that the cabdrivers had contributed but little to the present prosperous condition of its affairs. The capital was now upwards of £3000. Only about one thousand men, or less than one-tenth of the London cabmen, were members. A widows' and orphans' relief fund in connexion with the Association has just been inaugurated. The objects of the Society having been approved and supported by the public, we hope cabmen will appreciate this benevolence, and feel there is some obligation on their part to aid, by their subscriptions, in extending the benefits awarded by it to the deserving of their class.

Swimming for Girls.—Athletic feats are becoming, it appears, more and more popular, and partaking somewhat of novel forms. The National Health Society has offered for three years to the female pupils of the London Schools Swimming Club five prizes of the value of 5s. each, two prizes of 10s. each, and one prize of 15s. There must be fifty competitors, and the prizes will be awarded upon conditions to be arranged by the Committee of the Club. Other prizes for female swimming are offered by the Club.

Eastern Counties Asylum for Idiots, Colchester.—Mr. J. F. Bishop, the Chairman of the House Committee, and the Finance Manager of the Asylum, has generously undertaken to defray the expenses of building a new secretary's offices, board-room, etc., upon the grounds of the Asylum, at a cost of £500.

The Sanitary Condition of Lowestoft.—Dr. Edward Jeffery, the Medical Officer of Health to the Urban Sanitary Authority, reports the town to be in an exceptionally favourable sanitary condition. The death-rate for the past quarter was only 10·77, the lowest for five years. There is no case of zymotic disease in the whole district that he is aware of.

The Army Hospital Corps, Aldershot.—Last week two distinguished officers of the Austrian Medical Department visited the hospitals, canteens, sergeants' messes, etc., at Aldershot, and saw the Army Hospital Corps perform the duties of bearers, and apply the "first dressing" to wounded men on the battle-field. Before leaving they expressed their high approval of the various details of the organisation.

Adulterated Drugs.—The *Liverpool Albion* says:—"There is a point in the County Analyst's report which was read at the recent Preston Sessions, that deserves serious attention. It appears that only two samples of drugs had been analysed, but these were 'entirely wanting of the principal ingredients.' Now, if the milk-dealer who waters his milk, the grocer who waters his butter or puts chicory in his coffee, or the brewer who puts a little extra salt in his beer, deserves to be fined, surely the apothecary who falsifies a prescription deserves hanging at the very least! The crime is one of the basest and most serious that can be conceived, as it may render abortive the skill of the most experienced physician, and dash the brightest hopes of the invalid. We trust, therefore, that whilst not forgetting either the grocer, the publican, or the milk-dealer, the authorities will above all keep watch upon that sinner above all sinners—the adulterating apothecary."

Medicus.—Sir Anthony Home, K.C.B., V.C., will receive the local rank of Surgeon-General while serving as Chief Medical Officer, at Cyprus. Surgeon-Major Jackson and Surgeon Bennett are the only other medical officers sent out from England to Cyprus, the rest of the medical staff being at present drawn from Malta. The establishment of an army hospital corps sufficient for three station-hospitals is being forwarded from England.

Sympathiser.—The concert at Stafford House, on the 17th inst., produced £300 for the hospitals at Gallipoli.

In Memoriam.—At a meeting, held last week, of friends of the late Dr. Wilson, of Pocklington, to consider what form the memorial to him should take, it was resolved to erect a "cottage hospital" as a suitable *memento*. It was announced that for this object £130 had already been guaranteed, which was accepted, and a committee appointed to receive subscriptions.

The South Stockton Local Board and their Medical Officer.—At the meeting of this Sanitary Authority, on the 16th inst., a communication was read from the Local Government Board as to the re-appointment of Mr. Joseph Laidler, District Medical Officer of the Middlesborough Union, as Medical Officer of Health for this Sanitary District. The Board, under all the circumstances, did not offer any objection to Mr. Laidler acting as Medical Officer of Health for the district until March 25 next. They, however, requested that, prior to the expiration of the period for which they had now sanctioned his re-appointment, the Sanitary Authority would take again into their consideration the propriety of appointing as the Medical Officer of Health for the district the person who holds that office for the Rural Sanitary District of the Middlesborough Union and the Middlesborough Urban Sanitary District. An opinion of the Local Authority in respect to Mr. Laidler's appointment appeared to be that the Local Government Board wished to introduce their centralisation scheme, but it nevertheless seemed unfair that because they (the Local Authority) declined to agree to the scheme proposed, the Board should withhold the grant of one-half of the salary, which they undoubtedly would.

COMMUNICATIONS have been received from—

Dr. John Sullivan, London; Dr. James Ross, Manchester; Mr. John Chatto, London; Dr. J. M. Bruce, London; Mr. T. M. Stone, London; Dr. F. Churchill, London.

BOOKS AND PAMPHLETS RECEIVED—

James Sanderson, The History of Drink—Dr. Hermann Beigel, Pathologische Anatomie der Weiblichen Unfruchtbarkeit (Sterilität) Deren Mechanik und Behandlung—William Goodell, A.M., M.D., A Case of Vaginal Ovariotomy—William Allen Miller, M.D., Elements of Chemistry; part 2, Inorganic Chemistry—J. Marion Sims, M.D., Cholecystotomy for the Removal of Gall-Stones in Dropsy of the Gall-Bladder—Report on Provident Dispensaries—Brief, vol. i.—Surgeon-Major W. E. Riordan, Heart Disease and Aneurism in the Army—Alfred Hill, M.D., Report on the Health of the Borough of Birmingham for 1877.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médicale—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Nature—Philadelphia Medical Times—Cincinnati Clinic—Medical Examiner—Centralblatt für Gynäkologie—New York Medical Record—West Middlesex Advertiser—Centralblatt für die Medicinischen Wissenschaften—Cincinnati Lancet and Clinic—Home Chronicler—Richmond and Louisville Medical Journal—American Practitioner—Students' Journal.

APPOINTMENTS FOR THE WEEK.

July 27. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

29. Monday.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

30. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

31. Wednesday.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 1½ p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

August 1. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

2. Friday.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

Quekett Microscopical Club, 8 p.m. Annual Meeting.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 20, 1878.

BIRTHS.

Births of Boys, 1210; Girls, 1154; Total, 2364.
Average of 10 corresponding years 1868-77, 2203·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	913	874	1787
Average of the ten years 1868-77	819·5	735·7	1555·2
Average corrected to increased population ...	...	...	1664
Deaths of people aged 80 and upwards ...	...	...	47

Note.—The births and deaths registered last week may be compared with the average numbers in the corresponding weeks of the ten years 1868-77 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	2	6	1	1	16	1	4	...	59
North ...	751729	3	1	9	3	29	1	3	...	91
Central ...	334369	...	1	1	1	10	...	2	...	25
East	639111	2	1	2	1	20	1	2	...	70
South	967692	12	4	8	2	31	...	4	1	94
Total	3254260	19	13	21	8	106	3	15	1	339

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·053 in.
Mean temperature	66·8°
Highest point of thermometer	84·6°
Lowest point of thermometer	49·2°
Mean dew-point temperature	56·8°
General direction of wind	N.
Whole amount of rain in the week	0·00 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, July 20, 1878, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1878.*	Persons to an Acre. (1878.)	Births Registered during the week ending July 20.	Deaths Registered during the week ending July 20.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3577304	47·5	2364	1787	84·6	49·2	66·8	19·34	0·00	0·00
Brighton	103923	44·1	58	36	80·2	52·0	64·6	18·12	0·00	0·00
Portsmouth ...	129461	28·9	67	54	...	...	...	...	...	...
Norwich	84620	11·3	51	35	83·5	52·0	65·1	18·39	0·00	0·00
Plymouth	73599	52·8	42	32	81·0	54·5	64·4	18·00	0·00	0·00
Bristol	206419	46·4	162	75	84·3	46·8	65·0	18·33	0·00	0·00
Wolverhampton ...	74240	21·9	60	32	82·0	50·5	61·8	16·56	0·00	0·00
Birmingham ...	383117	45·6	317	166	...	...	...	...	...	...
Leicester	121473	38·0	89	63	86·5	51·8	64·8	18·23	0·00	0·00
Nottingham ...	165267	16·6	113	68	86·2	48·9	63·7	17·61	0·00	0·00
Liverpool	532681	102·2	346	290	...	...	...	...	...	...
Manchester ...	360514	84·0	262	206	...	...	...	...	...	...
Salford	170251	32·9	161	79	89·1	52·1	63·8	17·67	0·02	0·05
Oldham	107366	23·0	74	47	...	...	...	...	...	...
Bradford	185088	25·6	112	52	89·6	54·2	66·5	19·17	0·00	0·00
Leeds	304948	14·1	270	131	86·0	56·0	67·3	19·61	0·00	0·00
Sheffield	289537	14·7	201	150	85·0	54·0	66·4	19·11	0·00	0·00
Hull	143139	39·4	108	72	86·0	48·0	65·0	18·33	0·00	0·00
Sunderland ...	112459	34·0	94	75	55·0	50·0	67·9	19·94	0·00	0·00
Newcastle-on-Tyne	144570	26·9	112	58	...	...	...	...	...	...
Edinburgh	222371	53·1	160	85	83·7	51·0	65·2	18·44	0·00	0·00
Glasgow	566940	94·0	405	311	77·0	50·0	62·3	16·84	0·00	0·00
Dublin	314666	31·3	183	141	79·1	52·8	66·1	18·95	0·01	0·03
Total of 23 Towns in United Kingdom	8373953	37·9	5811	4045	90·0	46·8	65·1	18·39	0·00	0·00

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 30·05 in. The lowest reading was 29·86 in. at the beginning of the week, and the highest 30·17 in. on Thursday morning.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1878 by the addition of seven years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. Nottingham, Salford, and Oldham, however, form exceptions to this rule, as the estimates for these three towns have been revised with the aid of local information as to the rate of increase of inhabited houses. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

BY HER MAJESTY'S ROYAL LETTERS PATENT
AND BY SPECIAL APPOINTMENT TO HER MAJESTY
AND THE ROYAL FAMILY
THE EMPRESSES OF RUSSIA & FRANCE &c. &c.

JOHN WARD

5 & 6, LEICESTER-SQUARE, LONDON.

No. 12, Ward's Patent Albert Lounging Chair, the most simple and luxurious extant, is fitted for the Drawing Room, Boudoir, Cabin, or Camp; is made in Wood, Iron, or Brass, and folds into a small compass for shipment. From 4½ Guineas.

No. 17, a Four-wheel Victoria Pleasure-ground Chair, mounted in a very light Iron-framed Carriage upon C and patent India-rubber Springs, is either drawn by Hand or Animal, and is the most elegant and easiest Chair made.

No. 16, a ditto, upon three wheels, mounted same as four wheels, on C and India-rubber Springs.

No. 9, a Bath Chair, with Leather Head, and Folding German Shutter.

No. 18, a Sofa Britska Spinal Carriage with the inside Tray made to take out and in, on which an invalid may be taken from her room to the carriage.

No. 24, Ward's Improved Child's Perambulator, with Patent Parasol. A variety always on hand.

Nos. 10, 10, Sketch of Earl's General Invalid Couch or Bed, made with or without a Convenience; it adjusts the back seat and legs to any given position by means of machinery, and is recommended by the Faculty as being the most complete Bed ever made for confirmed Invalids, or for Fractured Limbs.

No. 11 is Ward's Patent Reclining Chair, with Shifting Elbows for more easily getting on and off the Chair when the leg-rest is drawn out, as shown in the drawing.

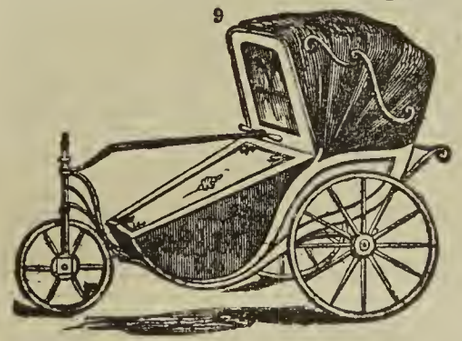
No. 7 is an elegant Patent Recumbent Chair.

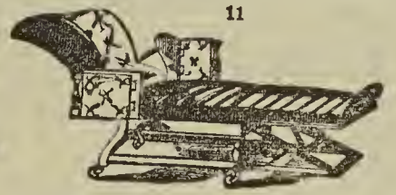
Nos. 13, 13 is a Couch-Chair or Bed invented by Dr. Hester, and may be placed in any position by the Invalid without the assistance of a second person.

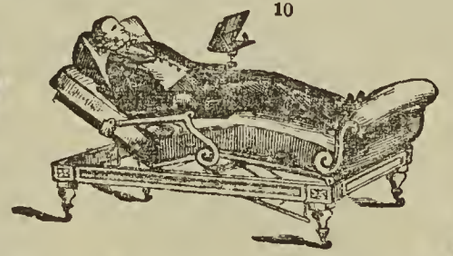
Nos. 2, 3, 4, and 5 are all Self-Propelling Chairs, upon the best and most scientific principles; either may be used by a child eight years of age with perfect ease.

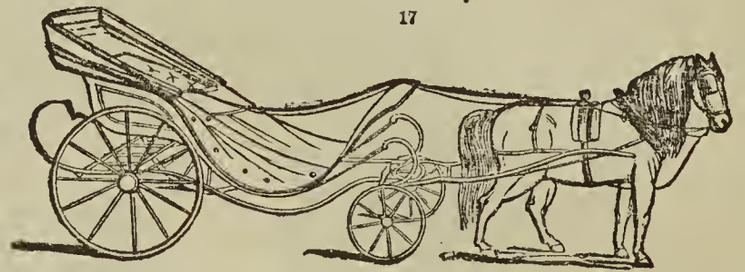
No. 14 is the simplest and best-constructed Chair for carrying invalids up and down stairs, the lower handles for level ground, the upper ones for ascending or descending a staircase: the sketch conveys the exact idea; it is also made portable for travelling. Several other kinds are always in stock, upon various principles.

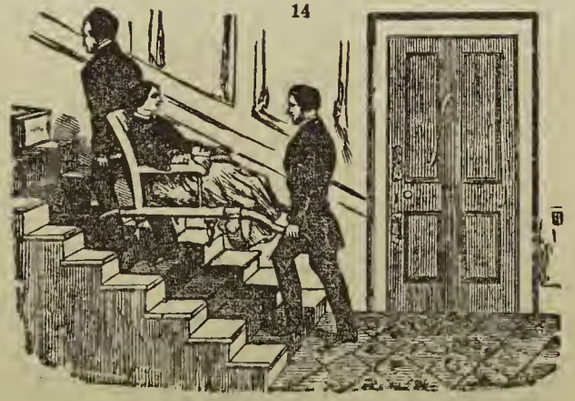
N.B.—The largest assortment in the World of INVALID CHAIRS, CARRIAGES, CRUTCHES, and BEDS, always on hand, for Sale or Hire. Established more than a century.

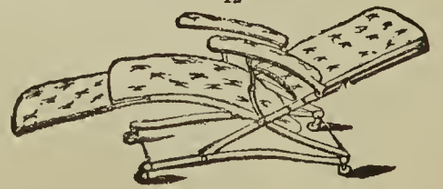


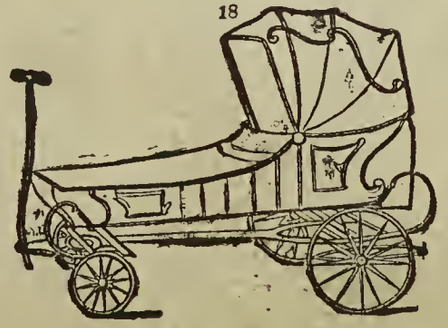


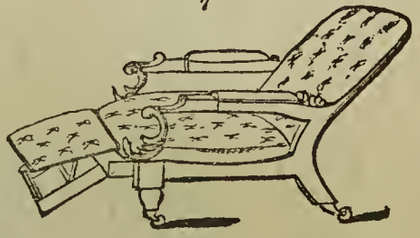


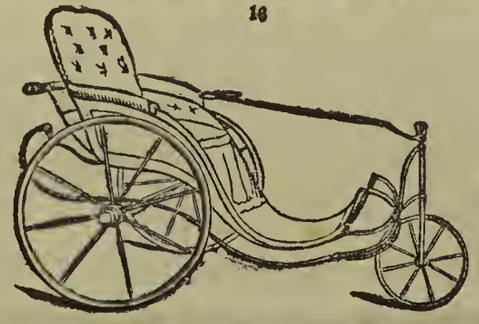


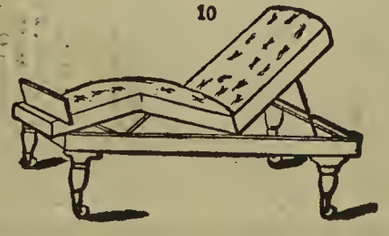


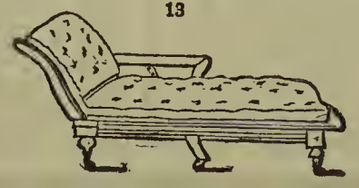


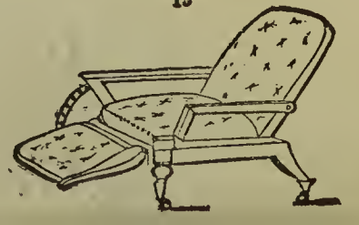












ORIGINAL LECTURES.

CLINICAL REMARKS

ON THE INFLUENCE OF HABITS OF LIFE ON THE PRODUCTION OF LARYNGITIS.

DELIVERED AT ST. GEORGE'S HOSPITAL.

By T. WHIPHAM, M.B.,
Physician to the Hospital, and in charge of the Department for Diseases of the Throat.

The old Latin proverb, *Quisque suæ fortunæ faber*, is perhaps rarely more notably exemplified in medical practice than in affections of the throat. In the majority of the cases the causes on which the laryngitis depends may be traced to the habits of the life of the individual—causes, that is, which are incidental to various callings and occupations. The inflammatory processes thus excited may be to a certain extent acute in their onset; but eventually, the cause being ever present, become chronic.

We have almost daily under our notice, both in the wards of the Hospital and in the out-patient department for diseases of the throat, cases which amply demonstrate this fact.

Let me to-day bring under your notice a few of the more prominent occupations which are productive of the disease in question. And in so doing I shall call your attention to those which we have constantly under observation in hospital practice, and also to others which you will in time be called upon to treat as medical practitioners.

We have during the past few months had under observation in the Throat Department several men who describe themselves as hawkers, or costermongers, suffering from laryngitis of a chronic form—men who, in the pursuit of their calling, are exposed to all the vicissitudes of a climate such as that of England in the winter and spring. During these months the sudden changes which occur in the temperature are extremely conducive to catarrhal affections generally; and, consequently, the number of persons affected with laryngitis is proportionately large. Moreover, the exposure to prolonged action of cold—at all times an efficient cause of laryngitis—which the life of the costermonger entails, renders him especially liable to inflammation of the laryngeal mucous membrane. But the costermonger is a person who runs equal risks of laryngitis from causes of his own seeking. He is not always a man of strictly temperate habits; on the contrary, he too frequently indulges freely in alcohol, and, as is the custom with men in that rank of life, often drinks the spirit undiluted. Alcohol, thus habitually consumed, produces a state of hyperæmia of the mucous membrane of the mouth, fauces, and pharynx; and the chronic congestion, thus set up, gradually, and often speedily, extends downwards, until the larynx itself is involved, and this even in persons who are not of necessity exposed to other conditions equally efficacious in the production of laryngitis.

The costermonger, then, as we have seen, pursues his calling in all weathers, and the laryngitis excited by his exposure to cold or sudden changes of temperature is aggravated by the irritating action of alcohol on his mucous membrane. He is, however, still more unfortunate, in that in his case another cause of laryngitis prevails—viz., the mechanical irritation of his upper respiratory passages due to constant shouting. Prolonged and frequently repeated elevation of the voice, as in the present instance, or in the case of commissioned or non-commissioned officers in the army, who are compelled to give the word of command in a loud tone, owing to the excessive friction caused by the increased speed at which the air is forced through the glottis, frequently excites inflammation of the mucous membrane more immediately in contact with it. Not only so, but the forced and deep inspiration, which is rendered necessary by a prolonged sustention of a street-call, is performed through the mouth, the nasal passages, with their specially adapted warming surfaces, not being sufficiently capacious for the admission of the volume of air required for the function of overstrained respiration; and thus air cold, damp, and perhaps charged with irritating vapours, impinges directly upon the larynx. In this manner such persons are exposed to a fourth duly recognised cause of laryngitis.

Laryngitis originating in increased friction may be only transitory, of which we have a familiar example among schoolboys who have indulged in cheering on festive occasions: in their case the huskiness or complete aphonia which results is in part due to the hyperæmia of the mucous membrane, and in part to nervous exhaustion and consequent temporary paralysis of the laryngeal muscles.

The military officer, it is true, is exposed to risks in many respects similar to those which occur to the costermonger (though, in the case of the former, alcohol does not, doubtless, play so important a part), yet, as a rule, he suffers less from throat affections. The explanation is not far to seek. In the case of the soldier, the hours of work in such portions of his duties as are liable to affect the vocal apparatus are far shorter than those of the itinerant hawker, who not unfrequently passes the greater part of the day in vociferous advertisement of his goods. Laryngeal hyperæmia, induced in either case, subsides during the long interval of rest, so far as his voice is concerned, which the soldier enjoys between the hours fixed for parade—the hyperæmia is transitory; whereas, in the hawker the cause is in operation for many hours in succession, and the effects are precisely in proportion—the period of rest for his voice is shorter, and his liability to chronic laryngitis greater. There are other reasons, too, for the comparative immunity of the soldier, viz., that he lives under more favourable hygienic conditions, he is better lodged, better clothed, and probably better fed.

Many other vocations in life which expose their followers to danger of similar inflammatory affections of the upper air-passages might be mentioned—for instance, those of cabmen, watchmen, police-constables. In the first two of these occupations I cannot but think that the main cause of disease is intemperance in spirits, etc. The fat, bloated, husky cabman is a prominent figure in all cities; and the morning charge-sheet at the police-court but too frequently bears out my assertion. In the police force intemperance is, and justly so, one of the gravest offences, and proportionately punished; moreover, the constables, as a body, are men whose moral character has been, and is, a matter of constant investigation; at any rate, they are, so far as I know, a remarkably temperate class, and it is to this fact that I attribute their escape from such effects of exposure as have been described.

The potman at the public-house, and not unfrequently his master the publican, and the brewer's drayman, are all familiar examples of this effect of alcohol on the mucous membrane of the mouth, pharynx, and larynx. The thick, husky voice too often tells a tale of an imperial pint, or perhaps more, of ardent spirit, or, in the case of the drayman, eighteen to twenty pints of beer, in the day. With the development of other diseases resulting from abuse of alcohol the dangers of laryngitis are greatly increased, the most formidable of which is the œdema of the larynx, which is so commonly a symptom of renal disease.

Another habit of life which is a very prevalent cause of laryngitis, at first possibly of an acute form, but subsequently—either owing to repeated attacks or neglect of the "slight cold" with which it commenced—becoming chronic, is that of the close confinement to one room during the greater part of the day. Niemeyer has pointed out the fact that persons living in towns are more liable to laryngitis than those who dwell in the country. The ordinary avocations of men of business in large cities compel them to pass many hours, if not the whole day, in a warm office often imperfectly ventilated, or in the stuffy atmosphere of a shop or warehouse. In such cases two causes are combined in setting up the malady in question. In the first place the rooms, offices, or shops are usually kept at a high temperature, in order that their occupants may not feel the cold. A life, one half of which is spent in an overheated, ill-ventilated room, is in itself bad, but its evil effects might perhaps be productive of few immediately bad results if the person had no necessity for vacating his office or shop save at his own desire, or under favourable conditions of temperature, etc.: in such a case he would become, as it were, acclimatised. Lawyers, merchants, warehousemen, etc., however, rarely reside in the houses where their business confines them during the day, and the dangers with which they have to contend are those which arise on their way home after the work of the day is finished. They leave their hot apartments in the evening, when, during many weeks of the year, the sun has set, and the air is raw, cold, damp, smoky, etc.; they are in all probability tired and exhausted with toil, often both mental and bodily; they are, moreover, not improbably ill-nourished

and weak—the result of the enervating effects of the excessive heat and foul air in which they have for many years existed. Sir Thomas Watson remarks that "among the circumstances which favour the morbific effects of cold and relate to the condition of the body itself, is to be included whatever has the effect of weakening the system and so diminishing the capability of evolving heat." It would be difficult to imagine circumstances to which these observations could be more applicable than to the case in point. A man who is daily engaged in work which is necessarily carried on in close rooms, may, it is true, become acclimatised; but in what does his acclimatisation exist? It in reality means that he has gradually accustomed himself to dispense with that fresh air and exercise which are absolutely necessary for the proper performance of their functions by the different parts of the human body. He continues for a time in the enjoyment of fair health. But, sooner or later, dyspepsia, with its attendant train of miseries, asserts its sway; and with failing circulation, and gradual loss of physical strength, he sinks into a state of debility, in consequence of which he is unable to withstand sudden or great changes, whether domestic or climatic. A slight indiscretion in diet sets up gastro-intestinal disturbance, by which a person living under proper hygienic rules would be entirely unaffected. An almost inappreciable variation in temperature produces, possibly, a severe catarrh. "The vigour," to quote Sir Thomas Watson once more, "of his circulation is diminished, and he has lost the power of generating heat."

In confirmation of the above observations may be adduced the great immunity from the evil effects of cold which is enjoyed by those who follow active pursuits in the country. It is somewhat remarkable how rarely laryngitis is heard of among farmers or their labourers, the nature of whose occupations exposes them continually to cold and changes of temperature. Doubtless they do not entirely escape; but, as a rule, the activity of their lives insures to them that good health which renders a man in the prime of life—the period, that is, at which the closely-confined City drudge begins to fail—proof even against extremes of temperature or sudden variations of heat and cold.

We have lately had under observation in the out-patient room several cases of laryngitis occurring in laundresses. In their case the cause of the affection is, to a certain extent, identical with that above-mentioned as producing the disease among business men, viz., confinement for many consecutive hours in overheated apartments, and subsequent exposure to draught, a much lower temperature, etc. In addition to being overheated, the air of the rooms in which these women work is, as a rule, saturated with aqueous vapour arising from the damp linen. Now, the constant inhalation of moist warm air produces on the laryngeal mucous membrane effects very similar to those of a wet compress, or poultice, or a hot bath on the skin. Heat alone causes dilatation of the superficial vessels, and when combined with moisture has a still greater influence in relaxing the vascular walls; the result of which is, that the mucous and submucous tissues become sodden from serous effusion. Now, laundresses aggravate these existing evils by the incessant conversation by means of which they seek to relieve the monotony of their labour; and still more so by the habit of gin-drinking, which so many of them contract. It is, I think, probable that if they could be induced to avoid the two latter vices, the effects of the former would be far less injurious. At the same time, the steamy heat incidental to their calling is, in many cases doubtless, the sole cause of the throat affection, and of this we have now under treatment in the department for diseases of the throat a marked example in the person of a girl of seventeen, who is otherwise in good health. She commenced work in her sister's laundry in the suburbs when very young, but until lately appears to have suffered no harm. About four months ago she became hoarse, and in a short time quite aphonic. When she came under observation there existed a generally congested and sodden appearance of the larynx generally, and of the vocal cords especially; she was in consequence advised to relinquish her occupation for a time. Difficulties arose with the sister in carrying out this advice, and in spite of tonics administered internally, and the local applications of astringents, but little improvement took place. Eventually she was sent into the country, and the laryngeal troubles speedily disappeared. On her return home she resumed her laundry work, and in three or four weeks the throat symptoms recurred, for which she is again under treatment.

Persons in whom the voice is subjected to prolonged strain—as, for example, clergymen, or those who are engaged for many hours of the day in tuition—are especially liable to an affection of the throat of a chronic and frequently very intractable form, unless absolute rest can be secured to the parts. The disease is essentially chronic (Mackenzie), is at its onset a glandular inflammation, and remains limited to the glands for a considerable period. It may and often does, more especially if the sufferer be subjected to any of the ordinary causes of acute laryngitis, become complicated by a more active form of inflammation. Clergymen are frequently exposed to such risks, not only in the pursuit of their ordinary parochial duties, but also in having to read the burial service at the open grave—often a most trying ordeal in the winter months. It is this constant exercise of the voice, frequently under adverse circumstances, which produces the so-called "clergyman's sore throat." In consequence of the inordinate demands on their capabilities, the glands of the fauces and larynx are stimulated to increased action in order that the mucous membrane may be maintained in its normally moist condition; and for a time which varies in different individuals, and depends in a great measure upon their state of health, the supply furnished by the glands is equal to the demand; but in the end, in debilitated constitutions chiefly, the organs become inflamed, and their secretion altered in character; instead of being clear and colourless, it becomes opaque and viscid. In order to remove those unhealthy products the patient contracts the habit of "scraping his throat," and thus increases the morbid action of already inflamed tissues.

The immunity from this form of laryngitis enjoyed by members of the bar is at first sight somewhat remarkable. It admits, however, of the following explanation:—In the case of barristers the strain upon the vocal apparatus is less prolonged than among clergymen and teachers. Doubtless the barrister is frequently called upon to deliver a long oration, but the necessity for long speeches is in his profession of exceptional occurrence, and the intervals between these excessive demands on his vocal powers are wide. Short speeches, on the other hand, do not excite any functional derangement or inflammation of the glands. It cannot be denied, however, that dryness of the throat and huskiness of the voice often follow a speech in court, even of moderate length, precisely as in the case of lecturers, owing to the active hyperæmia and consequent arrest of the secretions of the mucous glands; but in such cases the evil effects speedily subside on the removal of the cause. As a rule, among barristers and lecturers a considerable time elapses between these demands on their vocal powers, and in that time the larynx recovers its healthy state. The case is widely different in the case of the clergy, whose daily occupations necessitate a constant and prolonged exercise of the voice, and that often under very disadvantageous circumstances, as, for instance, early morning service performed in a cold, damp church, or one in which acoustic principles have either been neglected or ignored.

Any undue strain on the laryngeal muscles, as has been already mentioned in the case of hoarseness due to shouting, is productive of laryngitis, which may become more or less chronic, or may render the patient liable to frequent relapses. This often happens in persons who are in the habit of singing, and especially in those who possess tenor voices. In them two causes combine to produce the evil in question. First, the constant practice necessary for the perfection of their art, by increased friction, causes hyperæmia of the larnygeal mucous membrane, which may go on to inflammation of the submucous tissues. Secondly, nervous exhaustion ensues, in consequence of which muscular activity is diminished or co-ordination is impaired. The result of the two is a subacute and often recurring laryngitis—a serious ailment in a profession in which clearness of phonation is of paramount importance—rather than a chronic malady; for if it were so the hoarseness of voice would be more or less permanent, and the vocalist would thus be totally incapacitated from pursuing his vocation. I lately had under my care a young lady, who had been selected for an opera singer on account of a singularly clear and powerful voice, and who, by indefatigable practice, had become afflicted with laryngitis. Instead of allowing her to desist from her efforts for a time, her instructors disregarded an occasional inability

to attain the full compass of her voice, and urged her by practice to overcome the weakness, as they termed it, of her voice. The result was, as might have been expected, that in a short time her voice became husky, hoarse, and finally failed altogether. Laryngoscopic examination revealed acute hyperæmia of the laryngeal mucous membrane, together with much swelling of the ventricular bands and vocal cords. Under absolute rest and appropriate treatment the redness and swelling rapidly subsided, and when I last saw her the voice was steadily regaining its natural compass.

Cases of laryngitis due to irritation of dust, which have of late occurred in the out-patient room in the persons of builders, labourers, carpet-beaters, etc., furnish other examples of the influence of habits of life or occupations on the production of throat disease. Time, however, forbids more than this passing allusion to them.

Important points in the treatment of laryngitis were discussed in my last lecture; it remains, therefore, merely to state definitely what has already been hinted at in the foregoing remarks, viz., the obvious necessity for absolute rest when the disease is the result of constant irritation, as in clergymen, tutors, singers, etc. Cessation from their duties, and change of air at some bracing place by the seaside for a period, is often in itself sufficient for the recovery of the patient; such favourable results, however, are not always met with; on the contrary, the inflammation of the glands frequently persists for a long time, in spite of treatment. Of the various remedies ordinarily prescribed in such cases, perhaps none surpass the local application of nitrate of silver (℈j.—ʒj. ad ℥j.) as recommended by Mr. Porter in his treatise on the Larynx and Trachea, and subsequently, as the mucous membrane recovers its normal appearance, that of astringents, either in the atomised form or by means of the laryngeal brush.

The treatment of laryngitis in those suffering from the effects of close confinement is in many respects similar. Change into fresh air and regular exercise each day will usually restore the patient to health, and not unfrequently so after tonics internally and applications locally to the larynx have entirely failed so long as he continued his daily routine of work.

In the case of those who have not the means to resort to the seaside much may be effected by avoidance of the cause of their affection, and, above all, by abstinence from drink. Many such cases, however, in which change of air cannot be obtained, are extremely obstinate, and not unfrequently baffle all attempts to relieve them, more especially during the prevalence of cold, east wind, or damp; and it is only with the change to warm and genial weather that the throat symptoms subside.

The laryngitis which occurs among laundresses in very many instances subsides if they absent themselves from their work for a short time, avoiding also other causes of the disease before mentioned as being instrumental in aggravating their troubles. Rest, however, powerful as it is for good in all cases, is in some insufficient for complete restoration of the throat to the state of health, and in such persons the administration of tonics, as quinine, iron, strychnia, with local applications of astringents, usually produces excellent results; and even should symptoms indicative of renal disease be manifest, very slight, if any, modifications of the above are required. Finally, it is in cases where the laryngitis becomes chronic, as in most of those above mentioned, that the efficacy of lozenges is so decided, of which those containing guaiacum, rhatany, gallic acid, benzoic acid, or chlorate of potash, are most useful.

Académie de Médecine.—M. Marc Sée has just been elected into the Section of Anatomy and Physiology by the votes of forty-nine of the seventy-three academicians present. M. Tillaux obtained twenty-four votes.

Monument to Professor Porta, of Pavia.—It is intended to erect in the University of Pavia, by subscription, a monument to the late Prof. Luigi Porta, the most distinguished Italian surgeon of recent times, and so well known by his important work on the arteries. Profs. Corradi, Buccellati, Biffi, Cantoni, Mazzachelli, Quaglino, Scarenzio, and Zoncada, have formed themselves into a committee for this purpose. Subscriptions may be forwarded to Cav. Luigi Gatti, Economo della R. Universita, Pavia.

ORIGINAL COMMUNICATIONS.

CLINICAL STUDY
OF A CASE OF
PROGRESSIVE MUSCULAR ATROPHY,
AFFECTING CHIEFLY THE TRAPEZIUS, RHOMBOIDS, AND LATISSIMUS DORSI.

By CHARLES J. CULLINGWORTH,
Surgeon to St. Mary's Hospital, Manchester.

The patient whose case I am about to describe is a woman of forty-one years, the subject of progressive muscular atrophy. The disease has not affected, as yet, any of the muscles of the upper extremity; the interossei of the hand, the muscles of the ball of the thumb, and the deltoids, which are generally the first to be attacked, have hitherto completely escaped. Again, there is no sign of wasting of any of the muscles of the feet and legs. The flexors and extensors of the thigh, especially the greater glutei, are thin, flaccid, and weak; but the chief brunt of the disease has fallen upon the lower half of the trapezius, the rhomboids, and the latissimus dorsi, which have completely disappeared, with the exception of a small band of fibres passing obliquely upwards on each side from the middle of the posterior border of the scapula to the spine, and forming the only remaining vestige of the greater rhomboids.

The woman was under my care in the out-patient department of the Hospital, on account of some minor ailment, when I first noticed her peculiar movements in walking and sitting. She was subsequently admitted into the wards, for the purpose of more minute and careful observation. The following notes are abridged from my case-book:—

Charlotte A., aged forty-one, admitted into St. Mary's Hospital, Manchester, February 3, 1878. She is married, and has had three living children, all of whom died in infancy. There is no family history of nervous disorder or of impairment of power of locomotion. Her father, an intemperate man, died of chest disease at the age of thirty-six; her mother died in her fiftieth year of heart disease. Of six brothers and sisters, two died in infancy, one from the consequences of her husband's ill-treatment, and three are living in good health.

She worked in a factory from the age of nineteen until five years ago, having had constantly two, and sometimes more, looms under her charge. The nature of her work necessitated the stooping posture, and for some years this had been a painful strain to her. She was a long time in straightening herself when the day's labour was over, and the process was not only difficult but painful. About six years ago, when she was pregnant of her last child, she was suddenly seized with an attack of unconsciousness while at her work; she fell down, and was carried unconscious home. She had other attacks of the same kind both before and after her confinement, and, indeed, had one shortly before her admission. Her husband says that there is absolutely no warning, that she frequently hurts herself in falling, that she foams at the mouth and rolls her eyes, but that there is no violent struggling. It was on account of these fits that her overlooker advised her, for her own safety, to cease work several years ago. She cannot tell exactly when the peculiarity in walking was first noticed, but is certain that she has had difficulty in rising from a chair ever since her last confinement. This difficulty has gradually increased.

She is a thin, sallow-complexioned woman, of average height, and of feeble intellectual power. Her lips become markedly livid on the least exertion or exposure; the whole body is sensitive to cold. There is nothing abnormal in the condition of the thoracic or abdominal viscera.

Examination while Standing.—The head is erect, and movable by the patient in all directions; the shoulders are somewhat higher than usual in a woman; the upper part of the spine is carried backwards more than usual. A plumb-line from the most prominent of the spines of the upper dorsal vertebræ falls an inch behind and away from the sacrum. The knees are very slightly bent; the feet are placed firmly on the ground, with the heels touching, the toes turned outwards and extended naturally. The upper extremities present no appearance of muscular deficiency,

and the deltoids are prominent and well developed. The lower extremities present this anomaly: that while the thighs are thinner, softer, and more flaccid than natural, the calves, on the contrary, are of a size quite out of proportion with the muscular development of the rest of the body. The following measurements were taken:—Circumference of upper arm below pectorals, 9½ in.; forearm at thickest part, 9⅛ in.; middle of thigh, 16 in.; thickest part of calf, 14½ in. It will thus be seen that the circumference of the calf is nearly equal to that of the middle of the thigh.(a) This circumstance gave rise to a suspicion of pseudo-hypertrophy, and a minute portion of muscle was withdrawn from the calf by the muscle-trocar, and kindly examined for me under the microscope by my friend Dr. Dreschfeld. The muscular tissue was not found to have undergone any change.

Fig. 1.

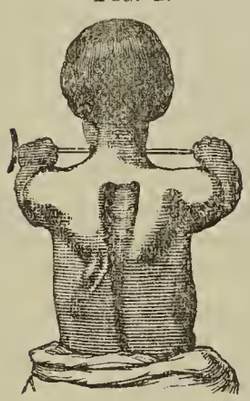
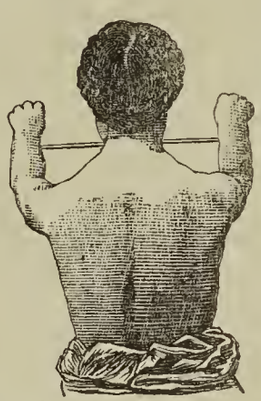


Fig. 2.



(*From photographs.*)

Fig. 1 shows the position assumed by the scapulæ when the arms are extended forwards. There is a deep sulcus between the two bones, the posterior borders of which project two inches from the costal wall. The posterior border of the left scapula is parallel with the median line, having been adjusted by the action of the serratus magnus, whose fibres (passing downwards, outwards, and forwards from the lower angle) are seen contracting beneath a fold of skin. This movement of adjustment has not yet taken place on the right side, where the lower angle of the scapula is nearer the vertebral column, a little higher, and altogether more prominent than on the opposite side, owing to the unopposed action of the deltoid; the serratus magnus, being in a condition of relaxation, is much less noticeable on this (right) side. The transverse fibres of the trapezius, passing from the outer half of the spine of the scapula to the last cervical and first dorsal vertebræ, are well seen; with these fibres the upper and unaffected half of the muscle abruptly terminates.

Fig. 2 shows the appearance of the back when a healthy subject is placed in the same attitude. The scapulæ are applied so closely against the costal wall that, although the person is by no means stout, the outline of the bone is scarcely traceable. The lower angle is in the axillary line.

As the patient stands at ease, with her back to the observer, attention is at once attracted to the unusual projection of the posterior borders of the scapulæ. They stand back an inch from the posterior chest-wall, retaining their parallelism with the median line, and leaving a fossa between them four inches in breadth and an inch in depth, bounded on each side by a wall of skin, which passes perpendicularly from the scapular borders to the back of the thorax. The condition of the inter-scapular muscles can be best studied when the arms are held horizontally forwards (see Fig. 1). The spinal borders of the scapulæ then project backwards to a distance of two inches from the chest-wall, and approach within an inch and a half of each other, still preserving their parallelism. Between the anterior surface of the scapulæ and the chest-wall there is a deep grove posteriorly, easily admitting the tips of the fingers when they are bent over the posterior edge of the scapula. The trapezius, perfectly developed in its clavicular portion and in the upper half of its middle third, terminates abruptly by a strong bundle of fibres stretching across from the spinous processes of the last cervical and first dorsal vertebræ to the outer half of the spine of the scapula. There is not a trace of the muscle to be felt below this point. Between the posterior border of the scapulæ and the spinal column there are no muscular fibres to be felt, except one little thin band passing to the middle of the edge of the scapula. This is all that remains of the rhomboids. The latissimus dorsi has also disappeared, and there is no response to the strongest faradic current in the course either of this muscle or of the lower half of the trapezius, or of the rhomboids, except in the slender fasciculus of fibres just named. On the other hand, the levator anguli scapulæ and serratus magnus can be felt to contract forcibly, and they respond readily to a moderate current. The lower segment of the latter muscle, passing downwards and forwards from the lower angle of the scapula to the lower ribs, stands out prominently when the arms are raised; and, being uncovered by the latissimus dorsi, can be grasped underneath the skin, which is raised into a fold by the contraction of the muscle. The deep scapular muscles (supra-spinatus, infra-spinatus, sub-scapularis, teres minor, and teres major) are well-developed and easily defined. The pectoral muscles are also unaffected.

The patient cannot elevate her arms vertically; the nearest approach to this which she can make is to raise her elbows until they are on a level with the ears, at a distance of about nine inches from the head. When this position is assumed, instead of the scapulæ being closely applied to the chest-wall, and rotated so as to bring the lower angle outwards and forwards as far as the axillary line, the posterior borders of the scapulæ are brought into actual contact with each other at their upper extremity, slightly diverging from above downwards, so that the lower angles are two inches apart. The anterior face of the scapula is in the meantime one inch and three-quarters behind and away from the thorax. When the arms are stretched out horizontally right and left, the posterior borders of the scapulæ touch each other both at their upper and lower angles, on a plane one inch and three-quarters behind the chest-wall. If the patient places one hand upon the opposite shoulder, the scapula assumes the following position:—The external angle is raised along with the whole shoulder, the internal angle is depressed, the inferior angle is drawn outwards, the posterior border projects an inch from the chest-wall and is distant from the vertebral column three inches at its upper end and four inches at its lower. When, again, the shoulders are drawn back, the elbows placed by the side and flexed, so that the fingers point upwards, with their palmar aspect directed forwards, the posterior borders of the scapulæ are pressed forcibly together, closing over the vertebral column on a plane two inches behind it (see Fig. 3).

Fig. 3.

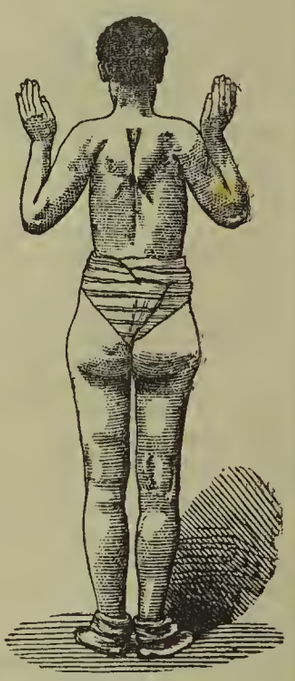


Fig. 3 shows the patient, Charlotte A., when the shoulders are thrown back and the scapulæ brought together. The posterior borders are partially in contact on a plane two inches behind the costal wall. The sharp edge of the unaffected half of the trapezius is again clearly seen, as well as the inferior segment of the serratus magnus on each side. The levator anguli scapulæ is acting more powerfully on the left than the right. This drawing also shows the loss of rotundity in the gluteal region, and the remarkable contrast between the hypertrophied calf and the attenuated muscles of the thigh.

The patient, in attempting to carry the arm behind the trunk, cannot rotate it so as to direct the posterior aspect of the upper arm outwards, or carry the upper arm from the plane of the axilla towards the middle line of the back.

Walking.—In walking there is a general unsteadiness of gait, but no waddling. The knees are slightly flexed, and the head and shoulders are held well back, so that the feet are always kept in front of the patient. The mode of progression remains unaltered when the patient closes her eyes. Ascending stairs is a matter of extreme difficulty, and it is exceedingly painful to witness her condition of exhaustion and lividity after making the effort.

Sitting.—When about to sit down she steadies herself for a moment, grasps her thighs firmly with her hands, and falls suddenly on to the chair as though the trunk were a dead

(a) In order to ascertain the average relative size of the thigh and calf in the adult woman, I took careful measurements of twelve hospital patients, varying in age from twenty to forty-two. The average girth of the middle of the thigh was 18⅝ in., and of the calf 12½ in.; giving a proportion, therefore, of three to two. I was interested, too, to find that none of the twelve possessed either so stout a calf or so thin a thigh as this patient: the smallest thigh measured 17 in., the largest calf measured 13½ in.

weight. At the moment, and in the act of sitting down, the trunk is involuntarily thrown forwards upon the thighs, and it remains in that position until by moving the feet forward and planting them firmly, and by then grasping the knees, she pushes up the trunk into the erect posture "by force of arms."

Rising from the Sitting Posture.—She rises from the sitting posture with great difficulty, and in the following manner:—Compressing her lips, she separates the feet widely, and grasps both her knees; she then flexes the trunk upon the thighs until the trunk is horizontal, and raises the buttocks from the chair by a movement of extension at the knee. In this stooping attitude she shuffles away from the chair until she reaches something to lay hold of—mantelpiece, table, or bystander—when, having rested for a moment, she raises the hands, one by one, from the knees, and clutches firmly the object near which she has halted. Then very slowly and with great effort, keeping the back stiff and straight, she raises herself by means of the arms into the upright position. The mode in which she rises from the floor is even more painful to witness. Placing her hands on the ground in front of her, she first of all scrambles on to her hands and knees. In this posture she makes her way to the nearest available article of furniture, seizing which, she regains her feet. The trunk, however, is still horizontal, and it is the tremendous, and for a long time futile, efforts that she now makes to straighten herself that constitute the most distressing part of the performance. Striving to obtain a firm purchase with her feet, the knees being fully extended, the feet slip backwards time after time. Eventually, after violent exertions, which leave her exhausted and breathless, she accomplishes her task.

Flexion of Thigh upon Pelvis, etc.—When lying in bed horizontally upon the back, she is able to flex the leg upon the thigh, and the thigh upon the trunk, so long as the heel remains upon the bed; but when the leg is fully extended she is unable to lift the heel a single inch from the plane of the bed. As she sits, with the knees flexed, she cannot raise the foot from the ground; but the movements of adduction and abduction are accomplished fairly well. She crosses one thigh over the other by the following manœuvre:—Supposing the right thigh is to be crossed over the left, the left knee, bent to an acute angle, is adducted and pushed under the right knee, which latter is thus lifted up and carried over to the left side, resting upon its fellow.

Ankle.—The movements at the ankle-joint are performed without difficulty.

Progress and Treatment.—The treatment of the patient during her residence in hospital has consisted in daily faradisation of the affected muscles, with rest and a generous diet. March 20: The patient has gained flesh, and has improved in health generally. The position assumed by the scapula during the various movements of the upper extremity remains the same. She can now lift her head from the pillow, which she was unable to do when she was admitted. She still projects the upper portion of the spine backwards in standing and walking; but the gait is decidedly steadier. A remarkable change has taken place in the actual and relative measurements of the thigh and calf; for while the middle of the thigh has increased in circumference from 16 in. to 16¾ in., the girth of the calf has in the meantime diminished from 14½ in. to 13½ in.(b) The patient is now able to sit down with a less heavy thump, and the trunk is no longer thrown forwards horizontally in the act of sitting; it remains, in fact, nearly erect. In rising there is also a very marked improvement. The trunk is not now, as a preliminary measure, inclined horizontally forwards, nor are the buttocks raised by extending the knees. The trunk is certainly thrown forwards, but only to about an angle of 45° with the perpendicular; and the arms of the chair from which the patient is rising afford sufficient help to enable her, with some difficulty, to raise herself into the upright posture. A very significant change, too, has taken place in her power of flexing the thigh on the pelvis. Lying in bed, with the body and limbs fully extended, she is able to raise the foot four inches from the plane of the bed. In the same position she can also, with considerable effort, flex the lower extremities (with the knees bent) upon the abdomen to such an extent as to lift the feet three or four inches above the horizontal plane. When seated in a chair, she has now gained the ability to raise the foot a few inches from the ground, and she can cross one thigh over the other, without the manœuvre previously described, by using the toes to scramble up the opposite leg, and then flinging the knee over its fellow with a jerk. Again, as she lies on one side with the lower extremities fully extended and resting on each other, she can abduct the upper thigh sufficiently to separate it by several inches from the lower. If, however, when the patient lies on her back, the lower extremities, fully extended, are placed a little distance apart, she cannot approximate them, although the adductors of the thigh can be felt in energetic contraction.

Remarks.—In the following attempt to single out the muscles which are at fault in the above case I have to acknowledge at every step my indebtedness to the researches of Duchenne. Whoever wishes to unravel the many intricate problems which such a case presents must at the very outset make himself familiar with the invaluable additions made to our knowledge of the actions of muscles by the experiments of that illustrious man. By isolating the muscles, and noting the effect of faradisation upon each individually, he was able to correct many erroneous statements as to their actions which had been perpetuated from book to book; and by his vast clinical experience of cases where, from atrophy or paralysis on the one hand, or from spasmodic contraction on the other, the functions of certain single muscles or groups of muscles were interfered with, he was enabled to utilise and confirm the conclusions he had already drawn from experimental investigation. Now and then he met with clinical phenomena that he had not expected; but such occasions—I mean those where his electro-physiological experiments had led him to draw inferences which pathology failed to bear out—were, for so intricate a subject, astonishingly few in number, and only serve to exalt one's appreciation of the marvellous accuracy which generally characterises his results. The phenomena exhibited by my patient are, in one or two instances which I shall indicate, not quite in accordance with the observations of Duchenne; but this is quite exceptional. The eccentric attitudes and movements of the scapula are due to the complete atrophy of the lower half of the trapezius, and the nearly complete atrophy of the rhomboids. The action of the lower fibres of the trapezius is to draw the scapula directly inwards to the vertebral column, while that of the rhomboids is to pull the posterior border of the scapula obliquely upwards and inwards, causing rotation of the scapula upon its external angle, which remains fixed, while the lower angle is drawn upwards and carried nearer to the median line. The serratus magnus is capable of directly antagonising the action of these two muscles; its middle digitations drawing the posterior border of the scapula directly outwards and forwards, its lower segment drawing it not only outwards and forwards, but, at the same time, downwards in the direction of the lower ribs. In the case of a patient named Javais, related by Duchenne,(c) there was atrophy of the lower portion of the trapezius alone, the rhomboids remaining unimpaired; the scapula was displaced outwards, so that the posterior border, instead of being two inches from the vertebral column, was four inches. Other cases of the same lesion are also referred to, where one side only was affected, and comparison with the normal condition was therefore easy; the same phenomenon (abduction of the scapula) was always present. Whenever the lower portion of the trapezius had wasted, without lesion of other muscles, the result was outward displacement of the scapula, with rounding of the back from increase of the distance between the two shoulders. When the whole muscle had wasted, the shoulder was found depressed and the internal angle of the scapula drawn upwards and outwards, so that the posterior border was directed from above obliquely downwards and inwards towards the vertebral column.(d) With regard to the voluntary movements of the scapula—when the lower portion of the trapezius was alone wanting, it was noticed that a patient suffering from that lesion on the right side only, on being told to press his shoulders forcibly together, executed the movement naturally on the left side by the

(b) The inference is that the enlargement of the calf was due to a true compensating hypertrophy, which has become partially reduced owing to the smaller demand on the muscles engaged in locomotion during a hospital-residence, and to the improved condition of the weakened muscles of the thigh.

(c) Duchenne (G. B., de Boulogne), "De l'Électrisation Localisée." Paris, 1855, page 282.

(d) Case of Bonnard: Duchenne, *loc. cit.*, page 285.

combined action of the trapezius and rhomboids, while, on the right, the scapula, obeying the rhomboids only, was drawn *en masse* upwards and inwards, and rotated so that its posterior border ran from above downwards and inwards. Instances of loss of the lower portion of the trapezius are not rare. This muscle is one of the earliest to be attacked in progressive muscular atrophy, and its lower portion is always the first to disappear; the clavicular portion, which is supplied by a branch of the spinal accessory nerve, as a rule not only outlives the other portions of the same muscle, but several of the neighbouring muscles also.

A patient named Berniol, also under the care of Duchenne,(e) afforded an exceptional opportunity for observing the phenomena resulting from the loss of certain muscles of the shoulder. This man had been a soldier, and had now atrophy of the rhomboids and of the lower third of the trapezius on the left side, while on the right side not only was there atrophy of these muscles, but the serratus magnus had also disappeared. When he stood at ease, no difference was observable between the two sides; the posterior border of each scapula stood away from the chest-wall, leaving a sulcus between them. On being desired to raise the arms horizontally forwards, the right scapula turned on its vertical axis, deepening in an extraordinary manner the hollow between the anterior surface of the scapula and the chest-wall, so that it would admit the hand.

Duchenne enters at length into the alterations produced by atrophy or paralysis of the serratus magnus, founding his remarks upon ten cases in which the serratus had become atrophied along with other muscles. The opportunity, however, never occurred to him of seeing a case where the serratus magnus alone was the seat of lesion. It is not to be wondered at, therefore, that when such a case came to be recorded the symptoms did not precisely tally with those given by Duchenne as characteristic of this lesion. Dr. G. V. Poore published a case in the *Transactions of the Clinical Society of London* (vol. viii., page 83), in which he had made a careful and minute study of the symptoms. They were mainly as follows:—When the arms were at ease, the lower angle of the scapula was a trifle nearer the middle line than the corresponding angle on the sound side; when the arms were raised horizontally forwards, the posterior border on the affected side stood back two inches from the costal wall; the inferior angle was stationary, while the internal angle was brought slightly nearer to the middle line; the two shoulders were on the same level, and no difficulty was experienced in raising the arms above the shoulder.(f)

Having now glanced at the actions of the muscles chiefly concerned in the movements of the scapula, and referred to cases illustrating the results of atrophy or paralysis of those muscles, both singly and in combination, I proceed to analyse the position and movements of my patient's scapula, so far as they are abnormal. The projection of the posterior border of the scapula as she stands at ease is due to the atrophy of the rhomboids. The direction of the fibres of these muscles is continuous, or nearly so, with that of the fibres of the lower segment of the serratus magnus: the two form as it were one muscle crossed in its course by the posterior border of the scapula to which it is attached. In order that the posterior border of the scapula shall remain in normal apposition with the chest-wall, the action of both sets of fibres is necessary; the loss either of the rhomboids (as in my patient) or of the serratus magnus (as in Dr. Poore's case) is sufficient to allow its projection backwards, through the action of the acromial fibres of the deltoid. That the loss of the lower portion of the trapezius plays but a very small part, if any, in permitting this deformity is rendered probable by the fact that the fibres of the trapezius have no attachment to the border of the scapula, and is proved by clinical experience. The only deformity that has been observed in patients whose trapezius is the sole muscle at fault, and whose arms hang at rest by the sides of the trunk, is a displacement of the scapula outwards.

The projection of the scapulæ backwards becomes twice as great when the arms are raised horizontally forwards—a position which calls forth a more powerful contraction of the deltoids;(g) but, at the same time, the scapulæ, instead of rotating outwards on their external angle as in the normal condition, are brought nearer to each other, and therefore to the vertebral column, so that there is only one inch and a half between their posterior borders. This is not what would at first sight be expected. The rhomboids and part of the trapezius, the two adductors of the scapula, having become wasted, one is surprised to find the scapulæ approaching one another abnormally. It seems to me that the explanation is to be found in the necessity for fixing the scapulæ under new conditions. Ordinarily the rhomboids and serratus magnus, acting together, fix the scapula firmly against the chest-wall, and at the same time the contraction of the lower segment of the serratus gives the necessary elevation to the shoulder by drawing the inferior angle of the scapula outwards and forwards. Here, however, the loss of the rhomboids prohibits that concerted action, and the scapula must be made a *point d'appui* for the deltoid in some other way than by fixation against the chest-wall. This is accomplished by two distinct movements, following one another in point of time, and always in the same order. The first movement is effected by the simultaneous contractions of the levator anguli scapulæ,(h) and what remains of the trapezius. The latter draws the scapula directly inwards; the former elevates it. In effecting this elevation, however, the levator anguli scapulæ, being attached to the internal angle, destroys the parallelism of the posterior border with the vertebral column, and tilts the lower angle slightly inwards towards the middle line. The scapula is now firmly held in position by the continued action of these three muscles—viz., the serratus magnus, levator anguli scapulæ, and a portion of the trapezius,—and forms a fixed point from which the deltoid can act in elevation of the arm. The same mode of fixation carried a step further enables the deltoid to raise the arm until the elbow is on a level with the ear, the extreme limit of elevation possible. This alternative method of fixing the scapula does not allow vertical elevation of the arms by the side of the head.

With reference to another remarkable movement of the scapulæ, Duchenne makes the following remark (*loc. cit.*, page 297):—"Malgré la destruction du rhomboïde et du trapèze, les malades rapprochent encore les bords spinaux des omoplates avec énergie; il est facile de constater que ce mouvement est opéré par les fibres supérieures du grand dorsal." Now, this phenomenon is well pronounced in my patient; as the latissimus dorsi, however, is here wasted, Duchenne's theory of its mode of causation cannot be true for every instance. It appears to be brought about in this patient by a powerful simultaneous contraction of the elevators of the shoulder and the acromial fibres of the trapezius.

The want of power to carry the arm backwards from the plane of the axilla is due to the absence of the latissimus dorsi.

Besides the muscles which have already been considered, and which, either in their whole extent or in certain definite portions, have become completely atrophied, there are certain other muscles situated in the lower portion of the body in which the degeneration is as yet only partial. The fibres of those which are within reach can be felt to contract feebly during voluntary movement, and can be made to respond to a powerful electric stimulus. Further, the muscles of which I am now going to speak have all improved to a greater or less extent during the patient's residence in hos-

(e) *Loc. cit.*, page 326.

(f) The portion of Duchenne's description which this case does not corroborate is contained in the following passage, translated by Dr. Poore:—"At the moment when the patient separates his arms from the trunk, and mainly when he carries them in advance of him, we see the scapula execute two principal movements—first, a movement of rotation on its vertical axis, so that the spinal border separates itself from the costal wall; second, a see-saw movement, by which the inferior angle is raised and made to approach the middle line while the external angle is depressed." "This last pheuomenon," says Dr. Poore, "was not observed in the patient, but, on the contrary, the upper end of the spinal border was pulled upwards and inwards by the action of the levator anguli, trapezius, and rhomboidei."

(g) On this point Duchenne has been led into a curious error. He says (page 296, *loc. cit.*):—"Quand la portion inférieure du trapèze et le rhomboïde sont à la fois atrophiés, la gouttière qu'on voit entre le bord spinal de l'omoplate et la colonne vertébrale se creuse davantage. On fait disparaître momentanément cette surface concave en faisant porter au malade les bras horizontalement en avant; car si son grand dentelé est intact, on voit à l'instant l'omoplate tourner de manière que son angle inférieur s'avance en dehors et en avant, et que son bord interne s'applique contre les parois latérales de la cage thoracique." He here credits the serratus magnus with a power which it appears to possess only when acting in conjunction with the rhomboids.

(h) "J'ai eu rarement l'occasion d'observer l'atrophié complète de l'angulaire de l'omoplate. Ce muscle est un des derniers atteints par l'atrophié musculaire graisseuse progressive."—Duchenne, *loc. cit.*, page 300.

pital. In dealing with this part of my subject I have nothing original to offer; the analysis of symptoms here attempted is entirely founded on the great work of Duchenne, on the Physiology of the Movements.(i)

The flexors of the thigh upon the pelvis are six in number:—

1. *Psoas* } also rotators outwards.
2. *Iliacus* }
3. *Tensor fasciæ femoris*: also a rotator inwards.
4. *Rectus femoris*: also an extensor of the leg.
5. *Sartorius*: also a flexor of the leg.
6. *Pectineus*: also an adductor of the thigh.

I believe each member of this group is weakened. First of all, however, I have to show that the movement of flexion of the thigh upon the pelvis is generally impaired; I shall then proceed to speak of the muscles individually.

When the patient lies horizontally on her back, with the lower limbs fully extended, she is unable to flex the thigh sufficiently to raise the heel even an inch from the plane of the bed; again, she can draw the knees up, flexing both leg and thigh, so long as the feet remain upon the bed, but she is unable to continue the flexion further. When she is seated upon a chair with the knees flexed, she cannot raise her foot from the ground or cross one thigh over the other. From these and other considerations, which I need not stay to enumerate, it is evident that the power of flexing the thigh upon the pelvis is impaired; if it were lost the patient could not walk. Now as to the individual muscles. From their mode of insertion the psoas and iliacus in flexing the thigh tend at the same time to rotate it outwards; this tendency is corrected by the tensor fasciæ, which, besides being a flexor, is a rotator of the thigh inwards. Inequality of action on the part of these muscles would result in slight rotation of the thigh during walking. No such rotation, however, takes place. Hence I conclude that if these muscles are affected at all, they are affected equally. Again, the rectus femoris being an extensor of the leg as well as a flexor of the thigh, acts most powerfully on the thigh when the knee is flexed, yet when the patient is seated and the knee flexed the foot cannot be lifted from the ground. On the other hand, the sartorius being a flexor of the leg as well as of the thigh, acts best as a flexor of the thigh when the leg is extended, yet, when lying in bed with the lower extremity fully extended, the patient cannot lift the heel from the horizontal plane. It seems probable, therefore, that both the rectus and the sartorius are involved in the general enfeeblement of the group. Lastly, the patient cannot make the least approach to crossing one thigh over the other, either when standing, sitting, or lying. As this movement is performed by the concerted action of the pectineus with the psoas and iliacus, it may be taken for granted that the pectineus no longer fulfils its function.

The extensors of the thigh upon the pelvis are, like the flexors, six in number:—

1. *Gluteus maximus*: also rotator outwards.
2. *Gluteus medius* } also abductors.
3. *Gluteus minimus* }
4. *Semi-tendinosus* }
5. *Biceps* } also flexors of leg.
6. *Semi-membranosus* }

The strongest proof of diminished power in the extensors is afforded by the manner in which the trunk is thrown back during standing and walking, in order to obviate that tendency to fall forwards, which is the inevitable consequence of weakness of these muscles. A plumb-line from the most prominent dorsal vertebra falls an inch behind the sacrum. This attitude is also characteristic of pseudo-hypertrophic paralysis; but in that case it is associated with lordosis of the lumbar spine, and weakness of the sacro-lumbalis.

The gluteus maximus is affected more than any other muscle of this group. When a person is standing, or walking on level ground, the fibres of the gluteus maximus remain comparatively relaxed; but the moment he places his foot upon a step, attempts to walk up an incline, leap, run, or rise from the sitting posture, they become strongly contracted. In the case before us, the patient can stand with ease when once she has gained the erect posture; she can also walk slowly along the floor; but she cannot ascend a single stair without pulling herself up by the arms. And when she wishes to rise from the sitting posture, she executes a series of remarkable manœuvres, which have been described at length in the earlier part of this paper. It will thus be seen that she performs with the utmost difficulty all those movements in which the gluteus maximus is chiefly concerned. The gluteal region has at the same time lost its proper rotundity. The gluteus medius and gluteus minimus do not appear to be affected in an equal degree with the greater gluteus; the alternate balancing on each leg in the movement of walking, or in other words the waddling gait, which the loss of these muscles produces, and which is so characteristic of pseudo-hypertrophic paralysis, is here altogether wanting. At the same time, their partial implication in the general impairment of the group is shown by the patient's inability, when lying horizontally on her side with legs extended, to separate the thighs; the uppermost thigh cannot be lifted away from the lower one. With regard to the remaining members of the group, I have only to add that if they are involved, as seems most probable from the rapidity with which the patient becomes fatigued even when walking on a flat surface, they are affected in an equal degree. There is neither inward nor outward rotation of the leg when these muscles are in action—effects which must necessarily have followed if either the inner or outer portion of the group happened to be the more powerful.

Cases of progressive muscular atrophy are divisible into two classes: those in which the disease is general, and those in which it is local or partial. This case belongs to the latter category, in which the actual determining cause is continuous and excessive exercise of certain muscles. The muscular system of this woman, deprived as she has been of all the luxuries of life, and scantily supplied even with its necessaries, would fall an easy prey; and the nature of her employment sufficiently accounts for the selection of a special group of muscles for the worst ravages of the disease.

(i) "Physiologie des Mouvements demontrée à l'aide de l'expérimentation électrique et de l'observation clinique et applicable à l'étude des paralysies et des déformations," par G. B. Duchenne (de Boulogne). Paris, 1867.

THE ACTION OF BELLADONNA AND OPIUM.

By S. K. COLTER, M.D.

The radiating fibres of the iris, we are told, depend for motive power upon the sympathetic system, and the circular upon the third cranial nerve; and the well-known theories regarding the action of belladonna are two—first, that it paralyses the third nerve; and secondly, that it stimulates the sympathetic, so far as to overcome the third nerve.

The common objection to the former theory is that all the other muscles of the eye—except the superior oblique and external rectus, which are supplied by the fourth and sixth nerves respectively—are altogether unaffected by belladonna; so that if the action was truly paralysis of the third nerve we should see ptosis or strabismus, or some impairment in the five external muscles supplied by the third nerve.

We find that belladonna dilates the pupil by external or internal use. We also find it very efficient in atonic states of the bowels; and that it relieves constipation, doubtless by stimulating the involuntary sympathetic muscular fibrils, which regulate vermicular action in the intestines. Belladonna is also a stimulant to vaso-motor nerves, contracting the calibre of the vessels.

I once, by mistake, took about two or three grains of the extract of belladonna; and within about half an hour experienced a burning glow over the whole body, with exhilaration of spirits, and a feeling of protrusion of the eyeballs. The throat felt intolerably parched and the tongue felt swollen, and articulation was indistinct. Within an hour a rash appeared universally over the body—a rash which it would be impossible to distinguish from that of scarlatina; the face was bloated, and the hands were swollen. The pupils were not much affected, which I attribute to a large dose of tincture of opium I took soon after the belladonna.

Belladonna is necessarily serviceable in hyperæmic conditions of the cerebral and spinal regions, as it diminishes the calibre of the vessels; but it is not apparent why ergot, which does the same, produces no pupillary effect.

In typhoid fever we have sympathetic irritation (and subsequent exhaustive paralysis), and this irritation is reflected

to the iris; and yet in dysentery, where the whole glandular surface of the large, and two or more feet of the small, intestine is utterly destroyed, how does it happen that mydriasis does not occur?

If the vaso-motor sympathetic fibres regulate blushing, would not one expect such a vivid central impression to induce some degree of mydriasis? I have never observed whether it does so or not.

In the exanthemata, such as scarlatina, morbilli, etc., I have not seen mydriasis, though *à priori* it might be expected in the first, as its rash and that from belladonna are so identical in appearance; and this fact would seem to imply that in scarlatina the sympathetic is only peripherally affected, or else that all effect is transferred to the surface; or, in other words, the disease is a bowel rash turned outwards, as some have thought.

The diseases in which I have seen mydriasis are typhoid fever, epilepsy, tetanus, cholera, and cerebro-spinal meningitis. I have seen it also in alcoholic poisoning, and in poisoning by the seeds of *Ricinus communis*, which latter fact may throw some light upon the subsequent constipatory effect of castor oil, and the grounds of its utility in bowel diseases characterised by sympathetic torpidity.

I may here mention that I possess the power—varying in strength at times—of dilating my own pupils, apparently by an effort of will. This case may not be so singular as is supposed, its logical conclusion being that the sympathetic is capable of some voluntary action. And is it not said that some actors have the power of flushing or growing pale at will?

Against the theory of mydriasis by sympathetic stimulation, the effect of strong light may be urged; but it is reasonable to suppose that the impression upon the vividly sensitive retinal expansion overbears the sympathetic, thus augmenting the voluntary action of the third nerve.

Darkness is a sedative to both third and sympathetic, but the former seems the more sensitive of the two to this kind of sedative; or, on the other hand, it may be that whatever voluntary subserviency the sympathetic possesses is brought to bear by the mental effort to pierce the darkness. In sleep, myosis is doubtless due to cerebral hyperæmia, acting directly by pressure on the third nerve, and overcoming the ever wakeful sympathetic.

Opium, as far as I read its action, is a direct antagonist to belladonna, paralysing the sympathetic, retarding secretion in the abdominal organs, and vermicular action in the intestines. It is a heart-stimulant—not like the ethers, but by virtue of its mechanical relief to the heart's action by inducing enlargement of the calibre of the vessels by vaso-motor paresis, in the same way, in effect, as the horizontal position relieves the heart in syncope. To say that it retards secretion is to say, in other words, that it impairs the action of that system of nerves which rules chiefly over all secreting organs, namely, the sympathetic. Opium produces stertorous breathing no doubt by impression upon the nerves of the velum palati, especially the tensor and levator palati; and these, it may be noticed, derive their nerve-supply from the otic and Meckel's ganglia respectively—ganglia consisting extensively of sympathetic fibres.

In the *Lancet* of November 18, 1871, we read "opium stimulates vaso-motor nerves, raises the pulse and temperature"; and secondly, "*it is a sedative to motor and sensory nerves, lessens blood current and temperature,* and allows the sympathetic to act." With the portion of these remarks which is printed in italics I agree. The first theory appears to fail in explaining such effects as peripheral hyperæmia or diaphoresis. If it stimulated the vaso-motor cerebral branches, would not *anæmia* and not hyperæmia result; and if so, how then does myosis occur? It is not evident what necessity exists for the belief in the above complicated duality of action.

On the subject of antagonism between belladonna and opium, the following case, already recorded in the *Medical Times and Gazette* (May 21, 1870), may bear repetition:—

Miss H., aged about twenty-five, drank by mistake about half a large wineglassful of a "linimcnt of belladonna and opium" prescribed in a little "red book" to be found some few years ago in military hospitals. She drank this at about 9 a.m. on a Monday morning. Very soon after, she felt a sudden exhilaration of spirits, and a rush of blood to the head. Her face was flushed, and the eyes seemed starting from their sockets. A perfect effervescence of spirits came on, and she said she "felt as if she was swimming in air." Soon the throat became so dry that she swallowed with the utmost difficulty, and articulation was indistinct like that of a person thoroughly drunk. At 11 a.m. she became irrepressibly drowsy, and found she could not read—the letters blending together. The tongue became dry and swollen, and sordes collected on lips and teeth. The cheeks were puffed out and flaming hot. She tried to swallow some strong tea, and kept running up and down stairs to keep herself awake, which she had sense enough to understand was necessary. She kept chattering noisily without intermission. Up to this time she was unaware that she had taken poison, and at about twelve, when told of it, she became instantly insensible. Emetics of all kinds were given, but none would act; her face was livid. She was kept walking, supported by two people, from 1 p.m. to 9 p.m., talking constantly in a thick drunken tone. At about midnight she went to bed and slept well. In the morning she seemed very languid, and the face was still flushed and bloated. Violent epistaxis came on, and hysterical sobbing. On the following Saturday the skin desquamated. For weeks after, she was attacked at night by epileptiform spasmodic grasping of the hands, and rigidity of the arms and lower jaw. She saw specks and rashes on everybody's face, and their eyes and noses double, and this continued for several months. For about a year after, she continued to exhibit a slight but decided aphasia, with great impairment of memory. As well as I recollect, the amounts of belladonna and opium swallowed would be about ten or eleven grains each, either of which singly would hardly have failed to produce speedy death; and there is apparently no explanation of the non-occurrence of a fatal issue, but the supposition of antagonism between the drugs.

Transvaal.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

HOSPITAL FOR EPILEPSY AND PARALYSIS, REGENT'S-PARK.

CASES OF PRIMARY AND SECONDARY SCLEROSIS OF THE SPINAL CORD.

(Under the care of Dr. ALTHAUS.)

THERE are now a number of cases of diseasc of the spinal cord in this hospital under the care of Dr. Althaus, in which the seat and extent of the lesion have been diagnosed with a considerable degree of certainty. In one of these cases the pathological change is strictly limited to the anterior cornua of the grey matter in the lumbar enlargement of the cord, as there is motor paralysis of the lower extremities, without any affection of sensibility, but accompanied with muscular atrophy which has set in rapidly, there being complete loss of faradic excitability of the muscles and nerves, and greatly diminished galvanic or voltaic excitability of the same. There is not the slightest affection of the bladder and rectum, and no tendency to bedsores, so that an affection of the posterior cornua and columns is excluded. The case is mending slowly under the influence of iodide of potassium, phosphorus, sulphur-baths, and galvanisation of the cord. We will, however, to-day give the details of two cases only, one of which Dr. Althaus diagnosed as primary sclerosis of the external portion of the posterior columns, while the other was stated to be one of secondary sclerosis of the posterior or crossed pyramidal portion of the lateral column of the cord.

Case 1.—*Primary Sclerosis of the External Portion of the Posterior Columns.*

J. R., forty, single, a commercial traveller, admitted January 25, 1878. He has travelled much in the tropics, undergone great exposure to cold and heat, and lived altogether a wild life, exceeding in drinking and sexual relations. Five years ago he had an attack of delirium tremens. He also had some time ago a soft chancre and gonorrhœa, which resulted in stricture of the urethra, but never had constitutional syphilis. There is no hereditary neurotic tendency. Two

years ago, when in South America, he first began to feel difficulty in walking, and was some time afterwards admitted into the hospital at Buenos Ayres, where he remained three months. He noticed that he walked much worse in the dark than in the daytime, and was obliged to look at his feet when walking in order to direct their movements. Six months ago he returned to this country; and two months before admission he was still able to go about, and could at a stretch walk three or four miles. One day, however, when about to cross a street, he had to make a sudden jump in order to avoid a cab running him over. This appeared to give him a strain in the back, and from that time he has gone down steadily.

Present State.—The brain is quite free from disease, but the third left cranial nerve or motor oculi is affected, there being paralysis of the rectus internus and the obliquus inferior muscles of the left eye. The patient is therefore unable to turn that eye upwards and inwards, thus showing divergent squint: there is crossed diplopia, and the lateral distance between the double images increases as the object is carried over to the right side. At first sight there appears also to be ptosis of the left eye, as the eye is habitually covered by the lid; but on closer examination it is found the levator palpebræ superioris is not paralysed, but has been intentionally put out of action by the patient, so as to avoid the annoyance of the diplopia; and the eye can be opened at request without any difficulty. The ocular muscles of the right eye and all the other cranial nerves are quite healthy. Vision is perfect, and the ophthalmoscope does not reveal any textural changes in the eyes. The cord affection in this case is at present confined to the lumbar enlargement. The upper extremities and the thoracic and abdominal viscera are quite healthy. Incomplete anæsthesia, however, exists in the hypogastric region and the lower extremities, being more marked in the feet and legs than in the thighs and hips. On standing the patient feels the ground quite soft, like velvet or cotton; he is still able to feel the prick of a pin and touch of the fingers, but there is great numbness. Temperature and pressure are well perceived. The reflex action of the skin is normal, but tendinous reflexion is gone in the knees and feet. The power of walking is entirely gone, and the patient has great difficulty in getting up from a chair, nor can he stand except when supported on both sides; yet he can easily cross one leg over the other, and move the legs in all directions when sitting or lying down. There is malnutrition of the muscles of the lower extremities, which have become flabby and thin by disuse; yet they respond quite well to both the faradic and voltaic current, showing that there is the proper relation between them and the anterior cornua of the cord. The patient has no difficulty in passing and retaining his water; the bowels are habitually regular, and the sphincter ani acts properly. The sexual power is diminished, but not gone; for the patient has erections on waking in the morning, and occasionally emissions in his sleep. Seeing that there is functional energy of the bladder, rectum, and sexual organs, it appears evident that the disease has not spread to the posterior cornua of the grey matter, but is confined to the external portion of the white posterior columns, which Charcot and Pierret have shown to be the first seat of the lesion in progressive locomotor ataxy.

The patient has been treated with nitrate of silver for three months, and afterwards with the liquid extract of ergot and phosphorus also for three months. There has been very little change in his condition; the disease appears to have become arrested. No fresh symptoms have appeared, and the only improvement has been that the patient is able to get up from a chair more easily. Dr. Althaus has now prescribed the liquid extract of damiana, which he believes to possess a special action on the spinal cord, similar to that of ergot.

Case 2.—Secondary Sclerosis of the Posterior or Crossed Pyramidal Portion of the Left Lateral Column of the Cord.

C. B., aged forty, married, a fish salesman, was admitted under the care of Dr. Althaus on January 31, 1878. Seven years ago, while attending to his business, he had an attack, in which he to some extent lost his speech and the use of the left side. He could speak, but thickly and with an effort, and could walk a little, but kept falling down as he went on. He was taken into the London Hospital, but was unable to return to his business when he left it. Twelve months after the first attack he had another, which was more severe than the first, the paralysis being for a time more complete. He attributed his illness to anxiety and excitement in business, having had heavy losses just previous to the first attack. His parents were both extremely nervous people, and had died early; and he had for some time previous to the first attack suffered from headaches and indigestion.

On examination it was found that his speech was somewhat thick and indistinct, but fluent, there being no loss of words. The patient's manner is peculiar, somewhat silly. His memory is impaired. The cranial nerves are quite healthy. There is loss of power and rigidity in the left side of the body. The arm appears abducted from the side, and the elbow, wrist, and fingers are held in a state of extension. There is great difficulty in flexing and supinating the arm, and in bending the hand and fingers; and considerable resistance to passive movements in that direction is experienced. The patient's gait is most peculiar, and closely resembles that kind of walk which is found in spastic spinal paralysis. He walks on tiptoe with the left leg, which seems to be fixed as in a vice, so clumsy are its movements. The foot is inclined to scrape the ground, and there is tendency to fall forwards on that side of the body. The rigidity is chiefly marked in the rectus femoris, and there is difficulty in flexing the leg and foot. The reflex action of the skin is slightly increased, and that of the tendons, more particularly in the triceps of the arm and the rectus femoris, is considerably increased, which constitutes another point of resemblance with spastic spinal paralysis. There is slight wasting of the muscles, but not more than could be attributed to disuse; and the faradic and galvanic response is slightly less than on the healthy side. Sensation is not affected, and the thoracic and abdominal viscera are quite healthy.

Dr. Althaus gave the following account of the pathology of the case:—There was at first hæmorrhage in the right corpus striatum, owing to a rupture of one or several miliary aneurisms of the arterioles of the Sylvian artery, causing left hemiplegia. There was never any true aphasia, but only such impairment of speech as is met with independently of disease in Broca's convolution. In consequence of the hæmorrhage, secondary sclerosis, such as first described by Türck of Vienna, set in in the posterior portion of the lateral column of the cord. This portion, which is now called Flechsig's crossed pyramidal column, is situated more posteriorly than the lateral column proper, and is composed entirely of fibres derived from the opposite cerebral hemisphere. This same portion of the lateral column is also the seat of that disease which has lately been described as spastic spinal paralysis (Erb), spasmodic tabes dorsalis (Charcot), and primary lateral sclerosis (Berger). There is thus no difficulty in explaining the physiological similarity in the symptoms observed in this case, which, except for its history, might be classed as one of spastic spinal paralysis. The cause and commencement of the two maladies are, however, quite different, the one being primary and the other secondary sclerosis. Moreover, the grey patches which would be found in the cord of the present patient, should his case terminate fatally, would be seen not to be wedge-shaped, as in primary sclerosis, but more rounded; and they would be seen to spread exteriorly, not as far as the pia mater, which they do in primary sclerosis, but would stop short at some distance from that membrane. The patient is treated with a mixture of iodide of potassium and citrate of iron and quinine, and systematic gymnastic exercises, under which he is improving considerably.

CHILDREN'S HOSPITAL, PENDLEBURY, MANCHESTER.

ACUTE TUBERCULOSIS — LOCALISED ENCEPHALITIS OF THE VERTEX — TUBERCULAR PERICARDITIS.

(Under the care of Dr. HUMPHREYS.)

[Reported by Dr. JUDSON BURY, Senior Resident Medical Officer.]

JAMES W., aged six years, admitted May 13, 1878.

Family History.—Father suffers from "spitting of blood." Mother healthy. One child died aged fourteen days, of convulsions; another aged ten months, of croup; one child was still-born.

Previous History.—Has had measles and whooping-cough. About four months ago he complained of pain in his head, and was taken to a medical man, but he soon recovered, and remained well until May 9. On the evening of that day, and on the 10th, he complained of headache. On the morning of the 11th he had an attack of convulsions, in which, according to the mother, he did not lose his senses. He screamed out; the right limbs were violently worked about, and the right side of the face twitched. The paroxysm lasted an hour. Afterwards the mother noticed that he could not move the right arm or leg. He could, however, talk quite well. On the afternoon of the same day another paroxysm occurred, of exactly the same kind and of about the same duration; a third yesterday morning, a fourth last night, and a fifth this morning. In all of them, according to the mother, the convulsions were limited to the right side. He sleeps well. Was sick yesterday afternoon and this morning. Bowels regular.

On Admission.—Much emaciated; marked rickety conformation. He lies on the left side with his head thrown back, and when placed otherwise rolls back at once to his old position. He is inclined to be drowsy, but is quite intelligent, and answers questions correctly and without defect in articulation. There is no want of symmetry in the face while the muscles are at rest. When asked to show his teeth the lines about the left angle of mouth become more marked than those of the opposite angle. The tongue presents three deep transverse fissures, and deviates appreciably to the right. The right arm lies motionless in bed; when lifted up and let go it falls helplessly. All its muscles are flaccid. The right calf slightly less muscular and more flabby than the left. With a little assistance he can walk. In this act the right thigh is very laboriously flexed, so that the knee is raised very high; after this he lets the right leg drop helplessly, the heel striking the ground first. No discharge from ears. Eyes parallel. A puckered scar at each angle of mouth. Finger-nails incurved, and ends slightly clubbed. Spleen projects two fingers' breadth below the ribs; feels hard. Liver can be felt for three fingers' breadth. On ophthalmoscopic examination, the discs reddened, with dimmed margins, the arteries smaller, and the veins larger than normal. At 5 p.m. he had another attack of convulsions. According to the nurse, his head and eyes turned to the right. The right side of face, right arm, and right leg became convulsed. The left side at first remained motionless, but afterwards participated in the movements.

May 14.—No convulsions since last report. More drowsy than on admission. Was sick this morning after breakfast. Bowels twice moved. Right arm and leg in the same condition as yesterday. The difference of movement on the two sides of the face is not so well marked as it was yesterday. The right half of the tongue is apparently narrower than the left. Skin cold and bluish. Temperature 99° to 97·6°.

15th.—Sick three times. Very drowsy and fretful. Right side in same condition as yesterday. He now lies indifferently on the right or left side. Urine acid; no albumen or sugar. Temperature 98·4° to 99°.

16th.—Sick five times yesterday. Temperature 100·4° to 98·2.

17th.—Cries out about every hour, and is getting much more drowsy. Was twice sick in the night. Passes only a little water. Respirations 36, very laboured, the shoulders being raised with each inspiration; pulse 76 to 84, irregular, dicrotous, long, and laboured. He often puts his left hand to the left parietal region. Temperature 100·4° to 101°.

18th.—Very drowsy; will only say "yes" or "no" to any question. Often puts his left hand to the side of his head. When his face is touched he cries out, and in doing so the left naso-labial fold becomes more marked than the right. Right arm still flaccid and helpless. Legs drawn up, but not rigid. Lies with his head to left, and the left hand under it. Eyelids nearly closed. The interval between them is a little wider on the left than on the right side. Has not been sick. Swallows with great difficulty. Temperature 99·8° to 102·4°.

On ophthalmoscopic examination, in addition to the appearances noted above, three patches of bright glistening exudation were seen on the left disc opposite the division of some small arteries; the margins of the disc appeared greyer than before.

19th.—Two convulsions this morning, in which, according to the nurse, the left side of the face moved first, then the left arm and left leg, and afterwards the right arm and right leg. Profoundly comatose; swallows with difficulty; head inclined to right; right elbow slightly bent and rigid; on passive movement it retains the posture given for a few seconds, and then gradually sinks back to its former position, the arm no longer falling helplessly as it used to do. The fingers of the right hand are curled in upon the palm, but are not rigid. Whilst watched he began to move his right leg, drawing up the knee and then thrusting it down again, so as to slide the foot up and down the bed. Similar movements of the left knee, only not so frequently. The face still turned to the right; the eyes, with respect to the face, look straight forward, but somehow the right eye is turned a little inwards; the lids are nearly closed, but the interval between them is less on the right side than on the left. Saliva dribbles from the right angle of the mouth; respiration 32, regular. Elevation is excessive. The end of sternum moves up quite one-eighth of an inch in inspiration; whilst, at the same time, the abdominal wall immediately below the costal arch sinks deeply in, but the hypochondria continue to swell out a little during inspiration. Pulse 100, small and dicrotous; temperature 100° to 103·4°.

20th.—Is lying on his back, slightly inclined towards right side, right cheek on pillow; unconscious, but eyes move slowly about, eyelids also; slight flush on left cheek; right arm stretched out on bed; right leg drawn up; left leg extended and adducted so that left knee is close to right heel; right limbs slightly stiff; breathes heavily and groans with expiration; respirations 38; had three loose stools yesterday; swallows with great difficulty; temperature 103·2° to 100°.

21st.—Lies with head inclined to left; both arms lie motionless on bed; both knees drawn up—right lies on the bed, the left is upright; eyes much sunken; left posterior base dull; breathing very weak, and accompanied by a few moist sounds; temperature 101·2° to 99·4°.

22nd.—Still lies with head slightly to left, and arms helpless at his side; right pupil larger than left; slight rigidity about right elbow and shoulder; thighs flexed and adducted; knees flexed and lying upon bed; takes no notice; eyes move upwards and inwards, but never outwards; they are not always parallel, moving generally independently of each other; respirations 40, regular, but very laboured; pulse 108, small; during respiration belly looks boat-shaped, owing apparently to the sinking in of epigastrium, due to excessive elevation of chest; four loose stools.

May 23.—Died at 5 a.m.

Autopsy, ten hours after Death.—Extreme emaciation; marked rigor mortis; abdomen of moderate volume. Cranium opened: partially decolorised clot in supra-longitudinal sinus; Pacchionian bodies well developed; convolutions flattened on left side; no undue vascularity of surface of brain. A well-marked patch of yellow lymph is seen on the left hemisphere near the median fissure; it is found to lie over the inner ends of the ascending frontal and ascending parietal convolutions, and it sends short prolongations along the fissure of Rolando and along the intra-parietal fissure, and it is somewhat thickly covered by Pacchionian bodies. A few scattered tubercles are seen in the following places—1. In the sulci between first and second left frontal convolutions. 2. In left Sylvian fissure; here, also, some adhesions of pia mater. 3. At lower end of fissure of Rolando. 4. At base of brain in front of pons; the pia mater a little thickened here. The only lymph to be found is the patch mentioned above. On making a vertical transverse section of the brain through the corpora albicantia, and, as it happened, through the middle of the patch of yellow lymph, a circumscribed mass of red softening comes into view, somewhat pear-shaped, and of an area measuring one inch by one inch; the narrower end joins the patch of surface lymph, the red softening involves the grey matter of the ascending frontal and ascending parietal convolutions, and encroaches on the white matter beneath. The brain-substance is tolerably firm, except in the immediate neighbourhood of the lesion. A good deal of fluid at the base of the brain. Thorax: The parietal and visceral layers of the pericardium were firmly and universally adherent; on separation each was found to be thickly covered with large semi-transparent tubercles. Heart-cavities small; valves healthy. The roots of the aorta and pulmonary artery were closely embraced by large caseous glands. The posterior mediastinum was crammed with similar ones, and two of these,

near the bifurcation of the trachea, were as big as walnuts. The condition of both pleuræ resembled that of the pericardium in all respects. The adhesions of the thoracic organs to the diaphragm were particularly firm. A few scattered tubercles in the lungs. Abdomen: Convex surface of liver everywhere adherent by firm cellular bands to diaphragm. On separation the under surface of the diaphragm was seen to be covered by clusters of large flattened tubercles. A vertical section of the diaphragm showed that the muscular substance was in places compressed between the tubercular masses in both its serous coverings. The condition of the rest of the peritoneum was similar to that in the diaphragm. The intestines were glued together. Liver: Tubercles seen on peritoneal surface, which in places dipped into the substance of the organ; the capsule of Glisson was a little thickened. One tubercle in cortex of right kidney. Spleen large, adherent to peritoneum; tubercles on surface; substance much softened. Testicles: Both layers of tunica vaginalis of right adherent; epididymis enlarged, presenting on section two or three small caseous nodules; testicle itself enlarged and firm.

Microscopical Examination.—Sections made by Dr. Bury through the diaphragm and surface of liver showed little heaps of round cells in the serous membrane between the two; here and there a prolific round-celled growth was seen between the bundles of muscular fibres, and in a few places some round cells were traced between individual fibres. Precisely similar changes were seen in sections made through the pericardium and heart-wall. In all parts of the liver a well-marked proliferation of round cells was seen in interlobular tissue; and here and there the round cells were collected into heaps, compressing the neighbouring lobules. Similar heaps of round cells were found in various parts of the kidney and spleen, and in the right epididymis.

Remarks by Dr. Humphreys.—The brain affords a somewhat rare example of localised tubercular encephalitis. It is true that tubercles were found in other places than about the focus of inflammation; but they were not associated with lymph or softening of the brain-substance beneath—in fact, the brain-substance was sound everywhere except in a circumscribed area at the top of the fissure of Rolando, and the symptoms were those of a discharging lesion occupying the position described. The adherent pericardium was not recognised by physical signs during life. In connexion with the tuberculosis of the membrane, it is interesting to note the caseous glands embracing the roots of the aorta and pulmonary artery, and the lower end of the trachea. The lymphatics of the heart are gathered up into two trunks, one of which, ascending across the arch of the aorta, passes backwards to the trachea, and the other passes along the pulmonary artery; both of these trunks must have been intercepted by the caseous glands mentioned above. Another interesting point is the paralysis of the diaphragm. The signs of this condition, according to Duchenne and Erb, are a depression of the epigastrium and hypochondria during inspiration, the reverse movements occurring during expiration. The signs in the present case were, during inspiration, exaggerated elevation of the sternum and marked sinking-in of the abdominal wall which lies between the limbs of the costal arch; but the lateral parts of the hypochondria continued to swell out perceptibly during inspiration. The sudden onset and the short duration of the illness (about twelve days) are noteworthy; but it is open to doubt whether the rapid termination of the case was not brought about rather by the extensive tuberculosis of the serous membranes of the chest and abdomen, than by the affection of the brain.

THE ITALIAN MEDICAL ASSOCIATION.—The eighth Congress of the Italian Medical Association will be held at Pisa from September 22 to 28, 1878. Application should be made to Dr. D. Barduzzi, Secretary, Pisa.

THE NEW DIPLOMATED NURSES.—The *Révue Médicale* (July 22), in allusion to the effort being made to substitute lay nurses for the *rcligieuses* at the new Hopital de Menilmontant, observes that, notwithstanding the long experience of these latter, it will be a long time before they issue cards like the following:—"*Madame Veuve D., Garde Malade, Diplomée par la Société dc Médecinc Pratique, soigne les dames cn couches. Opérations chirurgicales.*" It asks whether this new female surgeon is the fruit of the new municipal school for nurses.

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Medical Times and Gazette.

SATURDAY, AUGUST 3, 1878.

MEDICAL LEGISLATION.

THE second reading of the Medical Act (1858) Amendment Bill has now been fixed for the evening of Monday, August 5, but the Government has itself confessed, in the words of Lord George Hamilton, that "the chances of the Bill of becoming law this year daily diminish." A large number of amendments, occupying three closely printed octavo pages on the Notice Paper, will be proposed by the Government in Committee; and the most important of these will be found in another column.

With reference to these amendments, Lord George Hamilton stated on Monday evening in the House that "they were put upon the notice paper to make clear to the opponents of the Bill the course that the Government intended to take, in the hope that their opposition would be then removed"; and he added that, "until he knew the effect of his amendments he was unable to give a definite answer as to the fate of the Bill." Unfortunately, however, "the effect of these amendments" cannot now be ascertained with any certainty. The season is so far advanced that a large number of those who are interested and active in medical politics are scattered throughout the country or are travelling abroad. For our own part, we believe that the "effect of these amendments" would be on the whole to improve the Bill in several important respects. The woman-difficulty especially would to some extent be surmounted by the provision for registering persons without diplomas, in the event of their being refused a diploma on the ground of sex, or on certain other grounds therein enumerated. But, as we have always contended, the very principle on which the present attempt at medical legislation is declared to be based is uniformity of qualification. Women who are separately examined, and who have no diploma or degree, ought not, according to this principle of uniformity, to be placed on the same register with men. Their names ought to be inscribed on a separate register, where those of the public

who may desire to employ their services will find them, as well as a statement of the examinations which they have passed. We trust that if the Bill becomes law it will contain provisions for the separate registration of women who may have received a separate education and a different examination from men. The number of debateable points connected with the Bill are, however, still too numerous for us to expect that it will not meet with most serious opposition in Committee. The best fate, in all probability, that can befal it, and the most fortunate ending after all for the profession of this attempt at legislation, is its withdrawal by the Government.

Meanwhile, the Dental Practitioners Act has been published, and we find, as we remarked last week, that it imposes upon the General Medical Council duties with respect to dentists as onerous and almost as extensive as the duties which the Council at present inefficiently discharge towards the general profession. We await with much interest the reception of the Act by the Council at their next meeting. We should not be surprised to find that the Council will not hasten, or even proceed at all, to avail themselves of powers which will practically bring business to a dead-lock. If this should be the case, the profession will find itself provided with a pretentious measure which cannot be put in force, but still without the legislative reforms which have been felt to be an urgent necessity for the last twenty years. A few practicable clauses, occupying no more space than the amendments that are to be introduced on Monday evening, would have secured the principal reforms. As it is, we fear we shall not have much reason to congratulate ourselves on the outcome of the attempts at legislating for the medical profession in the Parliamentary Session of 1878.

MR. SPENCER WELLS' LECTURES AT THE COLLEGE OF SURGEONS.

It is not an easy task to criticise such lectures as those just delivered by Mr. Spencer Wells at the Royal College of Surgeons. In this case the subject belongs to the orator, and the orator to the subject, in a peculiar manner. No one can speak or write on the branch of surgery in question, without laying himself largely under obligation to Mr. Spencer Wells for the best part of his materials; and on no other topic could Mr. Wells have spoken with such authority. Indeed, in many points—such, for instance, as those concerning operative details—criticism is not simply difficult, but impossible; for the unequalled experience of Mr. Wells here gives to his *ipse dixit* a weight which no skill in argument, but limited experience, can attain to.

But, it is said, "good wine needs no bush"; and therefore we need not occupy our pages by complimenting Mr. Wells. That he found the operation of ovariotomy one which many of the best men of that day thought it criminal to attempt; and that he has made it one of the most brilliantly successful in the whole range of surgery; that his experience in it is larger than that of any man, living or dead; that he has from the beginning fearlessly made public both failures and successes; and that he has, by accurately and carefully recording all his work, made it useful to others as well as to himself,—all this is known to the whole profession. This simple statement of facts is in itself higher eulogy than any profusion of laudatory phrases could be.

Mr. Wells begins by carefully defining his task. "All that I can do," he says, "is to bring before you, in the plainest manner, the results of twenty years' exceptionally large observation and practice . . . and . . . to tell what I have learned about the diagnosis and surgical treatment of abdominal tumours; how I have learned it; the lessons I have been taught by mistakes and failures; the satisfaction which has attended increasing success." These sentences accurately describe the scope of the lectures; beyond the programme thus sketched out they do not go.

The first lecture contains an account of the mode of examining patients with abdominal tumours, and recording their cases. This part is interesting, and fertile in useful hints; but we fancy that every surgeon of large experience soon falls into a method of note-taking suited to his own purpose, and is not likely to bind himself down to the system of anyone else, however eminent. Mr. Wells then runs over the different kinds of abdominal tumours which have been, and therefore may be, mistaken for ovarian growths, noting the chief diagnostic marks of each. The brevity doubtless imposed upon him by his limited time makes this section, also, suggestive rather than exhaustive. We find some remarks, not so clear as we could wish, upon the chemical and microscopical characters of the liquids drawn from ovarian cysts. "A chemical and microscopical examination of the fluid that is removed," says the lecturer, "will settle any doubt as to whether it is free peritoneal or ovarian fluid, or fluid of some other cyst." Subsequently, however, he mentions observations which appear to prove that to diagnostic rules based on this mode of investigation there are exceptions. We should have been glad of some more definite statement of the amount of weight to be attached to these facts. Do, or do not, the chemical and microscopical characters of the fluids in question with certainty reveal their origin? To this question we should like to have heard the answer of Mr. Wells.

In the third lecture, we enter upon the lecturer's own special province. He first describes tapping: its history, methods, and the limits of its utility. Here he expresses a decided opinion, and his dictum ought to be, and no doubt will be, recognised as an authoritative rule. "I think," he says, "I have seen quite enough now to warrant me to endeavour to impress upon surgeons that, if the cyst be a single cyst, before they do anything else, they should see what can be gained by one tapping." Then he comes to ovariotomy. The rules which he lays down as to the circumstances under which the operation should be performed are eminently judicious. So long as no great inconvenience is caused by the tumour, the surgeon should hold his hand; but he should not delay operation till the patient's health is so undermined as to compromise success. The mere size of the tumour, and the difficulties met with in the operation, do not so much affect the result as the patient's constitutional condition. The operation should not be associated with a sudden change, from activity and excitement to the monotony and restraint of the sick-room. Almost the only positive contra-indication to an operation is the fact that the patient has some other certainly fatal disease. Even the probability that a tumour is cancerous does not absolutely forbid its removal.

As to the details of the operation, comment is not needed. Mr. Wells' success is the proof of the correctness of his method. We may note, however, that as an anæsthetic he prefers the bichloride of methylene, which he thinks safer than chloroform. In the management of the pedicle his experience is greatly in favour of the clamp. The result to the patient is, he rightly says, the great thing to be considered, the thing with which nothing else can be compared in importance; and tried by this test, the clamp comes out best. The justification of the ligature is, that the use of the clamp is not practicable in every case. The cautery treatment Mr. Wells has found troublesome and uncertain. The necessity for carefully counting forceps, sponges, etc., was impressed upon the listeners by anecdotes narrated at length in a dramatic form.

In the part of his lectures which deals with the treatment

of the abdominal wound, Mr. Wells refers to a few valuable experiments which he has made upon living animals. We must say we remark with much regret the apologetic tone in which he thinks it necessary to refer to them. He speaks of his having been accused of cruelty, and protests that the number of experiments he has made is but small. But we think that a man in his position should guide public opinion, and not bend to it. If he do allow himself to be influenced by the prejudices of others, it should be by the opinion of the educated public, the leaders of the scientific world, and not by the excited feelings of amiable, well-meaning, but misinformed persons. Those who, like Mr. Wells, are in the proud position of not only understanding what science is, and how scientific problems are to be worked out, but of possessing the confidence of the public, should use their opportunities to lead people to appreciate science, and should help them to discriminate between those whose knowledge and work make them worthy of being heard, and those obscure seekers after notoriety whose only hope of getting it lies in appealing to the feelings of persons unaccustomed to think. Comparing this passage with one in the sixth lecture, in which Mr. Wells implies that his adoption of the antiseptic method was retarded by the want of some experiments on animals which he would have liked to have made, we think that if he apologises for anything, it should be for having so little availed himself of this means of interrogating nature.

A topic upon which the lecturer's remarks are very interesting, is that of the antiseptic system. Hearing and seeing the great results which had attended this method, Mr. Wells thought it his duty to try it; but accidental circumstances prevented his doing so at the time that he had intended, and, going on in his old way, his results became even more brilliant than had attended the antiseptic system elsewhere, and were not subsequently outdone by the new system in Mr. Wells' own hands. This forms an instructive commentary upon the doctrine of *contagium vivum*, as expounded by Dr. Roberts at Manchester. To generate disease, there are not only needed morbific germs, but a soil in which those germs may live and propagate. Listerism (as it is called abroad) aims at, and succeeds in, destroying the germs. But if, by scrupulous cleanliness, these germs can be deprived of any soil in which they can thrive, Listerism is superfluous. This view is borne out, not only by Mr. Wells' experience, but by Mr. Callender's statistics of amputations. Those hospitals in which Listerism has worked the greatest change, have been those in which, prior to its introduction, the principles of surgical hygiene have been the least attended to. Safety from wound-poisoning lies in either plan, the greatest security being obviously in the combination of both. We should like to call attention, but have not space to do more, to Mr. Wells' most judicious remarks upon the administration of stimulants after operation. We should also like much to have Mr. Wells' opinion of Battey's operation; for the sake of this, we could even have spared Lord Selborne's calculations, which we fancy we have heard before.

And with respect to uterine tumours, Mr. Wells omits to answer what seems to us the vital question with regard to them: what are the circumstances which render the abdominal removal of a uterine fibroid justifiable? There is one vast difference between these growths and ovarian cysts. Ovarian tumours tend to death: uterine tumours, as a rule, do not. Hence the rule of practice must greatly differ. We should like much to have heard what Mr. Wells thinks on this point.

The only criticism we have to offer upon the lectures, as a whole, is to suggest whether an excess of modesty and scientific caution has not led the speaker to confine himself too much to what he himself has seen, done, and proved. We think there are points, some of which we have indicated, upon which the profession would have greatly valued an expression of Mr. Wells' opinions, even had time for them been found by the exclusion of some of the historical and anecdotal matter. But we take the lectures as they are, and thank Mr. Wells for his thorough, genuine work in the collegiate chair.

THE WEST LONDON HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

The population of the province of houses known by the collective name "London" is so vast, and increases by so many thousands every year, that there must arise now and then a need of additional hospital accommodation, either by the enlargement of existing hospitals or the establishment of new ones in the growing districts of the metropolis. We are therefore unwilling to object to the establishment of a new charity of this kind without strong reasons for so doing. But at the same time it must be admitted that "charity" may so easily be abused, and is such a convenient cloak for the covering of lower motives, that every appeal to the public for the support of a new hospital ought to be very closely examined and criticised. It may be justified by the fact that no hospital affording similar aid exists in or near the district in which the new one is to be placed, or by a well-grounded expectation that the new institution will contribute distinctly to the advancement of medical science. We are obliged, however, to confess that we have failed to discover any sufficiently good and patent reason for the establishment of the "West London Hospital for the Paralysed and Epileptic." We feel bound to approve of it if possible, for it is honoured and commended to the public by the patronage of her Royal Highness the Princess of Wales, and it has a *large* "consulting" staff of men of well-won distinction in the profession. And not being able to commend it, we should be glad to take no notice of it at all, did not the pretensions of its promoters provoke criticism.

Is this new Hospital really needed, either where it is placed, in Welbeck-street, or at all? Looking at its title, it appears to us that it certainly is not called for in the situation that has been chosen for it. It may perhaps be contended that, *literally*, no similar charity already existed in "West London"; but the "National Hospital for the Paralysed and Epileptic" has long been established in "West Central" London; and the "Hospital for Epilepsy and Paralysis," in Portland-terrace, Regent's-park, is certainly not far from Welbeck-street. It is said that the new Hospital is intended especially to provide for the treatment of paralysed infants and children under ten years of age; and had it been established for that purpose only, a good *raison d'être* would perhaps have been supplied, and it might have been welcomed, as has been that excellent charity the "Hospital for Hip-Disease in Childhood." But the establishment of a special ward for "paralysed children" is only one, and the fourth in order, of the objects of the new Hospital. Others of the "distinctive" features of the new charity appear either very doubtful or distinctly objectionable. We are unable to recognise the advantage to epileptics of the "distinctive feature" that they are to be treated as "out-patients" only. Most medical men would consider, we imagine, that the quiet, the discipline, the hygiene, and the improved diet, of residence in Hospital are very important aids in the treatment of epilepsy; and would at any rate lament or excuse the absence of such help, rather than throw it away and boast of doing so. The promoters of this new charity further boast that one of their objects is "to avoid the pauperising tendency of entirely

gratuitous relief by permitting THOSE PATIENTS WHO ARE ABLE to contribute a small weekly or monthly sum towards the expenses of their treatment." The "ordinary hospital," they say, "draws no distinction between absolute pauperism and comparative poverty," and, in administering relief to a class such as small tradesmen and artisans, "perpetuates indiscriminate almsgiving in its worst form and on a gigantic scale." There seems here to be a rather convenient forgetfulness of the fact that at not a few of the "ordinary hospitals" systems have been adopted for sifting the applicants for gratuitous relief, and refusing it to those who from their circumstances ought to be able to pay for medical aid; but, passing that by, what is the charm that is to save the pattern Hospital from working the terrible mischief that "ordinary" hospitals cause? "*The really indigent* are immediately and gratuitously treated," but "patients who are able are expected to contribute a small sum, *the applicants themselves assessing the amount of their contribution.* This payment varies with the ascertained ability of the patient to make a contribution, and very rarely exceeds a shilling a week"! We cannot but wonder whether any member of the Medical Staff of the Hospital, or even of the Committee of Management, can really believe that this permission to make a contribution of "very rarely more than a shilling a week" will prevent tradesmen and well-to-do artisans from obtaining from their charity the medical aid for which they could well afford to pay a general practitioner. The system will much more probably perpetuate under a very flimsy cloud the worst abuses of hospital charity.

We have derived our information about the new Hospital from a published "report of proceedings at the opening meeting of the West London Hospital for the Paralysed and Epileptic"; and there are some other noteworthy things in that report, besides the points upon which we have already commented. On the Consulting Staff of the Hospital are Drs. Broadbent, Crichton Browne, and Lockhart Clarke, Mr. Callender, and Mr. Brudenell Carter; but not one of these gentlemen appears to have attended the opening ceremony, unless indeed they are included among the "etc." that follows the names of those who were present. Only two gentlemen seem to have spoken—the Chaplain, whose speech we do not purpose to notice; and Dr. Tibbits, in one place called the "Senior Physician to the Hospital," and in another the "Honorary Medical Superintendent." The Senior Physician was speaking to a lay audience, but, even allowing for that, we must confess to a feeling of surprise at finding him say, in speaking of "infantile paralysis," that "if proper treatment is adopted *in time*, and before the wasting (of the affected muscles) has advanced too far, the greater number of these cases admit of cure." Do any of the eminent "Consulting Physicians" to the Hospital endorse this statement sent forth to the public? We think that men who have had the largest experience in the treatment of true "infantile paralysis" take a very different and much more gloomy view of the probable results; and such a statement does not help one to at all a hopeful view of the probability that the new Hospital will assist to advance the science and art of medicine.

The working Medical Staff consists of two Physicians. Dr. W. Wakefield, the Junior Physician, we know nothing whatever about; he is, we confess, to us "an unknown quantity," and therefore may be a great power—"*omne ignotum pro magnifico est.*" Dr. Tibbits is known as a practised medical electrician. The "Consulting Staff" are very numerous, and Dr. Tibbits is pleased to say: "We, the working medical staff, possess that which in our battle with disease, as in more material conflicts, is of incalculable importance—*a vast reserve power*, for our labour will be lightened by possessing a consulting staff whose reputation is not merely local, but European." This is very pretty—almost poetical—and may perhaps be supposed by the public to mean a great deal: but what is it really worth? A consulting staff is always ornamental rather than useful; and all the gentlemen on this one are always and fully engaged in the battle with disease elsewhere. And, indeed, all things considered, one is, on looking at the name of each of them, irresistibly reminded of the well-known exclamation in one of Molière's plays—"Que diable allait-il faire dans cette galère?"

THE WEEK.

TOPICS OF THE DAY.

THE Tithes Commutation Bill promoted by the Governors of St. Bartholomew's Hospital, which has already passed through the Lords, was last week considered by a Select Committee of the House of Commons. The Bill, it will be remembered, provides that in place of the present rate of 2s. 9d. in the pound, a fixed rate shall be levied, viz., from the present time to 1882 an annual sum of £1100, during the following five years £2650 annually, and thenceforward £2200 annually. The rates are to be levied by the churchwardens of Christ Church, Newgate-street, and to be paid by them to the Governors of St. Bartholomew's Hospital. Counsel appeared on both sides, and in the course of the discussion the Rev. Michael Gibbs, Vicar of Christ Church, was called as a witness. He stated that a large majority of the parishioners were in favour of the measure, but he declined to give his personal opinion as to its merits. Finally, the Committee ordered the Bill, with some slight amendments, to be reported to the House.

A singular accident recently happened at the Barton Railway-station, Hereford. A large travelling-tank full of creasote, which was being conveyed by luggage-train, by some mischance burst whilst the train was standing at the station. The drains on the line quickly conducted the creasote into the Wye, which runs close by, and as a consequence large quantities of fish were immediately killed. Fortunately the water-supply of the town is drawn from a part of the river well above the polluted source, but Dr. Sandford, the Medical Officer of Health for Hereford, immediately telegraphed to Ross, much lower down the stream, where the water-supply must have been seriously affected by the sudden introduction of this unsavoury compound into the river.

The "coffee and cocoa house" movement is gradually extending itself all over the country, and it remains to be seen whether this praiseworthy effort, on the part of those who recognise the importance of endeavouring to wean the masses from over-indulgence in strong drinks, will be rewarded with ultimate success. Last week one of these houses was opened in Leamington by Lord Leigh, Lord-Lieutenant of Warwickshire, in the unavoidable absence of the Duke of Westminster, who was detained in London by attendance on the House of Lords' Committee on Intemperance. In the course of his opening address Lord Leigh remarked that thirty years' experience as a visiting justice had convinced him of the intimate connexion between crime and drink, and had consolidated his opinion that but for the latter the gaols would be empty. He expressed a hope that the day was not far distant when the working-man would be able to enjoy his liquor rationally, but in the meantime he cordially approved of total abstinence.

At the annual meeting of the Psychological Society which was held last week at the Royal College of Physicians, Pall-mall, Dr. J. Crichton Browne, the newly elected President, delivered an inaugural address, in the course of which he

drew attention to the satisfactory character of the report of the Select Committee on Lunacy Law. On the whole, he held it was very questionable whether isolations of personal liberty could be more effectually guarded against than by the rules that should now regulate every consignment to an asylum. The law of lunacy was, however, capable of improvement in other directions, but he trusted that the demand that had arisen for a Royal Commission to inquire into the subject would not meet with favour, at least for many years to come. What was really wanted was an era of tranquillity; those connected with asylums should, in short, be allowed an interval of repose, so that they might spend their time in the investigation of nervous and mental diseases. The machinery for the supervision and control of asylums had been found to be satisfactory, and further inquiry in that direction would, at all events, be needless. He could not, therefore, but regret the proposal made in Parliament to introduce a new body in the control of our public asylums, which were improving year by year, and were at the present time patterns to Europe and the world. The addition of poor-law guardians to their visiting committees would increase the difficulties of the officers connected with them, while the general tendency would be to drag down asylums to the workhouse level. He trusted if the County Government Bill were re-introduced the management of asylums would be excepted from its provisions. If anything new in the way of administration were required, a system such as that which now regulated prisons would be far preferable.

The Hackney Guardians have recently had under consideration the necessity for an enlargement of the Union infirmary accommodation, and decided, by twelve votes to six, to purchase an adjacent plot of ground, known as the Castle House Estate, at Homerton, the intention being to build upon the land thus acquired an extensive infirmary for acute cases. The cost of the land and the new buildings has been estimated at from £15,000 to £25,000.

Surgeon-Major Elkington, of the Grenadier Guards, who has had medical charge of the National Rifle Association Camp at Wimbledon during the recent meeting, assisted by Surgeon Pocklington, 1st A.B. Surrey Volunteers, in his report to the Council on the health of the camp during its existence, states that the total number admitted into hospital was twelve, of which the only case requiring notice was that of a marine, whose great toe was accidentally crushed and had to be amputated. A volunteer was also admitted to hospital suffering from measles; and a case of sudden death occurred from the rupture of a blood-vessel. Of the 155 cases treated out of hospital there was nothing particular to report. With the exception of diarrhœa during the first week, the sanitary condition of the camp was most satisfactory during the meeting.

We last week recorded the action of the London, Brighton, and South Coast Railway, in providing iced water for their passengers, as an example worthy of being followed by other companies, and we are therefore happy to be able to state that the Midland Railway Company have given notice of their intention to supply travellers on their system with iced water gratis. Passengers will only have to make a request for this luxury at any of the Company's own refreshment-rooms, and they will be immediately supplied with it.

The *Sanitary Record* says:—An extraordinary fatality in one house and family at Finchley is recorded by Dr. Saunders in a report recently presented to the Barnet Rural Sanitary Authority. During the year 1877, one child died of diphtheria at this house; two more were ill with the same disease, but were removed, and recovered; another child died of erysipelas; and a third died of phlebitis. The water used for drinking purposes was procured from a shallow well, and was polluted. The house itself was situate in, and formed part of, the enclosure of a farmyard, which was surrounded by buildings on all sides, and contained the usual amount of farm-yard refuse, but with less chance of the air (which must be rendered impure by the manure, etc.) becoming diluted. Dr. Saunders mentions this case particularly, because he thinks it very desirable to break down the tradition that familiar stinks, such as from farmyards and certain offensive trades, are harmless. The cases of diphtheria which have happened through his entire district have every one been under the influence of impure air, although from sources not unusual, and therefore little thought of.

The reports presented on Saturday last at the usual fortnightly meeting of the Metropolitan Asylums Board showed that the patients remaining under treatment in the various hospitals for small-pox under the control of the Board numbered 126, or six more than the number recorded as remaining at the termination of the preceding fortnight.

The report of the Nightingale Fund for the year 1877, dated from St. Thomas's Hospital, shows that on January 1, 1877, there were 29 probation nurses in the school at St. Thomas's Hospital, besides 3 who, having previously completed their training, were still disengaged; 45 were admitted during the year; and of the whole number of 74, 27 completed the usual course of training and received appointments, in addition to two of the three above mentioned, 1 left without any engagement, 8 resigned, and 7 were discharged as unsuitable for the work, leaving 32 probationers in residence at the commencement of the present year. The financial position of the Fund continues satisfactory, the report showing that a balance of £1853 was carried over after paying all expenses.

Vice-Chancellor Bacon has just granted an injunction in the case of Brooke *v.* Wigg, to restrain the defendants from carrying on their works to the detriment of the plaintiff's estates and crops. The defendants were owners of a manufactory in Cheshire which had originally been erected for the manufacture of creasote, but was now used as alkali works. In addition it was asserted that the defendants had carried on vitriol, copper, soda, and other works—the fumes from which were deadly to vegetation—without using the proper means for condensation. The principal defence of the defendants was that, besides their works, there were numerous others which had been carried on for years in the neighbourhood of the plaintiff's estates without complaint; they admitted that deleterious vapours had escaped from their works in rare and exceptional circumstances, but they denied that such damage was continuous. The Vice-Chancellor, however, ruled that if the plaintiffs had suffered from other manufactories that was no reason why they should suffer more from the defendants' works, and on those grounds he granted the injunction sought for.

At the commencement of the present week the Metropolitan Hospital Sunday Fund collection was stated to have reached the sum of £24,200, and, as all the principal amounts should by this time have been paid in, it may be assumed that the outside total has nearly been reached. We believe that the above total includes a sum of about £1000 which was carried over from the collection of 1877, but, under any circumstances, it shows the smallest results since the introduction of the movement into the metropolis. It remains to be seen what will be the next step of the promoters to insure a more general and extended support.

INTERNATIONAL CONGRESSES AT PARIS.

Among the numerous Congresses to be held in Paris whilst the Exhibition is open are two which more immediately

concern the medical profession. One of these is termed "The International Congress of Hygiene," and the other "The International Congress of Psychological Medicine." The former opened its session on the 1st of the present month, and it is expected to remain sitting until the 10th; the latter is advertised to meet from August 5 to 10. Among the names of the Committee of Organisation of the Hygienic Congress we see those of many of the leading members of the profession in Paris, and we understand that many hundreds of medical men from all parts of Europe have signified their intention to be present. A programme has been drawn up, by which we find that it is intended to submit six principal subjects for the consideration of the Congress. A committee of investigation has been appointed in connexion with each of these subjects, and six elaborate reports have been issued, which are intended to form the bases for the discussions. The subjects chosen are as follows:—1. The Hygiene of New-born Children, with special reference to the causes of the very large infant mortality in France and some other countries; the report on this question is signed by MM. Bergeron, Bertillon, and Marjolin. 2. On the Pollution of Rivers, whether by the refuse of manufacturers or by sewage; report signed by MM. Schlœsing, Durand-Claye, and Proust. 3. The Hygiene of Food; report signed by MM. Bouley, Locard, Bouchardat, and Gautier. 4. The Dwellings of the Working-Classes; report signed by MM. Trélat and Dumesnil. 5. The Hygiene of Trades; MM. Gubler and Lapias. 6. Prophylaxis of Contagious Diseases; MM. Fauvel and Vallin. Each of the reports is in itself a small book, and they all contain a vast amount of information on the various subjects treated of; it will be seen, moreover, that they have been drawn up by men of the first reputation in France. A day is to be devoted to the discussion of each of these questions, and the rest of the time is to be occupied by excursions to various objects of interest, amongst which are the sewers of Paris, and all the works connected with the disposal of sewage; the new model hospital of Ménilmontant, etc.

Among the names of the Committee of Organisation for the Psychological Congress, we notice those of MM. Baillarger (President), Dumesnil, Falret, and Lasègue. Discussions are to be held in connexion with the following subjects:—1. The Administration of Asylums, their legislation and statistics; 2. Mental and Nervous Pathology; 3. Medical Jurisprudence. The special point in connexion with the first question to which the attention of the Congress will be invited is the method of dealing with criminal lunatics. The pathological subject chosen for debate is general paralysis, with special reference to its clinical varieties; whilst the chief question in medical jurisprudence is to be the consideration of the medico-legal aspect of impulsive and transient insanity. As with the Hygienic Congress, the discussions will be varied by excursions, which in the present case will take the form of visits to the chief lunatic asylums in the neighbourhood of Paris.

All the subjects laid down for consideration in these two Congresses are such as concern all countries equally, and we may hope that permanent good will result from the attention which will be thus called to some of the most difficult, but at the same time most important, problems of the present day.

MEDICO-PSYCHOLOGICAL ASSOCIATION.

The thirty-third annual meeting of the Medico-Psychological Association was held on Friday, July 26, at the Royal College of Physicians. Dr. Crichton Browne succeeded Dr. Blandford as President for the year. Dr. Rayner, of Hanwell, was appointed General Secretary on the retirement of Dr. Rhys Williams (the Scotch and Irish Secretaries being re-elected); Dr. Paul was re-elected Treasurer; Dr. Clouston was re-elected Editor; and Dr. Maudsley succeeded by Dr. Hack Tuke and Dr. Savage. In the afternoon an eloquent and thoughtful address was delivered by Dr. Crichton Browne, referring to the losses of the Association by death, and to the satisfactory condition of lunacy as evidenced by the Parliamentary Commission. Dr. Browne maintained that quiet only was now required, and not agitation. Referring to the large field recently opened by investigators in the nervous system, he painted a glowing picture of the future, when the function of the alienist would be to prevent, and not to cure. Papers were read by Dr. Hack Tuke on "Medical Treatment in France," and by Dr. Savage on "A Strange Malformation of Head and Genitalia."

A CASE OF SNAKE-BITE.

We take from the *Southern Indian Post*, through the *Madras Weekly Mail*, the following interesting account of the successful treatment of a snake-bite. It seems most probable that in this case, though the symptoms were severe, the aggressive snake was not a cobra. It is said that the bite of a cobra is identified by two small punctured wounds, about one inch apart, inflicted by the striking-fangs, or poison-teeth, of the upper jaw; while the dhaboia and some vipers inflict generally four small wounds, arranged in two rows, and non-poisonous snakes a greater number of wounds arranged in four rows. In this case, as three distinct wounds and a very indistinct one were found, the snake was probably a viper:—A medical student of the Madura Local Fund Board's medical school, while out on the field facing the range office, heard the hiss of a snake, and immediately took to his heels. But he found to his astonishment that the snake had inflicted a wound on the back of his right foot. The wound consisted of three small cuts running in a parallel direction to each other, from each of which some blood was escaping. Promptly putting a ligature above the ankle, he hastened to the home of the Civil Surgeon, who united the three incisions by a deep flesh-cut, and favoured bleeding by bathing the part in tepid water for about thirty minutes, and then walked the patient up and down the verandah. His skin at this period was very cold, and freely bathed in perspiration, while his pulse was full and regular. He seemed to be in a state of great mental anxiety, and frequently begged to have his pulse felt. He was kept walking for two and a half or three hours, during which time one ounce of brandy and thirty drops of the strong solution of ammonia were administered every half-hour. At the end of the third hour he was allowed to lie down, continued very restless for some time, and at last fell asleep, and awoke in the morning quite well. The case justifies the plan so strongly advocated by Sir Joseph Fayrer, namely, that the best treatment in cases of cobra-bite is—(1) a ligature above the seat of bite; (2) a free incision; (3) the free use of stimulants, as brandy and ammonia; and (4) to adopt such means as shall encourage bleeding from the part incised.

THE LONDON TEMPERANCE HOSPITAL.

In this, the largest city in the world, and in a country where freedom of opinion is an established fact, there is room and opportunity for every section of thinkers to carry out their own peculiar views. Thus, the London Temperance Hospital in Gower-street, whose promoters affirm "that the non-alcoholic principle of treatment is as scientifically sound as it is morally safe," have issued their fifth annual report for the year 1877, which shows that 130 in-patients and 1272 out-patients have been received during the year under notice. The report further states that the medical and surgical cases of a severe and serious type have been quite equal to the average proportion in other hospitals, and such as,

according to traditional usage, would have been treated with a liberal supply of alcoholic liquors; but the absence of these has not been considered by the visiting physicians to have been attended with any disadvantage, but to have conduced to recovery, or to an abatement of disease. That those who prefer to be treated in sickness on temperance principles should have an institution to which to betake themselves on emergency is only right, and to such it will be matter of rejoicing to learn that it has been resolved to reconstruct the Temperance Hospital so as to accommodate at first fifty in-patients, and subsequently 100, whilst the facilities for attending to the out-patients will be largely increased; and it is hoped that this increased accommodation will be available to the public before the next anniversary meeting.

OIL OF ROSEMARY.

Professor Köhler and Herr Schreiber, of Halle, have published in No. 23, *Centralblatt Med. Wiss.*, the results of some experiments on the physiological action of oil of rosemary, which may turn out to be of great therapeutic value. The chief action of the oil is on the cerebro-spinal nerve-centres. The blood-pressure falls, owing to paralysis of the vaso-motor centre in the medulla, but the heart is unaffected, and there is only retardation of the pulse if the drug is pushed to its utmost extent; in the latter case the respiratory centre becomes ultimately paralysed. Reflex excitability is increased by small and diminished by large doses of the oil, or by the repeated injection of small ones. Large doses antagonise the pathological irritability induced by strychnia. The most important effect of the oil, however, is on the temperature, though for this purpose it must be inhaled in the form of vapour, and not given by the stomach. By the latter form of administration only a temporary reduction of about 2° centigrade can be obtained; whereas by inhalation the temperature may be reduced without difficulty *as much as* 8°. If the same effect can be produced on the febrile human subject without the development of other poisonous symptoms, the inhalation of oil of rosemary may prove to be a useful addition to our antipyretic remedies, and we hope to hear before long that the experiment has been tried and succeeded. Köhler and Schreiber did not find the abortive action which has been ascribed to he oil confirmed in experiments on rabbits. Its stimulant effects excite peristaltic action of the bowels, and produce slight diarrhœa. The oil appears to be diuretic if given by the stomach or by inhalation, and the urine passed by both animals and men under these circumstances smells distinctly of violets. Its prolonged administration *per os* for many weeks may produce a slight degree of fatty change in the liver, and nephritis, with albumen and casts in the urine. The irritability of the muscles is never affected by poisoning with oil of rosemary, nor has any alteration in the size of the pupils been observed.

PROVIDENT DISPENSARIES IN BIRMINGHAM.

The Committee, of which Mr. Sampson Gamgee was President, and Messrs. James Sawyer and D. H. Monckton were Vice-Presidents, appointed to report on the most just and practicable plan of establishing provident dispensaries in Birmingham, have just delivered the result of their investigations, which have not terminated satisfactorily. The report states that the Committee have clearly and unequivocally maintained a definite and, as they believe, just and unassailable principle. If provident dispensaries are to fill their proper place, and not become another organisation for the encouragement of improvidence and deception, a strict and general inquiry into the methods of hospital administration, with a view to the checking of abuses, must precede the establishment of such dispensaries; the adoption of efficient measures on the part of the executive of each of the medical charities must commence at least concurrently with the opening of the proposed institutions. The experience of Manchester is quoted as conclusive as to the necessity of proceeding most cautiously, if existing evils are to be remedied. Although in that city guarantors have for some years paid about £1000 per annum in aid of provident dispensaries, the members subscribing to them have largely diminished, and the scheme has thus failed to commend itself to the local members of the medical profession. The Town Hall Committee of Birmingham were anxious to establish the provident dispensaries first, leaving the medical charities to deal with hospital abuses afterwards as they might think fit; but to such an arrangement the present Committee would not agree. The report concludes by observing that, as there is no present prospect of this joint organisation of the medical societies being of service, the present Committee have tendered their resignation. If the Town Hall Committee, or any other body, at any future time wish to ascertain the opinion of the profession locally on the questions which have been under consideration, they will be able to consult the councils to which this Committee belongs, viz., the Birmingham and Midland Counties Branch of the British Medical Association, and the Midland Medical Society.

THE PHYSIOLOGICAL ACTION OF PURGATIVES.

This subject has recently been reinvestigated by L. Brieger (*Archiv für Exp. Pathologie*, viii.), on the basis of Moreau and Brunton's experiments. Large dogs, which had been kept a day or two without food, were used. They were chloroformed, and then a loop of small intestine was ligatured in two places, and thoroughly washed out with warm water through small openings made just to the inner side of the ligatured points. These openings were then carefully closed with sutures, and the isolated loop of gut was divided into three parts, each from twenty to twenty-five centimetres long. The experimental purgatives were then slowly introduced into the two outside compartments, the central one being left for comparison. The animals were generally killed, and the parts examined, about four hours and a half after the injection, but sometimes later. Dilute solutions of saline aperients (sulphate of magnesia, common salt) were absorbed without causing any change in the bowel; but as the strength of the solution was increased, the ligatured bowel contained more and more clear yellow alkaline liquid, containing flakes of mucus, intestinal epithelium, and mucous corpuscles. Drastic drugs (croton oil, colocynth), caused the secretion of a bloody liquid, or even set up diphtheritic inflammation of the mucous membrane, while laxatives such as senna, rhubarb, aloes, gamboge, and castor-oil invariably caused firm contraction of the muscular coats, the injected drug, its watery parts being absorbed, being found spread over the whole mucous membrane, which was *not* inflamed. The result was the same if the animals were killed as late as sixteen hours after the injection. It thus appears that laxatives mainly act by exciting peristaltic contraction of the intestine; whereas salines, as was previously known, attract water into the bowel, and also induce abundant secretion from the intestinal glands. On the other hand, drastics in small doses have a similar action to laxatives, but in large ones they cause inflammatory exudation and hypersecretion. Brieger's results, therefore, differ from those of Moreau and Brunton in the *rôle* he assigns to the laxatives. If we remember rightly, the latter observers found that the various purgatives used agreed in producing a copious transudation of

watery fluid into the bowel, and this Brieger only admits in the case of the saline and drastic aperients.

DEATH OF DR. WILKINSON, OF MANCHESTER.

We deeply regret to have to announce the death of Dr. M. A. Eason Wilkinson, of Manchester, the President of the British Medical Association. With the exception of a slight cold he had been in his usual health until about ten days previously, when he was attacked with bronchitis. At first his condition did not cause his friends any alarm, but presently pneumonia supervened, with symptoms of heart-failure, and he died at the age of sixty-four, on Friday evening, July 26. All who attended the meeting of the British Medical Association at Manchester, last August, will have a pleasant recollection of the courtesy and hearty hospitality of its kindly and genial President. In a very few days his year of office would have expired, and it would have been his agreeable duty to introduce his successor, Dr. Falconer, of Bath, the President-elect. The sad event will necessarily cast a shadow over the forthcoming meeting at Bath—the first of these meetings for many years at which the familiar face and figure of the late President have been absent. In his own city Dr. Wilkinson was universally esteemed. For a long period he had held the position of Senior Physician to the Manchester Royal Infirmary and Fever Hospital; and he was best known to the public from the deep interest he took in the welfare of these institutions.

DEATH OF DR. BARTELS.

Professor Bartels, of Kiel, a distinguished physician, died in the latter part of June. He made an especial study of renal diseases, and in England he will probably be best known by the volume on the Kidney in Ziemssen's "Cyclopædia of Medicine," and by an excellent lecture on the Diffuse Inflammations of the Kidney in Volkmann's *Sammlung klinischer Vorträge.*

MEDICAL PARLIAMENTARY AFFAIRS.

Small-pox.—Mr. Sclater-Booth, in reply to Dr. Cameron, said a man, since dead of small-pox, was allowed to be for ten hours in the public road, although he had applied for medical relief. The medical officer provided suitable covering for him, and provided him with tea and brandy before removing him to the workhouse. He was not removed at once because of the danger of infection.

Medical Act Amendment Bill.—Lord G. Hamilton, replying to Dr. Playfair on Monday last, said that in consequence of the opposition to this Bill its chances of becoming law this year were daily diminishing. He had placed some amendments to the Bill on the paper, to show what course the Government intended to pursue. It would depend upon the effect of these amendments on the opposition members what would be the fate of the Bill.

Infantile Mortality at Athens.—Dr. Zinnis, of Athens, presented to the Académie de Médecine a return of the mortality of children in Athens during the years 1863-72, the population being about 65,000. The deaths at all ages amounted to 15,096, and of this number 5533, or 36·6 per cent., took place in children less than two years old. The causes are thus distributed:—Debility in infants born prematurely, 204; eruptive fevers, 205; cerebral diseases, 870; diseases of chest, 1257; various diseases, 1066; diarrhœa, 1507; marasmus consecutive to diarrhœa, 424. Of the 1507 cases of diarrhœa, 533 took place in infants of less than six months of age, and 974 in children between six months and two years. During the winter six months (November to April) there were 320 deaths, and from May to October there were 1187. The two months of greatest heat, June and July, witnessed 583 deaths, more than a third of the total number. The mortality was fifteen times greater in the month of June than in the month of March.—*Bulletin de la Académie*, July 2.

FURTHER GOVERNMENT AMENDMENTS ON THE MEDICAL BILL.

The following are the chief amendments of which notice has been given by Lord George Hamilton, to be proposed by him on the Medical Act (1858) Amendment Bill, in Committee. We give the references for the benefit of those of our readers who may possess a copy of the Bill:—(Clause 4, page 2, line 22, at beginning of clause, insert)—"A person who has obtained a qualifying certificate under this Act from a medical board for any part of the United Kingdom shall, for the purpose of registration, obtain, except in case of such refusal as hereinafter mentioned, some medical diploma or diplomas, whether degree, membership, associateship, or other, from one or more of the medical authorities for the said part of the United Kingdom. Any such person may apply to one or more of the medical corporations for the said part of the United Kingdom for such diploma or diplomas (each of which is in this Act referred to as a registration diploma), and if refused such diploma or diplomas, either without any ground being assigned, or on the ground of sex, or on any ground except non-compliance with a scheme under this Act, or on some ground which would justify the erasure of the name of such applicant from the Register, shall be entitled to be registered in the Medical Register without obtaining a registration diploma. Nothing in this section shall oblige any medical corporation to grant a registration diploma to any applicant as aforesaid; and a person obtaining a registration diploma from a medical corporation, shall not, except so far as the medical corporation otherwise in their discretion provide, be entitled to any share in the government, management, or proceedings of that corporation, or to any rights or privileges in connexion with that corporation."

(Clause 13, page 7, line 40, after "terms," insert)—"of medical students who have begun their professional studies before the passing of this Act, and."

(Clause 13, page 8, line 2, leave out from "and" to end of line 4, and insert)—"may make such distinctions (if any) as may be judged proper between the cases of men and women, so, however, that the examinations of men and women be in all general respects equal."

(Clause 13, page 8, line 4, after sub-section 4, insert as new sub-sections)—"(5.) If at any time after the commencement of the joint board system there are not in force in any part of the United Kingdom examination rules under this Act, the General Medical Council shall forthwith cause to be framed and approve examination rules under this Act, and such rules shall have effect as if they had been framed by the medical authorities with the approval of the General Medical Council. (6.) If at any time it appears to the General Medical Council that the examination rules for the time being in force in any part of the United Kingdom require to be changed by revocation, alteration, or addition, they may by notice served on the medical authorities for that part of the United Kingdom, or on the medical board on behalf of those authorities, require that examination rules for changing the said examination rules, either generally or for the particular purpose specified in the notice, shall be sent to the Council for approval, and within six months after the service of such notice the medical authorities of that part of the United Kingdom, or the medical board on their behalf, shall comply with the notice, and the General Medical Council may approve, with or without modifications, as they think fit, any rules sent in accordance with the notice. (7.) If the rules are not sent in conformity with the notice within the said six months, the General Medical Council may cause such examination rules as they think expedient to be framed, and approve the same, and the same shall have effect as if they had been framed by the medical authorities with the approval of the General Medical Council."

(Clause 15, page 9, line 33, after "rules," insert)—"or to conduct the examinations in a satisfactory manner."

(After Clause 18, insert the following clause):—

[Power of medical authorities to grant medical diplomas.]

For the purpose of the provisions of this Act with respect to registration diplomas, a medical authority, without prejudice to any other power vested in them, may from time to time, by a statute or by-law made with the approval of the

Privy Council, constitute a new medical diploma to be granted by them as a registration diploma to persons who have obtained qualifying certificates from a medical board under this Act, but that diploma shall not, except so far as the authority otherwise provide, confer any rights or privileges in connexion with the said authority, but only the right to be registered in the Medical Register.

(Leave out Clause 22.)

(Page 23, after the Second Schedule, insert the following schedule):—

THIRD SCHEDULE.

Form of Register.

Name.	Residence.	Date of Registration.	Registration Diplomas.	Higher Diplomas.
Jones, Arthur...	16, High-street, Paddington	15th April, 1840	Mem. R. Coll. Surg. Eng. 1839 Lic. Soc. Apoth. Eng. 1838	Fell. R. Coll. Surg. Eng. 1842.
Jortin, Edward	9, Princes-street, Edinburgh	15th February, 1880	Lic. M.S.M. Scot. 1880 Lic. R. Coll. Phys. Edin. 1880	M.D. Univ. Lond. 1881.
Judson, Evelyn	10, Greek-street, Birmingham	9th June, 1881	Lic. M.S.M. Eng. 1881	

THE PUBLIC HEALTH (IRELAND) ACT, 1878.

THIS measure, after a chequered existence as a Bill, extending over three sessions of Parliament, has at last passed both Houses, and may be treated as the Sanitary Code of Ireland. It was originally prepared and brought in, during the session of 1876, by Sir Michael Hicks-Beach, then Chief Secretary to the Lord-Lieutenant, and Mr. Gibson, the Attorney-General for Ireland, as a Bill "to *consolidate* and *amend* the Acts relating to public health in Ireland"; and these objects it very fairly fulfils in its present shape.

Drawn on the lines of the Public Health (England) Act, the new Irish Sanitary Code is in some particulars an improvement upon it, and the Government may be congratulated on having carried so useful and necessary a measure. To the untiring efforts of the Irish Medical Association, also, much credit is due for successfully urging upon the Government the just claims of the profession in relation to the sanitary administration of Ireland. Nor should we forget to mention that Mr. Charles Meldon, M.P. for Kildare, took a most active part throughout in fighting the battle of the Irish Medical Association, both in the House of Commons and before the Select Committee which considered the Bill in the summer of 1877. In May, 1877, a petition was presented to the House of Commons by the dispensary medical officers of the sister country, praying that the law might be altered in the following respects:—

(*a*) That a system of independent supervision, analogous to that which exists in England, should be established in Ireland.

(*b*) That proper remuneration should be provided for the performance of special sanitary duties, such as visiting the sick on shipboard, certifying for the removal of bodies of persons dead of contagious diseases, attending in court as professional witnesses.

(*c*) That the scale of remuneration then in force should be withdrawn; by this a sanitary authority could not allow to a dispensary medical officer, for his services under the Public Health Act, more than a fourth of his salary as medical officer of health, inasmuch as the remuneration so paid (which, in but very few instances, reached the maximum) proved inadequate, and caused widespread dissatisfaction; and

(*d*) That the title of "Sanitary Officer" should be changed to that of "Medical Officer of Health."

These points were urged on Sir M. Hicks-Beach by a deputation of the Association; and when the Bill was subsequently referred to a Select Committee of the House of Commons Dr. Grimshaw (then Chairman of Council of the Association) was deputed to represent the views of the Council to the Select Committee. This he did so successfully that, with the exception of the first request in the petition of the dispensary medical officers, viz., *independent supervision*, every other point has been conceded.

The Irish Medical Association has always strongly advocated the system of independent supervision, but has invariably been met with an official reply to the effect that the Local Government Board had the power already if they considered it necessary to exercise it; or, in other words, that it was a subject for administration, and not one requiring legislation. Sir Michael Hicks-Beach, however, informed the deputation that he did not deny that more supervision was required.

In the report of the "Local Government and Taxation of Towns (Ireland) Commission," dated February 15, 1877, the necessity of supervision is strongly commented upon, and reform in this respect is advocated.

In reference to the supervision question, it may be stated that Sir Alfred Power, the Vice-President of the Local Government Board for Ireland, in his evidence before the Royal Sanitary Commission, gave it as his opinion (in reply to question 11,971) that the staff of the Department Board would require augmentation in the event of obtaining additional control over sanitary affairs. It is the augmentation thus indicated, and which experience has shown to be necessary, that the Association still seeks to have effected.

The Viscount Powerscourt, at the request of the Council of the Association, placed the following amendment on the notice paper of the House of Lords, viz.:—

"The Local Government Board shall, from time to time, appoint so many fit persons as the Lords Commissioners of her Majesty's Treasury shall sanction, being practising physicians or surgeons, to be Inspecting Medical Officers of Health, to assist in carrying out the provisions of this Act, and may remove all or any of such officers and appoint others in their stead.

"There shall be paid to such Inspecting Medical Officers of Health such salaries as shall, from time to time, be appointed by the Lords Commissioners of her Majesty's Treasury, out of any moneys which may from time to time be provided by Parliament for that purpose.

"Within six calendar months after the passing of this Act, the Local Government Board shall divide the whole of Ireland into districts, for the purposes of sanitary inspection, and every such district shall be subject to the supervision of an Inspecting Medical Officer of Health."

But as the Government represented to him that the insertion of this clause would probably give rise to such opposition in the Commons as would imperil the passing of the Bill, Lord Powerscourt thought it unwise, at that late period of the session, to press the matter further, and accordingly withdrew the amendment.

As to the other concessions, we may state briefly that, with respect to *sanitary duties on shipboard*, Section 152 of the "Public Health Act, 1878," provides that "whenever the medical officer of health of any sanitary district performs any medical service on board ship, he shall be entitled to charge extra, at a rate to be fixed by the Local Government Board; and such charges shall be payable by the captain of such vessel, together with any reasonable expenses for the treatment of the sick." Whereas in this Bill, as first introduced, the words alluding to such payment ran thus:—"He shall be entitled to charge extra for such service at the general rate of his allowance for services for the union, district, or place for which he is appointed." This latter arrangement would have been most unsatisfactory, and would have permitted only a fee so ludicrously small as not to exceed, in many instances, *one penny a visit!*

Certifying for Removal of Dead Bodies.—Section 158 fixes a guinea as the fee for certifying for the removal of the body of a person dead of an infectious disease; whereas in the clause in the Bill, as first introduced, no provision was made for remuneration. Subsequently a fee of ten shillings was inserted, which, owing to the exertions of the Irish Medical Association, was raised to a guinea.

Remuneration for Evidence at Sanitary Prosecutions.—In Section 258, provision is made that the Medical Officer of Health is to be remunerated for giving evidence in court at sanitary prosecutions at a rate to be approved by the Local Government Board. In the Act of 1874 there was no provision of this kind, and this was felt to be a great hardship. The words in this section, "*unless it shall have been agreed that the duty of affording such attendance and assistance shall be included in his salary*," might possibly be overlooked

or misconstrued, and therefore the Council of the Association are desirous that every medical officer of health should be warned not to make any such compact, which would prevent him claiming his fee for attendance and evidence at court.

Withdrawal of Fixed Scale.—In Section 11 the scale, by which the fourth of his dispensary salary was the maximum the medical officer could receive for carrying out sanitary duties, has been withdrawn. This scale question was always felt to be the greatest grievance the medical officer suffered from. Comparing this section with the English Public Health Acts, it will be seen that no *fixed scale* of remuneration is sanctioned by the English Acts, the salary of each officer being left an open question to be decided on its merits. The withdrawal of the scale now enables a sanitary board, with the consent of the Local Government Board and the Treasury, to apportion suitable remuneration to a district medical officer of health on the merits of the case, which is the fair principle to go upon; and it is to be hoped that this power will be equitably exercised. We may add that the difficulty of having the scale abolished was almost insuperable.

New Title: Medical Officer of Health.—In Section 11, the title of Medical Officer of Health is conferred in the following words:—"The medical officer of a dispensary district shall be a sanitary officer for such district under the title of 'Medical Officer of Health.'"

Titles of other Sanitary Officers.—In Sections 87 and 59 respectively, the "Executive Sanitary Officer," and "Sanitary Sub-Officer," are respectively alluded to as "Clerk of the Sanitary Authority," and "Inspector of Nuisances." These alterations were advocated by the Irish Medical Association, in order that each official should have an intelligible designation, as was always the case in the corresponding Acts for England.

Notice of Interment to be given to Registrar of Deaths.—In Section 191, provision is made that a return, containing the name, address, date, and cause of death of every person who shall have been interred in each burial-ground, shall be made to the registrar of deaths for the district in which the death took place. This will secure a more complete registration of deaths than has hitherto existed.

The foregoing are the points in the new Act which more especially affect the interests of the medical officers of health. But there are many other admirable provisions. For example, Section 22 renders it compulsory on every urban sanitary authority to provide a map of the system of sewerage within its district; Section 140 obliges *every* sanitary authority to provide *suitable* conveyances for infected persons when being removed to hospital, "or other place of destination"; Section 142 imposes a penalty for "waking" the body of any person who has died of "any dangerous infectious disorder"; Section 145 imposes a penalty on persons who, in letting or *taking* houses, may make false statements as to infectious disease; Section 146 provides against the wilful spread of infection in schools.

The Act consists of 294 sections, and supersedes the twenty Acts of Parliament which, either wholly or in part, hitherto formed the Sanitary Code for Ireland. In concluding this notice of what is, undoubtedly, one of the most useful measures passed this session, let us hope that the Irish Local Government Board will see their way to provide at an early date that supervision by competent Inspecting Medical Officers without which any sanitary administration will, we are confident, prove a dead-letter in Ireland.

THE Camp of Instruction for the Engineer Volunteer service closed on Saturday, July 27, at Upnor, near Chatham. During the first week the camp was pitched in St. Mary's Vale, Chatham; and, considering the intense heat, the general health of the troops was good. The prevailing malady of diarrhœa was necessarily present, and a few cases of sunstroke were treated in camp and at Fort Pitt. Two accidents occurred, viz., dislocation of the humerus into the axilla, and a fracture of the fibula, during the progress of the earthworks on Chatham lines. The medical officer in charge during the first week was Surgeon Baines, M.D., 1st Middlesex Engineer Volunteers, who during the second week (the force being divided for the purposes of attack and defence) shared with Surgeon Pigeon, 1st Gloucestershire Administrative Battalion Engineer Volunteers, the divided supervision of the two camps.

FROM ABROAD.

Prolonged Deprivation of Water.

Dr. King, a surgeon of the United States Army, gives an interesting account (*Amer. Jour. of Med. Science*, April) of the effects which the deprivation of water for eighty-six hours produced on a detachment of cavalry (about forty in number) during a search for hostile Indians over a sandy district in July, 1877. Dr. King being only one of the party of relief, is only able to furnish his account as he derived it from the lips of the sufferers. Their mouths and throats were so dried and parched that they were unable to swallow bread, and even brown sugar would not dissolve. Many were delirious, and the little sleep that was obtained was disturbed by ever-recurring dreams of banquets and feasts, with delicious foods and drinks. They would probably all have perished but for blood which was obtained by killing the horses as they became disabled. And, although this was thick and coagulated on exposure, it seemed to them more delicious than anything which they had ever tasted. Coagulated as it was, it was only swallowed with great difficulty, and quickly produced diarrhœa. The men drank their own urine (which was scanty and deep-coloured) thankfully, first sweetening it with sugar. A few drank the urine of the horses. Dyspnœa came on, with a feeling of suffocation as if the sides of the trachea were closing; and they breathed through the nose, prolonging the intervals between the inspirations as much as possible. Their lips were covered with a whitish, dry froth, and had a pale, ghastly, lifeless appearance. Just before relief came the situation had become desperate, and they lost all confidence in each other, and harboured suspicions. When they reached water, several men were missing, and those who arrived were almost helpless—the so-wished-for water not seeming to benefit them at first. It seemed to be impossible to leave off pouring it down, although their stomachs would not retain it. As they filled themselves with the water it was vomited up, warm coffee being the only thing that revived them at all. Again and again was water imbibed to repletion without assuaging the insatiable thirst, this only being relieved as the remote tissues became supplied. The overpowering dyspnœa which threatened their existence was due to the persistent dryness, as only moist membranes allow the free passage of respiratory gases. The lungs were filled with the purest air, and yet they suffered from an almost overwhelming sense of suffocation. The greater power of endurance of the mule over the horse was very manifest; for while the latter could neither chew nor swallow grass, the mules grazed at every opportunity. The sensation of thirst was rendered the more intense by the dry state of the atmosphere, as the men were toiling over arid plains and elevated plateaus in a climate noted for its lack of moisture.

The total loss amounted to two men dead, and two missing, supposed to be dead; and in five or six days the troop was enabled to return to its quarters.

Hypodermic Injection of Chloroform.

Recurring to this subject at the Paris Hospital Medical Society (*Gaz. Hebd.*, July 26), M. Dujardin-Beaumetz felt rather disposed to disparage this procedure, observing that in the horrible pains of cancer chloroform did not give relief as morphia does, an abatement of suffering of short duration being obtained, but not sleep. Moreover, nervous subjects, and those addicted to alcohol, do not derive any general relief. Independently of the danger of chloroform injections when performed by inexperienced hands, we cannot be certain of obtaining the results proposed to be obtained. In reply, Dr. Ernest Besnier, to whom we are indebted for the introduction of these injections, observed that there are two points to be noted with respect to these objections. First, with respect to the procedure; and next, as to how far they are substitutes for morphia. M. Dujardin-Beaumetz admits that accidents occur only where the operation is badly executed; but surely the practitioner ought to learn how to perform it, and not reject a method which furnishes favourable results merely because its execution requires some attention. Two things are requisite: a good syringe, and good needles of different lengths, for it is obvious that those which

are employed for the face should be less long than those inserted into fleshy parts. The entire needle-canula must be introduced into the tissue separately, and then we should wait an instant to see that a droplet of blood does not issue, proving that we had entered a vein. In this case the operation should be made in another point, and only then should the syringe be adapted and the injection proceeded with. Care must be taken that the point of the needle be at a certain distance from its point of insertion; and by observing this precaution, Dr. Besnier, who has always employed the same syringe, has met with no accident, although he has operated in almost every region, including even that of the wrist. As to the comparison of the chloroform with morphia injections, he has only used them when these last could not be borne, or when it was desirable to avoid morphinismus. He has cured sciatica with them, which has resisted all other treatment; and they may be made without danger. M. Duguet observed that he had tried them in several cases of sciatica, but although he found that they gave temporary relief, they had to be repeated, and did not cure the disease. Dr. Besnier replied that the dose is of importance. He injects a syringeful first at the upper part of the limb, and then a second syringeful at the middle part, when the pain ceases. Next day he injects opposite the fibula. On each occasion from two to four grammes of chloroform are injected. Perhaps the best results are obtained in tic douloureux.

Hereditary Syphilis.

Prof. Parrot has of late been delivering some interesting lectures on this subject, which appear in the *Progrès Médical*, and of one of these, as summarised in the *Gazette Médicale*, July 20, on the indications of treatment, the following is an abstract:—

When an infant is born perfectly healthy in appearance, but one of whose parents is the subject of syphilis, there is a difference of opinion as to whether it should at once be submitted to appropriate treatment. Profs. Parrot, Roger, and others prefer to wait for the earliest manifestation of disease. The first symptoms, however, do not necessarily exhibit themselves on the skin or mucous membranes, for Prof. Parrot has indicated the presence in some cases of obstinate gastro-intestinal disturbance, resisting all hygienic measures, appearing in new-born infants brought up under the most favourable conditions possible, and only yielding to specific treatment. When the new-born infant is manifestly syphilitic, much will depend on its mode of treatment on the clinical forms of the disease. As in the adult, syphilis may from the time of its appearance put on a very serious or malignant form, and terminate fatally, so that action must be speedy. In other cases, on the other hand, there are merely some cutaneous or mucous manifestations of slight extent, and which are so much the less serious the later they appear. In this delayed form of hereditary syphilis, insidious in its progress, and which may give rise to the bony lesions termed by Prof. Parrot "syphilitic rickets," all the manifestations may be sometimes limited to the production of a small number of papular *syphilides*, disseminated over particular regions. In such cases the infants may be cured without the aid of any treatment, although the iodide of potassium will render signal service, and contributes in the course of time to the modification of the osseous lesions. But the case is far more serious when the syphilis is speedy in making its appearance; and if at the period of birth it has already manifested itself on the surface, the internal lesions will have become too advanced generally to allow of their yielding, and the most heroic treatment will in most cases remain powerless. In most cases we find syphilis manifesting itself at the exterior during the early weeks after birth, and we should then act without delay. The therapeutical opportunity will not so much depend upon the more or less considerable quantity of mercury or iodide that has to be administered, as on the epoch of the appearance of the syphilitic accidents, syphilis being dangerous in proportion as it is speedy in manifesting itself. Mercury is the remedy *par excellence*, and one on which we can always count. In ordinary cases internal treatment suffices, and acts rapidly enough, Van Swieten's *liquor* (corrosive sublimate gr. ss. ad ℥j.) being the best form for administering the mercury, and one well borne by infants. Of this, if the infant is robust, a teaspoonful may be mixed with twenty-five or thirty grammes of milk—or, what is preferable, syrup; the five or six teaspoonfuls of which the mixture will then consist being administered before the child suckles each time, in this way avoiding the gastric irritation which the medicine might otherwise give rise to. At six months of age two teaspoonfuls of the *liquor* may be given. The treatment, in spite of its rapid success, must be continued for a long time, the infant being kept under the influence of the remedy for twelve or eighteen months, or even two years if necessary—whenever the symptoms reappear on its suppression. Then, whenever the bones present any of the characteristic lesions, we should have recourse to iodide of potassium. Prof. Parrot, however, prefers the tincture of iodine, as given in this formula, viz.:—Tincture of iodine and syrup of orange-peel or syrup of gentian 100 parts. A teaspoonful to be taken four or five times a day before each feeding.

The advantages of this internal treatment are immense; but it cannot be used indiscriminately with all patients, some of whom are cachectic, very feeble, scarcely taking the breast, and digesting badly—in a word, in a state of athrepsia or innutrition. The smallest portion of a medicinal substance introduced into the stomach is rejected, vomiting and diarrhœa preventing all internal treatment. After this has been tried for a day or two without avail, being even dangerous, we must resort to external measures—viz., the introduction of mercury by the skin. One contra-indication alone to this may be present, when the skin is covered with syphilitic ulcerations, threatening to absorb too great a quantity of mercury. Properly speaking, the mercury is then dangerous, and requires supervision, but it is not contra-indicated. The frictions should be made preferentially in the axilla and over the neighbouring wall of the thorax, where the skin is delicate and moist. A gramme of ointment, consisting of one part of blue ointment and two parts of lard, may be rubbed in every day, the utmost cleanliness being observed at the same time. Under its influence the syphilitic ulcerations and the *syphilides* generally disappear as if by enchantment; and corrosive sublimate baths are little recommended at the present time, as they are devoid of the precision obtainable by the employment of mercury in friction, and may be even dangerous. When they are deep, the ulcerations of the skin or mucous membranes may also require local treatment, and then the glycerole of zinc rapidly dries up the wounds; or iodoform may be used if the ulcerations are of a phagedænic character.

In hereditary syphilis, then, we shall meet with success if we act rapidly and with vigour by means of faithful medicaments.

A Good-Service Pension.—The vacant good-service pension of £100 a year, caused by the death of Inspector-General of Hospitals and Fleets John Rees, M.D., has been conferred on Inspector-General James J. L. Donnet, M.D.

University College, London.—Mr. Samuel Sharpe has promised to give £5000 towards the building of the north wing of University College, London, so soon as the Council are prepared to begin the work. It is expected that this liberal donation, together with others which have been received, will enable the building to be very shortly commenced. A sum of £50,000 in all will, however, be required to complete the extensions which are immediately contemplated.

Relief of Scorpion-Stings.—Dr. Lucas writes concerning the scorpion-sting:—"It is at first like a sharp prick from the point of a needle or a finely-pointed nail, and in a very few seconds it assumes a very agonising form, as if innumerable pins and needles were thrust into the part. It then shoots up the limbs along the course of the main nerve-trunk, and is afterwards of a darting and most excruciating nature, reaching its climax in from three to five minutes. When a pinch of powdered alum is put into the eye (the eye of the affected side being preferable), the pain of reflected irritation ceases almost instantly as the conjunctival mucous membrane begins to smart: the local pain, perhaps less severe than before, gradually subsides after some hours, and its disappearance is, I am inclined to think, expedited by firm and steady pressure. In regard to the *modus operandi* of the alum cure, I will refrain from saying anything beyond that it probably acts by distracting pain and irritation elsewhere. The credit of the suggestion of the alum cure is due to Drs. Beatty and Greany, of the Bombay Army."—*Indian Medical Gazette*, June 1.

REVIEWS.

Lectures on Medical Jurisprudence. By Francis Ogston, M.D., Professor in the University of Aberdeen. Edited by Francis Ogston, jun., M.D. London: J. and A. Churchill, New Burlington-street. 1878. Pp. 663.

When some years ago we had occasion to find fault with certain medical evidence given in courts of law in this country, we ventured also to suggest that an improvement might be made. We called to our mind the men most likely to help us in the matter, and without hesitation we had recourse to Professor Ogston, of Aberdeen, as a man who had devoted much time and attention to the subject, and who had that peculiar calm and unbiassed judgment which best and most fully matures experience. We had the pleasure of submitting to our readers certain selected lectures from his pen, which might serve to whet the appetite of those desirous of gaining sound knowledge. The completed series is now before us, and they do not falsify the sample.

Professor Ogston has been for many years a teacher of Medical Jurisprudence in the University of Aberdeen, and these Lectures are the outcome of extensive reading, extensive experience, and careful analyses of cases met with both by others and by himself. Their great merit consists in the utilisation in them of every important medico-legal case which has come under the observation of the author—and his experience in such cases has been very great. Many are discussed in detail with remarkable ability: no point is lost; and the author, in his treatment of a vast number of original observations, betrays that peculiar medico-legal skill to which we have referred, and which makes this volume a most valuable contribution to forensic literature.

After a lecture on the value of medical evidence and the behaviour of the medical witness in court, the author classifies the subjects embraced by the term "medical jurisprudence"; and his classification shows that all branches of medical science and practice are included in it. In his lecture on medical evidence he justly condemns the carelessness, ignorance, presumption, or one-sidedness which medical witnesses sometimes show, and we are bound to agree that deplorable exhibitions from one or other of these faults have not been uncommon. At the same time it should be remembered that, no matter how accomplished a medical witness may be, and no matter how careful and unbiased, it is not always possible for him to escape ill-treatment and misconstruction; for judges and counsel are not always so well acquainted with the medical side of a medico-legal question as the medical man is of the legal. It is to be regretted, in fact, that legal students are not compelled to study "medical jurisprudence"; if such compulsion existed, many of the ridiculous questions asked by counsel would not be put, and there would, to the advantage of all, be less of that sudden falling-back on a text-book, which is so common in all our law courts. It is only fair to say that, while the medical witness often errs, his errors are not unfrequently led up to by the ignorance of counsel and even of judges. We agree with Dr. Ogston that our text-books on medical jurisprudence are, as a rule, over-burthened with purely legal questions, with which the medical witness has no concern, and which he had indeed far better avoid.

The ordinary forms of procedure in the administration of the law in this and other countries are fully described in this book, and especially the differences between the English and Scottish law; it is clear that text-books of forensic medicine should be adapted to the requirements of all portions of the empire, for though a medical man resides in London, he may have to give evidence in Edinburgh or Dublin, and his ignorance of the forms in the courts of these cities might prove disagreeable to himself and unsatisfactory as regards the ends of justice. The differences in the procedures of these courts are puzzling enough, and a legislator who will take up the whole subject of these differences has a chance of leaving his name as that of one who did well for his country. The Chantrelle case, so recently dwelt upon in this journal, is a better argument than words in support of this opinion.

We are compelled, of course, to pass over many of the lectures with brief notice. That on Age in its medico-legal aspects is essentially practical, and we doubt not will often be referred to by those who have studied it carefully. It contains a number of facts which even the "expert" could not long retain unless gifted with a very remarkable memory, but which are facts none the less of the greatest importance. A very valuable "table" is given of the development of the skeleton at different periods after the forty-fifth day of life.

In a lecture on Sex there is again a constant reference to cases which have come under the author's observation, and the lecture is illustrated by diagrams of *asexualism*, of extroversion of the bladder, and of hypospadias. The whole subject of Hermaphrodism is discussed with great ability, and in cases of doubt we recommend a reference to Dr. Ogston's pages.

The vexed question of personal identity is entered into with much spirit. Professor Ogston declares that the medical witnesses in the Tichborne case, where Identity was *the* question, made mistakes because they were not practised jurists. He states that the physicians and surgeons who appeared in this celebrated trial were "evidently unacquainted with forensic medicine." We cannot discuss this plainly stated opinion; but we maintain that a well-educated medical man, though not a forensic expert, should be able to give a safe and certain opinion in regard to tattoo-marks, cicatrices, and the like. Dr. Ogston's Lectures are sufficient proof that the medical man, who makes use of all his opportunities in the course of his practice, observes faithfully, and argues fairly on the facts he meets with, is capable of giving a sound opinion in a witness-box—as sound as, and in some cases more sound than, that of the special forensic expert. It is possible to seize upon many subjects in this volume which prove that the general practitioner must be of necessity the "expert," and, though mistakes have been made and will be made, it would be easy to quote cases which show that the busy general practitioner who has devoted a fair share of study to forensic subjects can give, and has given, evidence in no respects inferior to that of men especially devoted to courts of law. Take, for example, the question of "footprints," which is so admirably discussed in the volume. A footprint, it is not too much to say, has hanged a man. Footprints are perishable, and all depends upon their immediate examination; but too often this examination has been left to the policeman "in charge of the case." How much better would it be to ask the attention of the medical man first called by the police to these traces, than to leave to him simply the examination of the body of a person found dead; and to the constable to take "casts," and submit them with "a pair of shoes" to the expert, who lives, perhaps, hundreds of miles away? A footprint near a person found dead is, and should always be, a part of the post-mortem examination; its accurate examination by an independent and scientific witness cannot but prove of the greatest value to the special expert to whom comparisons may be ultimately submitted. We are led to make these remarks not because footprints are alone concerned, but because anything surrounding a body supposed, for example, to be that of a murdered man, demands more diligence and skill than an ordinary individual can give to it. Lectures such as these of Dr. Ogston's are so practical and so suggestive, that we could from them multiply instances to prove that the medical man in ordinary practice may be called upon, and should be called upon, to act as an "expert" in the truest sense of the word. In courts of law, as elsewhere, a well-grounded knowledge of his profession is to the careful medical witness a safeguard against a host of difficulties.

Dr. Ogston has an excellent chapter on Impotence and Sterility, and after giving a number of original observations, and quoting cases not hitherto referred to by medial jurists, agrees with Orfila's conclusions, which he sums up in a manner which will please both students and practitioners. In the lecture on Rape much stress is laid on the subject of false charges of this offence, and to the medical practitioner there is nothing of more importance than to have that knowledge which will enable him to make capable examinations in such cases. We confidently recommend Dr. Ogston's lecture on this subject. There is no doubt that, over and over again, charges of rape, which are utterly unfounded, are made, and that innocent individuals may suffer the deepest degradation unless the medical witness is careful. A man's honour as well as his health is, in fact, not unfrequently at the mercy of a doctor's skill and caution.

A thoroughly practical tone pervades the lectures on Pregnancy, all the medico-legal aspects of which are very

commonly before the general practitioner. No medical man can read these lectures without profit, and everyone will more profit by such reading the more he has studied the various valuable manuals and treatises on medical jurisprudence which we possess. The student will be well repaid who reads these chapters after mastering the pages of Guy or Taylor, or the lectures of his teacher. The questions involved under the terms "Delivery" and "Birth" are elaborated with great skill, and the author gives Breschet's "classification of monsters," which is as minute as we could wish—so minute indeed, and yet so valuable, that all should have it for reference in any case of difficulty. "Birth" includes a variety of medico-legal questions. The reader will find these discussed in these pages, and will find also the opinions of eminent barristers who have considered the subject and its allies. And when we remember that many of the *causes célèbres* of this and other countries have turned on what seemed simple obstetric problems, we are glad to find that Dr. Ogston has introduced the "legal" element freely in his discussion of this and similar subjects. With regard to the protracted duration of pregnancy, Dr. Ogston adduces evidence to prove that a woman may go so much as six weeks beyond the ordinary period. We will not argue this point, but feel it a duty to point out that in the cases where such protracted gestation has occurred (the child being born alive), there have been just causes to suspect the woman, and that these protracted cases are not met with in the ordinary practice of medical men. Of course, commonly enough, a woman "goes" a month or more beyond the date she has fixed in engaging the services of her doctor; but the doctor does not, as a rule, accept such cases to prove the possibility of very prolonged gestation. We know of no subject in the range of forensic medicine which requires further investigation than that of prolonged gestation, and notwithstanding the opinions of leading medical jurists and obstetricians, and those observations on which forensic writers rely—of Earl Spencer, Tessier, and others,—we must doubt the possibility of gestation being prolonged seven weeks, and ending in the birth of a child living and of normal dimensions.

Infanticide has provided problems to medical men and lawyers as difficult of solution as any in the whole range of medical jurisprudence; and we venture to assert that no medical man is fit to practise his profession unless he is possessed of at least a general knowledge of this subject. This assertion especially applies to medical men in country districts, who are called upon unexpectedly to make examinations in cases of infanticide, and have to fall back entirely on their own resources. It is not too much to say that while men thus suddenly called upon have made mistakes—who has not?—they have, as a rule, come with credit out of the severest trials. It is impossible for us in our space even to enumerate the many questions which may crop up in any single case of infanticide. Dr. Ogston devotes five lectures to the subject; and we must say no one of these lectures is by a word too long. The subject is treated in a novel style, illustrated by original cases, and, read in the light of our forensic manuals, of exceeding practical value. We might, in an extra-critical mood, find fault with some parts; but we decline to do this, and will leave the many readers of these lectures to exercise their own friendly criticism. We are struck in reading more and more of this book that the author has, as it were, had some case in his mind's eye when discussing a particular subject, and that he has been arguing upon it, and by placing fact on fact, and by weighing doubtful signs, shown how it is possible in cases of great difficulty to come to definite conclusions. This plan a medical man must follow in ordinary medico-legal practice, and to enable him to do it he must have such a knowledge as the manuals yield to him. Facts abound in these Lectures, but we value them not so much for the facts as for the method of reasoning on facts; and to teach men to reason clearly should be the object of those to whom is entrusted their medico-legal training.

We have said enough to convince our readers that we thoroughly appreciate the value of these Lectures. Insanity receives an unusual share of consideration. The subject of "Death in its Medico-legal Aspects" has four lectures devoted it; "Wounds" receives even further attention; and all the various forms of asphyxial death are fully treated of, and with an ability as remarkable as is betrayed in any other part of this book.

It is impossible for us to point out the particular excellencies of these several Lectures. Reviewers of novels leave much to their readers: in this case we follow their example. Indeed the book is, because of its richness in cases observed by the author, not a little attractive from the romantic point of view; it is a book which proves the old adage that fact is stranger than fiction, yet a book of reference for the busy practitioner, a book of study for the student of medicine; and though it does not, nor is intended to, supersede the valuable manuals we possess, it is of such a character as to enable us to congratulate most heartily the northern Professor on the results of his labour, and to advise all to study it. Time will never be lost when given to the study of this volume, which demands our highest commendation.

We should not close our notice of the volume without noting the care bestowed on it by Dr. F. Ogston, jun., who has added, especially in the bibliography and verification of quotations, much to the value of the original lectures.

Les Eaux Minérales du Mont-Dore. Par le Dr. BOUDANT, Inspecteur-Adjoint de ces Eaux, etc.

The Mineral Waters of Mont-Dore, their Properties, etc. By Dr. BOUDANT, Assistant-Inspector of the Baths, etc. Paris: J. B. Baillière et Fils. 1877.

MONT-DORE is situated, as no doubt many of our readers know, in the volcanic region of Auvergne. It is a commune of 1240 inhabitants, and stands about 3250 feet above the sea. It is at present thirty-six miles from the nearest railway-station at Clermont-Ferrand, and would probably be very little visited, except by geologists and botanists, were it not for its mineral springs, of which there are eight. The temperature of the water ranges from 38° to 45° Cent. (100·4° to 113° Fahr.) except in the case of the Fontaine Sainte Marguérite, which is a cold spring containing carbonic acid gas in considerable amount. The total amount of water furnished by the springs in twenty-four hours has been calculated at 456,000 litres. The mean specific gravity at 15° Cent. is 1·0012, and as may be inferred from this fact, the amount of mineral constituents is small. The chief salts are the bicarbonates of soda, lime, and magnesia, and chloride of sodium. Infinitesimal quantities of arseniate of soda are also present, and all the springs contain a great deal of dissolved nitrogen. The waters are used in the form of baths, pulverised inhalations-douches, vapour-baths, and as an internal medicine. The "cure" lasts about eighteen days. The season is from June 1 to October 1. There is good accommodation, and the cost of living is from 6 frs. to 15 frs. per diem. The class of cases which are said to be profited by a visit to the Mont-Dore are chronic nasal, pharyngeal, and laryngeal catarrhs, chronic bronchitis, phthisis, chronic pleurisy, emphysema, rheumatism in all its forms, digestive disturbances, and certain diseases of the generative organs. This is a sufficiently long list, and when we read the illustrative cases furnished by Dr. Boudant, we are often forced to the conclusion that a few well-directed remedies at home would have done as much, or more, for the patients as the internal and external ablutions which life at a mineral-water establishment involves. Dr. Boudant thinks highly of Mont-Dore in phthisis, but when he states that "in July and August the heat is generally very great," and that a temperature only a few degrees below that of Paris is the rule until September 15 or 20, we must doubt the propriety of sending phthisical patients there, especially as he adds that storms are very frequent and violent, that there is a great deal of cloud, that west winds are common, disagreeable, and often accompanied with rain, and that sudden changes of temperature render special precautions as to clothing necessary.

Patients who visit the Mont-Dore will be well looked after. "There is no thermal station where the sick are more spoilt in this respect; from the moment they begin the treatment they are no longer their own masters, and we do not doubt that this continued and traditional solicitude has much to do with the success obtained." One unintentional testimony in favour of his health-resort is furnished by Dr. Boudant when he says "the patients eat too much" (page 16). Poor things! they are not allowed pepper or mustard, pickles, or any condiment, and are advised, when thirsty, to drink "a glass of water with two tablespoonfuls of coffee in it." To sum up, we are far

more inclined to attribute the successful results which Dr. Boudant obtains, to the quietude, pure air, and elevated position of the locality, than to the waters themselves. There are, however, numbers of invalids in Europe who wander from one place to another as much for variety as anything else, and some of these, if they have never yet been there, might do worse than spend a summer where "the water comes down at *Mont-Dore*."

On Infantile Paralysis, and some Allied Diseases of the Spinal Cord. By Julius Althaus, M.D., M.R.C.P. London: Longmans and Co. 1878.

In the little volume before us Dr. Althaus has given an account of infantile paralysis, with the view of showing its relationship to other diseases of the cord in which the main symptoms are paralysis associated with wasting of the muscles. It was pointed out some years ago by Duchenne that a form of acute paralysis, followed by rapid wasting, is occasionally met with in adults, and he gave to the condition the name "acute spinal paralysis of the adult." The question, therefore, arose whether the disease is not identical with the acute disease so often met with in young children—a question which we may now consider to be answered in the affirmative, for the clinical histories in the two diseases are very closely parallel, whilst in each it has been demonstrated by microscopical examination that the essential lesion is an acute inflammation of the anterior horns of grey matter. The disease is very carefully and accurately described by Dr. Althaus as it occurs in the child and in the adult, and he has given in detail the histories of two cases, in one of which paralysis of this description came on in an officer thirty-one years of age, who had apparently got chilled by a prolonged sea-bath; the other case being that of a gentleman aged twenty-two, in whom the disease was traceable to a walk in a snowstorm. Though several cases allied to these have been described in France and Germany, we believe that very few have hitherto been reported in this country, and we have been therefore much interested in reading those which came under the notice of Dr. Althaus.

Having thus described the clinical conditions arising from acute inflammation of the anterior horns, the author passes on to the consideration of chronic changes in these horns, prominent among which is the disease generally known as progressive muscular atrophy; but his account of this condition is less full than that of the acute disease, and we think he has scarcely attached sufficient importance to the diagnostic criteria between primary disease of the anterior horns, leading to a very slow wasting of the muscles, which rarely causes death until after many years, and the secondary wasting seen in lateral sclerosis, in which the course of the disease is so much more speedy. Dr. Althaus, in common with most pathologists who have paid much attention to the subject, declines to follow Friedreich in placing the primary lesion in the muscles themselves.

The work was written by Dr. Althaus in the form of an essay, and was read before the Medical Society of London. It is, consequently, didactic rather than original in its character, the one point in which Dr. Althaus has departed from other recent writers on the subject being in the suggestion of the name "anterior polio-myelitis" for the acute form of disease. Considered as an attempt to popularise knowledge which has hitherto been very much confined to a select few, we think that Dr. Althaus has written a book which is likely to prove of considerable service to the profession, and is a worthy appendix to his recently published work on Diseases of the Nervous System.

Archives of Dermatology: a Quarterly Journal of Skin and Venereal Diseases. Edited by Dr. L. Duncan Bulkley. Vol. III., No. IV.; Vol. IV., Nos. I. and II. New York: G. P. Putnam's Sons.

This very excellent publication, which we have some reason to think scarcely meets with the support it deserves in this country, maintains the high standard which its able editor has aimed at from the first. Vol. III., No. IV., for July, 1877, is especially remarkable for the very careful paper by A. R. Robinson, M.B., on the histology of the affection described by Hutchinson as Cheiro-pompholyx, and by Tilbury Fox as Dysidrosis. It is illustrated with capital drawings of microscopic sections taken from a patient who was seen by several dermatologists, including Dr. Bulkley and Dr. Duhring, as well as exhibited to the members of the New York Dermatological Society, by a number of whom the case was recognised as one of Fox's "dysidrosis." Now, if Dr. Robinson was right in his diagnosis—which Dr. T. Fox, in a paper published in Vol. IV., No. I., denies—the disease in question has nothing to do with the sweat-ducts, the vesicles being accumulations of serum between the corneal and Malpighian layers of the epidermis, or in the latter only, which serum is derived from the bloodvessels of the papillæ beneath. The controversy is still pending, and Drs. Fox and Crocker have recently shown, at the Pathological Society, microscopic specimens which, they believe, confirm Dr. Fox's original view that the vesicles are obstructed and dilated sweat-ducts. We only allude to Dr. Robinson's paper here that our readers may refer to it for themselves, and we believe that they will agree with us that Dr. Fox's reputed statement, that "either Dr. Robinson had drawn largely on his imagination, or had made his observations on a disease which was not dysidrosis at all," is untenable.

The digest of literature in Vol. III., No. IV., deals chiefly with syphilis, acquired and hereditary, and is very complete. The editor's notes on the local treatment of skin diseases, as well as his Clinical Conversations in this and the subsequent number, contain many useful hints for the general practitioner, as well as for those who make skin diseases their specialty.

In Vol. IV., No. I., Dr. White's address on Dermatology in America is an enthusiastic panegyric of the energetic way in which the study of skin diseases has been pushed forward on the other side of the Atlantic. We must confess it, though with shame—the country of Willan and Bateman is being distanced by her daughter in this particular branch of medicine. Whoever doubts the fact should read the digest of American skin disease literature at the end of Dr. White's address, he should note the activity of the Dermatological Society of New York and of the American Dermatological Association, as well as the silent testimony of the *Archives* before us, after which he may well turn aside to mourn over our defunct *Journal of Cutaneous Medicine*, and to lament the apathy of our medical societies when the enormously complicated subject of skin diseases turns up for discussion. In England quackery has been the curse of dermatology, and its taint has sometimes attached itself to the most innocent and upright men. We have in London the largest amount of material for the scientific investigation of skin diseases of any city in the world; and yet how little of it is utilised as it should be! How much theorising we get about these diseases, and how little experimental, or even microscopic investigation! How much inaccurate diagnosis there is, especially among surgeons, who think everything is syphilis; how much routine prescribing, and how little thoughtful treatment! Publications like the American *Archives of Dermatology* tend to awaken healthy interest in the subject they treat of, and in proper hands they are a direct antidote to charlatanism. Hence we regret that we should have to look to America for our digest of cutaneous medicine, as we look to it for sewing machines, talking machines, and "quite a number" of useful commodities.

Des Ictères Chroniques. Par le Dr. Isidore Straus. Paris. 1878.

The Various Forms of Chronic Jaundice. By Dr. I. Straus. Paris: J. B. Baillière et Fils. 1878.

This work may be dismissed with a very few words. It is a good *resumé* of our present knowledge of the causes, symptoms, effects, and treatment of chronic jaundice. The author is intimately acquainted with all the most important modern investigations on the subject, as well as with its literature in various languages; and we notice with pride how much of the work has been done by British observers. There is scarcely anything original inserted by Dr. Straus, but he is a good collator, and, from various indications in the work before us, is, we should think, of Teutonic rather than of French extraction. Those who wish to get facts about jaundice later than are contained in Dr. Murchison's last edition may read the above with profit.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, JULY 3.

CHARLES WEST, M.D., F.R.C.P., President, in the Chair.

THE following gentlemen were elected Fellows of the Society:—William A. Caskie, M.B. (Largs), William E. Dring, L.R.C.P. Edin. (Boughton), Thomas Davies Harris, F.R.C.S. (Aberystwith), James T. Hinton (Croydon), and Thomas Robert Judson, M.R.C.S.

TARNIER'S FORCEPS.

Dr. EDIS showed, for Dr. Robert Barnes, a modification of M. Tarnier's forceps. The branches of traction were divided in half, so as to slip readily into their places, and were secured to the angles of the blades instead of, as in the original forceps, working on after the blades are *in situ*.

Dr. Wiltshire, the President, and Dr. Savage made some remarks.

DOUBLE OVARIAN CYSTS, WITH FIBROID TUMOUR OF THE UTERUS.

Dr. EDIS showed a specimen, and communicated the particulars of a case in which the above conditions co-existed, with a considerable amount of ascitic fluid from peritonitis, and which well exemplified the difficulty of diagnosis in some forms of abdominal tumours. The patient, aged fifty-eight, first came under treatment for flooding at her periods in 1871. The uterus was then found studded with small fibroids, and there was a fulness in the sacral region. Latterly the abdomen had much enlarged, and was dull on percussion throughout, except in the lumbar region. On vaginal examination the pelvis was found blocked up by a firm cystic growth behind the uterus, which was pushed up towards the pelvic brim and fixed. The abdomen was tapped, and five pints and a half of smoky, blood-stained fluid drawn off. Though relieved at first, the patient died suddenly nine days afterwards. At the post-mortem examination the pelvic tumour was found to be a cyst of the left ovary; the fundus uteri contained several intra-mural fibroids. A large ovarian cyst was situated in the abdomen, and there were about twelve pints of free fluid in the peritoneal cavity.

PESSARY FOR PROLAPSE OF THE UTERUS.

Dr. GALABIN showed a modified form of lever-pessary intended for those cases of prolapse in which the perineum had been destroyed, and neither an ordinary Hodge's pessary, nor the long pessary of rubber-covered spiral spring, could be retained. In the instrument now shown, which was constructed of vulcanite, the anterior limb was made in the form of a cylinder about three-fifths of an inch in thickness; this was intended to rest high above the apex of the pubic arch, not against the rami.

FORCEPS.

Dr. HEYWOOD SMITH showed a modification of his ovum forceps. The fenestra were made longitudinally to facilitate their introduction into the uterus, and when the handles were pressed firmly the edges of the blades closed completely, so that small growths could be removed with facility. Dr. Heywood Smith also showed a new forceps, bent as a sound, for the introduction of laminaria tents.

CYSTIC DEGENERATION OF OVUM.

Dr. FITZPATRICK showed a good example of this, which had recently been expelled from the uterus of an elderly woman who had suffered for a long time from persistent hæmorrhage.

MODEL OF IRRIGATION BED.

Dr. PLAYFAIR showed, for Dr. Gaillard Thomas of New York, the model of a bed which he had contrived for cases of puerperal hyperpyrexia requiring the continued application of cold.

DOUBLE MONSTER.

Dr. GODSON showed a specimen of this of five months' development, which had been delivered with much difficulty by Mr. J. C. Eaton, of Ancaster. All four feet presented, and an attempt was made to push one fœtus back, and bring the other down. Finding this impossible, the hand was introduced into the uterus, and there was found to be but one body, the union commencing at the top of the sternum. It was a good example of the variety described by M. Saint-Hilaire, under the family of Monomphaliens, class Xiphopages.

CHANGES IN THE UTERUS RESULTING FROM GESTATION.

Dr. JOHN WILLIAMS read a paper on some of the changes in the uterus resulting from gestation, and on their value in the diagnosis of parity. The paper was suggested by the difficulty which occurred in the Wainwright murder case of determining whether the uterus of Harriet Lane had ever borne a child. The conditions to be described were those which remained after the process of involution was over—say, the eighth week after delivery. The only certain marks were to be found in the bloodvessels of the uterine wall; they appeared to be affected by the retrograde process in a less degree than the tissues of the uterine wall generally. In a section of a uterus which had undergone involution, the arteries projected beyond the surrounding surface, presented thick yellowish-white walls, more opaque than the tissues around, and their canals remained patent. On microscopical examination, the connective tissue around the arteries was found to be increased in quantity, the arterial muscular coat was greatly hypertrophied, and the inner wall considerably thickened. The vessels appeared, moreover, more numerous than in the virgin organ. To estimate the exact value of these conditions in the diagnosis of the existence of previous pregnancy, three questions should be answered:—1. Was the condition described present in all uteri which had been gravid? 2. Was it a permanent condition. 3. Was it simulated by disease? Setting aside such rare and exceptional cases as those in which the uterus became reduced after parturition to a mere membranous sac, the author had found the characters he had described in all the uteri that had borne children which he had examined during the last five years. He had found them as long as fifteen years after the last pregnancy, and eight years after the cessation of menstruation, and under such circumstances their permanency he thought might be fairly inferred. He had never seen the appearances brought about by disease, and neither he, nor, as far as he was aware, any other observer, had found them in the virgin organ. It could not, indeed, at present be asserted that the state of the uterine arteries described furnished positive proof of parity, but at the same time it must be admitted that it afforded the strongest presumptive evidence we possessed of that condition, while further research might show that it amounted to absolute proof of previous gestation. Passing on to the veins or sinuses of the uterus, the author said that these were all enlarged during gestation, but the enlargement was far more marked in that part of the wall to which the placenta was attached. Friedländer had investigated the condition of this part during the last two months of pregnancy, and found that at the eighth month many of the venous sinuses were surrounded by a wall 0·04 mm. in thickness; this wall contained abundant tolerably large nucleated cells in a clear homogeneous matrix, which became distinctly coloured by carmine solution. The contents of the sinus appeared to consist not only of blood corpuscles, but also of a greater or less number of dark granular cells, containing two to five nuclei, one of which had the appearance of a vacuole. These, which were regarded by Friedländer as wandering cells from the decidua, at last completely filled the sinuses, and coagulation took place, the clots showing a network of fine threads. Other sinuses, though not filled with these cells, also contained coagula at this period (eighth month). The author had only had an opportunity of examining one pregnant uterus, but after delivery he had not unfrequently found clots with a network of fine threads, though he had only rarely seen accumulation of large granular cells occupying the sinuses near the inner surface. At the end of four weeks, however, a great change had taken place. The walls of the sinuses at the placental site were much thickened, being due in part to a thin zone of connective tissue, within which was a granular glassy-looking transparent substance thrown into folds. The interior of the vessel was either entirely filled with these folds, or its centre was occupied with the organised remains of a clot, or a narrow lumen might still be left. The folded layer when torn by needles broke into particles of a polygonal shape, similar to some of

the epithelial cells originally lining the sinus, and it appeared to be a distinct growth resulting from the proliferation of these cells. This condition had been found by the author, though somewhat indistinctly, twelve months after delivery. It might therefore be regarded as diagnostic of the previous existence of pregnancy, and, when found, justified a positive answer as to parity. It was true the structures described were not permanent, but they were discoverable for twelve months after parturition.

After some complimentary remarks from the President, Dr. Playfair, and Dr. Matthews Duncan,

Dr. Savage asked if Dr. Williams was perfectly sure that what he had described might be taken as a precise indication of pregnancy having existed.

Dr. Williams stated in reply that he regarded the appearances found in the sinuses of the uterine wall at the placental site as inimitable, and therefore diagnostic of previous pregnancy. With regard to the value of the condition of the arteries which had been described, further research was necessary before it could be estimated at its proper value.

Labour complicated by an Ovarian Cyst.

Mr. A. H. Brewer, of Dalston, communicated a case as above. It occurred in a woman aged thirty-five, who had already had one natural labour and one in which she had been delivered by craniotomy. She had also been treated at Guy's Hospital for "falling of the womb." On examination some hours after the commencement of labour, the finger came upon, somewhat high up and a little posteriorly, what felt like a fully distended bag of waters, enclosed in a tough and thickened membrane. The finger passed easily in front of it, and came upon the fœtal head uncovered by membrane. With one finger in the vagina and another in the rectum it could be distinctly made out that the tumour was situate between the two passages. An ovarian cyst was diagnosed, and it was determined, on consultation, that there was no need of immediate interference. Half an hour later, however, a sudden gush of fluid occurred during a violent pain, and the tumour was found to have disappeared. After the delivery of the child, which occurred at once and without difficulty, an opening was found in the posterior vaginal wall large enough to admit two fingers. For a week no bad symptom occurred, but on the eighth day there was diarrhœa, shivering, and some difficulty in passing urine. The discharge also became fetid. She got gradually worse till the twelfth day, when the temperature was 104°. On this day, while a catheter was being passed, a large quantity of purulent fluid poured from the vulva. On the next day she was seen by Dr. Godson, who found the perineum livid and distended as if by a fœtal head, and the vagina blocked up by a tense swelling. On pressure upon this swelling the finger lacerated the vaginal wall and slipped into a cavity, from which a large quantity of fluid of very fetid odour immediately escaped. The cavity was at once syringed out with a solution of carbolic acid (1 to 80), and from that moment the patient steadily convalesced. About a fortnight later, Mr. Brewer was shown a peculiarly dry-looking membrane which had been passed the previous day, and which Dr. Godson agreed with him in regarding as the cyst-wall of an ovarian tumour. When examined some weeks later, the posterior vaginal wall was found thickened with cicatricial tissue; and this condition was still present in January of the present year, when Mr. Brewer delivered the patient by forceps of a living male child.

Dr. Godson regretted that he had not been able to bring with him the membrane which had been expelled. It contained abundant crystals of cholesterine, and had all the characters of a thin ovarian cyst-wall. Nature had pointed out, by the rupture of the cyst through the vaginal wall, the treatment which should have been adopted, viz., puncture through that part. The case also illustrated the great value of washing out with carbolic acid lotion.

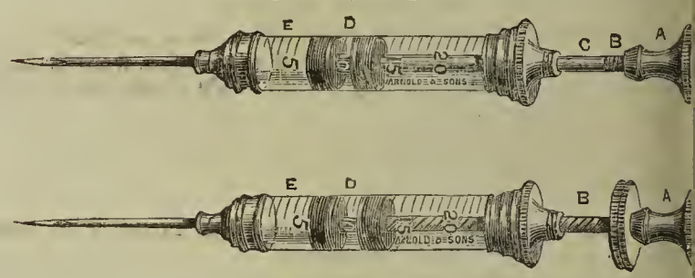
The meeting then adjourned.

The Devonshire Hospital at Buxton has just received a donation of £20 from Miss Emily Faithfull, the proceeds (after paying expenses) of her lecture in the Buxton Pavilion on "Modern Extravagance." The Duke of Devonshire, K.G., was in the chair.

NEW INVENTIONS AND IMPROVEMENTS.

AN IMPROVED HYPODERMIC SYRINGE.

The first of the accompanying woodcuts represents Arnold and Sons' new Patent Hypodermic Syringe with plain action, and the second illustrates the screw action. These instruments possess the great advantage of self-lubrication, by which the plunger is rendered soft, moist, and ready at all times for immediate use. The improvement consists of a reservoir containing oil (in the centre of the plunger); a small piston-rod is inserted inside the ordinary piston, and attached to the handle of the syringe by means of a screw. When the reservoir is once filled with oil it will last a long time without renewal. The operation of refilling is very simple: Remove the handle,



and pour into the piston-rod, which communicates with the reservoir, by means of a small glass syringe, as much oil as required, replace the handle, and the syringe in then charged ready for use. When the oil is only partially exhausted, and it is found necessary to force more into the reservoir, by a simple turn of the handle (which is screwed on to the outer piston rod) oil is forced into the reservoir as required. Another important advantage over existing instruments is, that the plunger being constantly expanded by moisture, fits the cylinder accurately, and thereby prevents the possibility of the solution being forced behind the plunger. This frequently happens with syringes at present in use; consequently only a portion of the solution is injected. The gradations on the barrel are accurately marked in red which is indelible, and the exact quantity injected can be readily seen. Another important improvement is secured by having the mounts *screwed* on to the glass, thereby rendering it impossible to separate the mount from the cylinder unless by breakage. This will be found a great advantage over those hitherto made. The application of this self-lubricating plunger, for which her Majesty's Letters Patent have been granted, can be applied to all syringes, enemas, etc. For India, the colonies, and all parts abroad this invention will be invaluable, as instruments so made cannot get out of order, and will always be ready for use at a moment's notice. The improved hypodermic syringes are patented, and manufactured by Arnold and Sons, of West Smithfield.

Composition and Quality of the Metropolitan Waters in July, 1878.—The following are the returns (by Dr. Meymott Tidy) of the Society of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, etc.	Nitrogen: As Nitrates, etc.	Ammonia.		Hardness. (Clarke's Scale.	
				Saline.	Organic.	Before Boiling.	After Boiling.
Thames Water Companies.	Grs.	Grs.	Grs.	Grs.	Grs.	Degs.	Degs.
Grand Junction ...	19·20	0·068	0·125	0·001	0·010	13·7	3·0
West Middlesex...	18·50	0·067	0·090	0·001	0·010	14·3	3·0
Southwark and Vauxhall ...	17·60	0·067	0·090	0·001	0·011	13·7	3·0
Chelsea	18·30	0·057	0·075	0·001	0·009	13·2	3·3
Lambeth	18·70	0·068	0·105	0·001	0·009	13·2	3·3
Other Companies.							
Kent	29·80	0·010	0·390	0·000	0·002	20·6	6·5
New River ...	18·30	0·046	0·135	0·000	0·008	13·2	3·3
East London ...	19·90	0·046	0·090	0·000	0·008	13·7	3·0

Note.—The amount of oxygen required to oxidise the organic matter nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases but the following, when it was slightly turbid—namely, in the Grand Junction and the West Middlesex.

OBITUARY.

MATTHEW ALEXANDER EASON WILKINSON, M.D., F.R.C.P.

Dr. Wilkinson was born in Manchester in the year 1813. Both on his father's and mother's side he could lay claim to being of gentle birth. At an early age he removed with his family, first to Devonshire, and soon afterwards to Lasswade, near Edinburgh, at which latter place he received a portion of his preliminary education, which was subsequently continued at the grammar-school of St. Bees. In 1832 he commenced his medical studies in Edinburgh, and graduated there in 1838. The two following years he spent in visiting several of the more famous continental medical schools, amongst others those of Paris, Berlin, Halle, Dresden, and Vienna; and in 1840 he began the practice of his profession in Manchester. His earliest hospital appointment was that of Physician to the Ardwick and Ancoats Dispensary. This, however, he held only for a short time, for in 1844 he was elected Physician to the Royal Infirmary. For the long term of thirty-four years, therefore, he had held that important and honourable post, and had performed its duties with an unremitting diligence and regularity that were quite remarkable. It was very seldom that a day passed in the wards without a visit from Dr. Wilkinson—indeed, as a rule, he might be seen at the Hospital twice every day. Former residents at the Infirmary will count these visits of their kind old friend amongst the pleasantest recollections of their hospital life. He was a man of few words, but his beaming face seemed of itself to be a powerful influence for good, and induced in his patients a restful and cheerful confidence, which not seldom worked wonders. At the anniversary meeting of the Provincial Medical and Surgical Association, held at Oxford in 1852, he was appointed to read the Address in Medicine, and chose for his topic the important subject of "Scrofula." In 1859 he became a Member of the Royal College of Physicians, and ten years later he was elected a Fellow. For many years he was one of the most attentive and punctual members of the Committee of Council of the British Medical Association, as well as of the Council of the Lancashire and Cheshire branch. Partly in acknowledgment of these services, but chiefly in recognition of his long and honourable connexion with the Royal Infirmary, and his position there as the senior member of the staff, it was unanimously resolved by his Manchester brethren, when they decided to invite the British Medical Association to hold its annual meeting for 1877 in Manchester, that Dr. Wilkinson should be nominated the President of the Association on that occasion. The governing body of the Association received the suggestion with hearty approval, and adopted it with acclamation. The inaugural address which he delivered at the opening of the meeting was on Hospital Construction and Hygiene, a subject on which he was pre-eminently qualified to speak from long experience of the working of one of the largest of our provincial hospitals, and from having made a personal inspection, in company with the late Mr. Southam, of a large number of the principal British and continental hospitals. Under his presidency the Manchester meeting was in every way successful; and his year of office, which was just drawing to a close, will always be remembered as one of the most prosperous in the history of the Association. He attended the International Congress of Medical Sciences held at Geneva last year, and was elected one of the Vice-Presidents; on the same occasion he was made an honorary member of the Société Française d'Hygiène.

Dr. Wilkinson's friends noticed with concern signs of failing health before the Manchester meeting last August; but during the past few months his looks had regained much of their natural freshness, and the anxiety as to his condition had almost subsided. His death after only a few days' illness came upon the profession and the public, therefore, with considerable surprise.

Dr. Wilkinson wrote little; indeed, the addresses to which we have alluded were his chief literary productions. He owed his professional position to his high personal character, his thorough amiability and warm-hearted benevolence, his shrewd practical skill in treatment, and his devoted attention to the conscientious fulfilment of every duty which he undertook. He held the appointment of honorary physician to many of the charitable institutions of his native city, and his services were always at their disposal. His memory will long be cherished affectionately by a wide circle of friends, both within and without the profession; and many of the suffering poor will have cause to miss his ready sympathy and kindness, and his generous and unostentatious help.

MEDICAL NEWS.

University of London.—The following are lists of candidates who passed the recent Preliminary Scientific (M.B.) Examination:—

First Division.—Herbert Hatfield Back, St. Bartholomew's Hospital; Charles Frederic Bailey, St. Bartholomew's Hospital; Hugh Reeve Beevor, King's College; James Berry, St. Bartholomew's Hospital; *Alfred Gibbs Bourne, University College; Richard William Brogden, Guy's Hospital; James Grierson Brown, Liverpool School of Medicine; John Howard Champ, Guy's Hospital; Joseph Collier, University and Owens Colleges; George Frederick Cooper, St. Thomas's Hospital; Edward Octavius Croft, University College; Edmund Samuel Dashwood, Guy's Hospital; John Patrick Crouly Dillon, St. Thomas's Hospital; Edward Alfred Dingley, University College; John Clement Ellison, St. Bartholomew's Hospital; Charles Silvester Evans, St. Thomas's Hospital; *Joseph James Fletcher, B.A. Syd., University College and Royal School of Mines; James Rocheid Forrest, University College; Percy Faraday Frankland, Royal School of Mines and University College; *William Dobinson Halliburton, University College; William Hamilton Hart, Guy's Hospital; James Harvey Hichens, Epsom College; *George Bernard Hoffmeister, Caius College and St. Bartholomew's Hospital; Frederick Knight, University College; Frederic Lever, Guy's Hospital; John Maye, London Hospital; Herbert Cecil Moore, University of Edinburgh; Edwin James Onions, B.A., private study; *Walker Overend, Royal School of Mines and St. Bartholomew's Hospital; Francis George Penrose, University College; Charles James Pike, University College; Guy David Porter, King's College; John Alfred Parry Price, Guy's Hospital; *James Grundy Ridsdale, Queen's College, Birmingham; *Charles Edward Robbs, Epsom College; Edward Roberts, Guy's Hospital and Epsom College; James Macdonald Rogers, Middlesex Hospital; *Daniel West Samways, St. Bartholomew's Hospital; Bernard Charles Scott, Middlesex Hospital; William Egerton Starling, Guy's Hospital; Charles Randolph Stedman, Guy's Hospital; Alfred Martin Sutton, Guy's Hospital; Edward Waldemar von Tunzelmann, University College; Walter Frank Raphael Weldon, St. John's College, Cambridge; Alfred Ernest Wells, St. Thomas's Hospital; Wm. Camac Wilkinson, B.A. Syd., private study and University College; Charles Jerome Woollett, Charing-cross Hospital; Sidney Worthington, University College.

Second Division.—Rayner Derry Batten, St. Bartholomew's Hospital; John Beard, Owens College; Benjamin Bertram, St. Bartholomew's Hospital; John Metcalfe Beverley, Owens College; Walter Tyrrell Brooks, King's College; Robert Marston Bruce, St. Thomas's Hospital; Harry Campbell, St. Bartholomew's Hospital; Matthew Carnelley, Owens College and private study; Thomas Edward Carter, St. Bartholomew's Hospital; William Wheelwright Clegg, Yorkshire College; Jonathan Crowther, Owens College; Robert Cuff, Guy's Hospital; William Thomas Frederick Davies, Guy's Hospital; Rudolph Ferdinand F. de Cordova, University College; Frederic Emile Dembski, private study; Howard Downes, University College; John Broomfield Dreaper, St. Thomas's Hospital; *Willmott Henderson Evans, University College; Edward Gordon, Owens College; Ben Hall, St. Bartholomew's Hospital; Charles Alfred Hebbert, Westminster Hospital; Joseph Langton Hewer, St. Bartholomew's Hospital; Charles Desamblier Hoar, University College; Stanley Stenton Hoyland, St. Bartholomew's Hospital; Frederic David Irvin, University College; Philip John Jackson, Guy's Hospital; John William Gregory Kealy, King's College; Arthur King, University of Edinburgh; Frank Washington Langridge, University College, Bristol, and private tuition; Ernest Muirhead Little, St. George's Hospital; Nicholas Percy Marsh, St. Bartholomew's Hospital; Arthur Henry Mason, University College; *James Maughan, Liverpool Royal Infirmary School of Medicine; Frank Herbert Mayo, Yorkshire College; Charles Joseph Parkinson, Owens College; Maurice Parry-Jones, University College; Thomas Hanson Smith, Leeds School of Medicine; Joseph Eagland Walker, University College; George Augustus Turner Walton, St. Bartholomew's Hospital; John Welpton, Leeds Medical School and Yorkshire College; Martin Samuel Whish, University College; Joseph James Whitaker, B.A., University College; Arthur John Williams, private study; Arthur Henry Wilson, Liverpool Royal Infirmary School of Medicine.

Royal College of Physicians of London.—The following gentlemen were admitted Members on July 25:—

Allbutt, Thomas Clifford, M.D. Cambridge, Leeds.
Caton, Richard, M.D. Edinburgh, Liverpool.
Cook, Henry, M.D. St. Andrews, Shaldon, Teignmouth.
Cullingworth, Charles James, Manchester.
Moullin, J. A. M., M.B. Oxford, 80, Porchester-terrace, W.
Osler, William, M.D. McGill, 7, Savile-row, W.
Owen, Herbert Isambard, M.B. Camb., 41, Glo'ster-gardens, W.
Rose, Caleb, Ipswich.
Valcourt, Jules Edmond Théophile de, M.D. Paris, Cannes, France.

The following gentlemen were admitted Licentiates on the same day:—

Bamber, Charles James, St. Bartholomew's Hospital, E.C.
Chapman, Herbert Frederick, Richmond, Surrey.
Clark, Charles Alfred Dagnall, Cross Deep, Twickenham.
Francis, Ernest George, Sutton, Surrey.
Hammond, Thomas, 22, Stanley-place, S.W.
Hunter, Christian Bernard, 15, Grafton-street, W.C.

* Passed also in the Mathematics of the First B.Sc. Examination.

Jones, Lloyd Middleton Bowen, Gwarmacwydd, Llanfalteg.
Kitching, Walter, Heworth.
Lowdell, Charles George Walton, Wadhurst.
Morgan, Edward Smith, Swansea.
Norman, Alexander Stewart, Southsea.
Pearce, Charles Worth, 523, Commercial-road, E.
Rose, James, Royal Infirmary, Liverpool.
Sheppard, Charles Edward, 7, Addison-gardens South, W.
Sylvester. George Holden, St. Bartholomew's Hospital, E.C.
Takaki, Kanehiro, 62, Fentiman-road, S.W.
Walker, Basil Woodd, London Hospital, E.
Weiss, Hubert Fobeaux, 7, Church-row, Fulham, S.W.
Wilson, Edmund Monkhouse, 4, Gilstone-road, S.W.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the Diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 25th ult., viz. :—

Dymott, Donald F., Southampton, student of University College Hospital.
Elliott, Horace, of the Westminster Hospital.
Evans, James W., L.S.A., Trevangham, Carmarthen, of University College Hospital.
Faulkner, John S., Urmston, Lancashire, of the Manchester School.
Harris, Frederick A., Reigate, of St. Thomas's Hospital.
Harwick, Percy, Hastings, of St. George's Hospital.
Hine, Alfred L., L.S.A., Oakley-street, Chelsea, of the Middlesex Hospital.
Hunt, Edgar A., Montague-street, W.C., of St. George's Hospital.
Jennings, Edward, Brighton, of St. George's Hospital.
Jones, Thomas, New Quay, Cardigan, of Guy's Hospital.
London, Alfred A., L.S.A., Maidstone, of University College Hospital.
MacDougall, Aymer R., M.B. Ed., Carlisle, of the Edinburgh School.
Sweet, William J., Hebburn-on-Tyne, of the Newcastle Infirmary.
Tuke, William S., Charlotte-street, W.C., of University College Hospital.
Whitney, Neville S., Great College-street, Westminster, of University College Hospital.

Eight candidates were referred. The following gentlemen passed on the 26th ult., viz. :—

Baker, Thomas, L.S.A., Cosham, Hants, student of St. Bartholomew's Hospital.
Bryden, Richard J., L.S.A., Uffculme, South Devon, of Guy's Hospital.
Claremont, Constantine Cecil, Hampstead-road, of University College Hospital.
Davies, John, Caersws, Montgomeryshire, of Guy's Hospital.
Edington, James E., Southport, of the Manchester School.
Goyder, Charles McJ., Sunderland, of the Newcastle and King's College Hospitals.
Herschell, George A., Arundel-gardens, W., of St. Thomas's Hospital.
Holmes, James, L.S.A., Ledbury, of University College Hospital.
Lovell, Robert H., Fremington, North Devon, of St. Mary's Hospital.
Ozanne, Frederick N., Guernsey, of St. George's Hospital.
Shann, Williiam A., Petergate, York, of St. George's Hospital.
Stevens, Lewis W., L.D.S., Swansea, of the Middlesex Hospital.
Tennant, William D., Stanford-road, Kensington, W., of St. Thomas's Hospital.
Tilston, Edward, Goldhawk-road, W., of University College Hospital.
Wainwright, Robert S., L.S.A., Lee, Kent, of Guy's Hospital.
Williams, Lemuel E., Brighton, of University College Hospital.
Woodman, William E., Leighton Buzzard, of St. Thomas's Hospital.

Eight candidates were referred. The following gentlemen passed on the 29th ult., viz. :—

Beevor, Charles E., Harley-street, W., student of University College Hospital.
Burnie, William G., L.S.A., Bradford, of St. Bartholomew's Hospital.
Davidson, Alexander, M.B. Toronto, Berlin, Ontario, Canada, of the London Hospital.
Duncan, Sydney E., Madras, of University College Hospital.
Hart, Marmaduke J., Sutton, of Guy's Hospital.
Hodgson, Freeth F., L.S.A., Chesham, Bucks, of St. Bartholomew's Hospital.
Moberly, Herbert J. R., Winchester, of King's College Hospital.
Osborne, James, Southwell, Notts, of Guy's Hospital.
Outhwaite, William, Denmark-hill, of St. Bartholomew's Hospital.
Smith, Robert P., Belvidere, Kent, of St. Thomas's Hospital.
Taylor, Sidney J., Grantham, of St. Thomas's Hospital.
Pardington, George L., Hereford, of St. Bartholomew's Hospital.
Pearce, Henry, Eastbourne, of St. Mary's Hospital.
Rawson, Ernest, L.S.A., Taranaki, New Zealand, of St. Bartholomew's Hospital.
Rhys, Joshua, L.S.A., Aberdare, of St. Bartholomew's Hospital.
Wells, Alfred G., L.S.A., Horselydown, of Guy's Hospital.
Wood, Percy M., Aberclwyd, Corwen, of Guy's Hospital.

Seven candidates were rejected. The following gentlemen passed on the 30th ult., viz. :—

Appleton, Thomas A., L.S.A., Cathcart-road, W., of St. George's Hospital.
Brown, Alexander S., L.S.A., Leamington, of St. Mary's Hospital.
Bullock, Charles, Congleton, of St. Bartholomew's Hospital.
Cock, Morris F., Southmolton, of Guy's Hospital.
Collins, G. D., L.S.A., Pembridge-gardens, of King's College Hospital.
Dingley, Allen, L.S.A., Argyle-square, of St. Bartholomew's Hospital.
Fox. Bonville B., Brislington, of St. George's Hospital.
Gardiner, Bruce H. J., L.S.A., Clapham, of the London Hospital.
Gill, John W., Clifton, Bristol, of St. Bartholomew's Hospital.
Hearnden, William F., Sutton, of Guy's Hospital.
Little, Edward, Worcester, of St. Bartholomew's Hospital.
McCausland, Albert S., Gloucester-place, W., of the Middlesex Hospital.
Margerison, Richard, B.A. Cantab., Bradford, of St. George's Hospital.
Messum, G. B. W., Dulwich, of Guy's Hospital.
Smale, Morton A., L.S.A., Edgware-road, of St. Mary's Hospital.
Symms, George F., Newton Abbot, of Guy's Hospital.
Wright, Harry C., L.S.A., Wynberg, Cape of Good Hope, of St. Bartholomew's Hospital.

Six candidates were rejected. The following gentlemen passed on the 31st ult., viz. :—

Bamber, Charles J., L.R.C.S. Lond., Fulham, of St. Bartholomew's Hospital.
Boyd, James S. N., St. Helier's, Jersey, of University College Hospital.
Burton, Alfred H., Sevenoaks, of Guy's Hospital.
Bush, Erasmus, Bath, of St. Bartholomew's Hospital.
Dennys, George W. P., Reading, of St. Bartholomew's Hospital.
Floyd, John, L.S.A., Oxford, of the London Hospital.
Hawkins, Walter R. T., L.S.A., Bristol, of the London Hospital.
Margetson, William E., Dewsbury, of the Middlesex Hospital.
Shann, Henry C., York, of the Leeds School.
Stewart, John McD., L.S.A., Cambridge-gardens, of the Middlesex Hospital.

Twelve candidates were rejected.

APOTHECARIES' HALL, LONDON.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, July 25 :—

Cuerton, Edward, Beam House, Shrewsbury.
Hodgson, Freeth Foster, Chesham, Bucks.
Llewellyn, Walter, 152, Whitechapel-road.
Martin, Theodore, Evesham.
Morgan, Edward Smith, Castle-square, Swansea.
Rhys, Joshua, Aberdare, South Wales.
Wainewright, Robert Spencer, Belmont, Lee, Kent.
Watson, Charles Jones, Heigham Hall, Norwich.

The following gentlemen passed their Primary Professional Examination on July 11 :—

Fowler, Charles Henry, St. Bartholomew's Hospital.
Monti, Peter, St. Mary's Hospital.

And on the 25th—

Carnall, Edward, St. Bartholomew's Hospital.
Crew, William Thomas, Guy's Hospital.
Fellowes, Henry Thos. Abdy B., St. Bartholomew's Hospital.
Morris, Edgar Freeman Griffith, University College.

NAVAL, MILITARY, &c., APPOINTMENTS.

ADMIRALTY.—Fleet-Surgeon Alexander Watson, M.D., to be Deputy Inspector-General of Hospitals in her Majesty's Fleets, with seniority of July 3.

BIRTHS.

CLAY.—On July 25, at 4, Windsor-villas, Plymouth, the wife of R. Hogarth Clay, M.D., of a daughter.

WYBRANTS.—On July 22, at Wincanton, the wife of R. B. Wybrants, L.K.Q.C.P., of a son.

MARRIAGES.

ANDERSON—MACROBIN.—On July 31, at Migvie House, Aberdeen, Samuel Anderson, Secretary of the Northern Assurance Company, Aberdeen, to Mary, eldest daughter of John Macrobin, M.D. Emeritus Professor of Medicine in the University of Aberdeen.

BAIN—ROBINSON.—On July 23, at Newark-upon-Trent, David Stuart Erskine Bain, M.R.C.S.E., etc., of Mere, Wilts, son of D. S. E. Bain, M.D., Deputy Inspector-General of Hospitals, to Gertrude Mill, daughter of W. Robinson, Esq., of Southfield House, Newark-upon-Trent.

HASSALL—MACGILL.—On April 24, at Biebrich, Prussia, Arthur Hill Hassall, M.D., to Alice Margaret MacGill, only daughter of the late Rev. Thomas MacGill, of Clapham, Surrey.

HIGGINS—HIND.—On July 24, at Sutherland Congregational Church, Walworth-road, London, G. Hodgson Higgins, M.R.C.S.E., L.R.C.P. Edin., of Belmont House, Leeds, to Mary Madeline, daughter of the late Charles Hind, Esq., of London.

KIRKPATRICK-PICKARD—CARVER.—On July 23, at Chesham Bois Church, Bucks, P. Kirkpatrick-Pickard, M.D., of 59, Abbey-road, St. John's-wood, to Mary Tudor, second daughter of E. Turst Carver, Esq., of Chesham Bois House.

LILLEY—YOUNG.—On July 30, at Lambeth Church, Frederick Charles, only son of F. J. Lilley, M.D., 222, South Lambeth-road, S.W., to Hannah Lucretia, widow of the late William Young, Esq.

LOWE—JARDINE.—On June 26, at St. George's Church, Haliburton, Ontario, James Henry, second son of W. H. Lowe, M.D., formerly of Balgreen, near Edinburgh, to Mary Ellen, youngest daughter of the late — Jardine, Esq.

MARKHEIM—BEVERIDGE.—On July 19, at Wycliffe, Yorkshire, Alfred John Henry Gegg Markheim, M.D. Paris, to Sarah Norris, daughter of the late Erskine Beveridge, Esq., of Brucefield, Dunfermline, N.B.

MESTAYER—KESTEVEN.—On July 30, at St. John's Church, Upper Holloway, Richard Liron Mestayer, of Manchester, to Katherine Emily, eldest daughter of W. B. Kesteven, M.D., of Holloway.

O'HALLORAN—PHILLIPS.—On June 13, at Trinity Church, Adelaide, South Australia, Edward White O'Halloran, Esq., to Clara Aunger, second daughter of James Philips, M.R.C.S., of England.

THOMAS—DUFFIELD.—On June 10, at St. George's, Gawler, South Australia, John Davies Thomas, M.D. Lond., to Eleanor, fourth daughter of the Hon. Walter Duffield, M.L.C., of Para Para.

DEATHS.

AYTON, ELIZABETH, widow of the late Jacob Ayton, M.D., Devizes, at 2, Campsbourne, Hornsey, on July 27, in her 58th year.

BONTON, GEORGE C., Surgeon of the Left Wing, 2nd Regt. M.N.I., at Sumbulpoor, C. P. India, of heat apoplexy, on June 22, aged 24.

GÜNTHER, EDWARD, youngest son of Theodore Günther, M.D., at Hampton Wick, on July 26, aged 14 months.

KEEN, ISABELLA, the wife of Thomas Keen, M.R.C.S., King's-road, Chelsea, on July 26.

LYNN, WILLIAM BERWICKE, F.R.C.S.L., Consulting Surgeon to the Westminster Hospital, formerly of the 5th Regt. of Foot, at Claygate, Surrey, on July 27, in his 93rd year.

MILLAR, CHARLES, M.D., at Penhros, Carnarvon, on July 24, aged 66.

THANE, CHARLES STUART, third son of George Dancer Thane, M.D., at 15, Montague-street, Russell-square, on July 24, in his 21st year.

THORNE, THOMAS HENRY, M.R.C.S., L.S.A., at Kimberley, Diamond Fields, South Africa, on June 15, aged 38.

WILKINSON, MATTHEW A. EASON, M.D. Edin., President of the British Medical Association, at Greenheys, Manchester, on July 26, aged 64.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BRAINTREE UNION RURAL SANITARY AUTHORITY.—Medical Officer of Health. Candidates must possess the necessary qualifications. Salary £25 per annum. Applications, with testimonials, to Fred. Smoothy, Clerk, on or before August 10.

CENTRAL LONDON OPHTHALMIC HOSPITAL, GRAY'S-INN-ROAD, W.C.—An Assistant-Surgeon. Candidates must be Fellows or Members of one of the Royal Colleges of Surgeons, or a Master in Surgery of one of the Universities of Great Britain or Ireland. Must not practise midwifery or pharmacy, but must have attended the practice of some ophthalmic institution for at least six months. Testimonials to the Secretary, on or before August 7.

MONTGOMERYSHIRE INFIRMARY, NEWTOWN.—Dispenser, who will be required to act as Assistant-Secretary. Salary £30 per annum, or £60 without board and lodging. Applications, with testimonials, to the House Committee, Infirmary, Newtown, before August 22.

QUEEN'S COLLEGE, BIRMINGHAM.—An additional Professor of Physiology. Applications, with testimonials, to Mr. Joseph Lewis, 21, Paradise-street, Birmingham, not later than August 9.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population in computed according to the census of 1871.

RESIGNATION.

Blaby Union.—The Enderby District is vacant; area 14,307; population 5647; salary £60 per annum. Also the Workhouse; salary £20 per annum.

Cranbrook Union.—Mr. E. Young has resigned the Hawkhurst District; area 20,172 acres; population 7172; salary £55 per annum.

Droitwich Union.—Dr. D. Wills has resigned the Droitwich District; area 15,297; population 4950; salary £120 per annum.

Lichfield Union.—Mr. James Clark has resigned the Ogley Hay District; salary £50 per annum.

Rochford Union.—The Rayleigh District is vacant; area 15,145; population 3228; salary £64 per annum.

APPOINTMENTS.

Ashton-under-Lyne.—Mr. Charles Estcourt as Analyst for the Borough.

Drayton Union.—Thos. L. Lloyd, L.R.C.P. Lond., M.R.C.S. Eng., to the Fifth District.

Greenwich.—Mr. G. W. Wigner reappointed Analyst for the District for one year.

Horncastle Union.—Albert E. Boulton, M.R.C.S. Eng., L.S.A., to the Horncastle District.

Yorkshire.—James Baynes, jun., F.C.S., as Analyst for the East Riding for one year.

SUBNITRATE OF BISMUTH.—Prof. Gubler, speaking of this substance at the Académie, observed that it is a mechanical absorbent just like any other dry powder; and it is a certain antacid, for while it does not absorb carbonic acid gas, which is secondary, it efficiently absorbs the normal acids in excess in the gastric juice, and especially the acids formed accidentally at the expense of alimentary or other matters introduced into the *primæ viæ*—acetic and lactic and volatile fatty acids. Moreover, the basic salt of bismuth possesses the very great advantage of absorbing sulphuretted hydrogen gas, or of producing with the sulphohydrate of ammonia, by double decomposition, nitrate of ammonia and sulphuret of bismuth. In this latter effect bismuth can only be replaced with difficulty, chalk, in particular, the employment of which would be so convenient, so cheap, and so inoffensive, not seizing hold of sulphuretted hydrogen. Oxide of zinc is the only other substance that can fulfil all the indications so well met by bismuth, and it easily becomes nauseating or emetic. It is, however, a remarkable thing that this inconvenience especially occurs when small doses of the oxide are employed—as from a twentieth to a fifth of a gramme—which always meet with enough acid in the stomach to convert them into neutral salts. When large doses are given—as a half to one, two, three, and four grammes per diem—they are exempt from all emetic properties, and especially when united with sufficient bicarbonate of soda to neutralise the acids of the *primæ viæ*. This combination furnishes excellent results in the same cases in which bismuth succeeds. The oxide of zinc, indeed, has this advantage over bismuth: that its sulphuret is white, and thus does not mask the presence of blood in the stools; nor does it raise fears in the mind of the timid of the presence of melæna.—*Bulletin de l'Académie*, July 16.

CÆSARIAN OPERATIONS IN THE UNITED STATES.—In the *American Journal of the Medical Sciences* for April, Dr. Robert Harris, of Philadelphia, has a valuable statistical paper bearing the following rather long title:—"The Operation of Gastro-Hysterotomy (true Cæsarian Section) viewed in the light of American Experience and Success; with the History and Results of Sewing up the Uterine Wound; and a full Tabular Record of the Cæsarian Operations performed in the United States, many of them not hitherto recorded." The length of the article and the details it enters into preclude our doing more than notice its publication; but it will be gladly consulted by those who have in future to deal with the subject. The author has collected 71 cases (37 occurring in white women, and 34 in black women), and 20 of these he has obtained by correspondence. In 34 of the cases the mother lived, and in 37 she died; of the children, 36 were born dead and 37 alive, 32 of the latter living. In 17 cases, in which the operation was performed within twenty-four hours after the commencement of labour, 12 women and 13 children were saved. The far greater mortality of the operation in Great Britain and Ireland is very remarkable; for while in each country about 24 per cent. of the entire number of such cases have been early or "timely" cases, in Great Britain the fatality to the mother was 71 per cent., and in America but 30 per cent.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Foreign Hospitals in China.—The high provincial officials of the province of China in which Foochow is situated have, says the *Foochow Herald*, sent $500 to the United States Consul at Foochow, of which $200 are for distribution to the Medical Missionary Hospital for Women, under the direction of Miss Trask, M.D., and $300 for the General Hospital, under the control of Dr. Osgood. These donations are from the private purses of the Viceroy, Tartar Generals, Acting Governor, and other officials of rank, who take an interest in foreign hospital work.

Industrial Dwellings.—From the half-yearly report of the Improved Industrial Dwellings Company, it appears that the Company now possesses twenty-five estates in various parts of the metropolis, on which 2369 dwellings have been erected and are in occupation; and 831 are in course of erection. When these are completed about 16,000 persons will be residing in the Company's dwellings.

Women Doctors.—Four female students at Madras have lately passed their examinations in medicine and surgery, and been granted certificates to practise.

The Blind, Deaf, and Dumb in Europe.—Dr. G. Mayr, the Director of the Royal Bavarian Statistical Bureau, has published the following statistics, showing the proportion of blind, deaf, and dumb people, and of imbeciles, in the different countries of Europe and in America:—The proportion of blind people in Germany is 8·79 per 1000 of the population, in England 9·35, in Denmark 7·86, in Norway 13·63, in Sweden 8·06, in Finland 22·46, in Austria 5·55, in Hungary 12, in Switzerland 7·61, in France 8·37, in Spain 11·26, in Italy 10·16, and in the United States 5·27. Of deaf and dumb people the proportion in Germany and Austria is 9·66 per 1000, in England 5·74, in Denmark 6·20, in Norway 9·22, in Sweden 10·23, in Switzerland 24·52, in France and Spain 6·26, in Italy 7·34, and in the Unted States 4·20. The proportion of idiots in Germany is 23 per 1000, in England 31, in Denmark and Sweeden 22, in Norway 30½, in Switzerland 29, in Belgium 14, in France 26, and in Italy and the United States 16.

The North-West Provinces of India.—We learn from India that Dr. Townsend is appointed to investigate the cause of the recent mortality in the North-West Provinces, and into the sanitary and medical subjects proposed by the Famine Commission, especially as regards food rations.

The Gentler Sex.—It was Mr. Boyd Kinnear, who said that we may leave the question whether a particular employment is womanly or not, to be settled by the "women who may adopt it, and the public who will judge them."

Seamen's Hospital, Greenwich.—By the last quarterly report it appears that 368 seamen had been admitted to the Hospital as in-patients during the past quarter from British and foreign ships. In addition to the British seamen, 113 sailors of different nationalities were benefited. We regret to observe that the accounts presented a deficiency of £458 13s. 1d.

The London School Board Playgrounds.—After much consideration the London School Board have resolved to open, on Saturday afternoons and summer evenings, three of the playgrounds attached to Board Schools.

"*Prevention,*" *South Wales.*—The Royal Jennerian and London Vaccine Institution was founded in 1802 for gratuitous vaccination and supplying vaccine matter to the public.

Verax.—From the year 1859 to 1875 the admissions into lunatic asylums, or placed under single charge, exceeded 185,000 (about 18,000 being transfers): 150,000 were pauper, and 35,000 private patients. During this period 63,000 were discharged "recovered," and 27,000 "not recovered"; the total number restored to liberty, so far, at least, as confinement under certificates is concerned, being 90,000, of whom 22,000 were private patients. The deaths amounted to about 57,090. The total number of patients on January 1, 1876, was 67,916, being an increase in seventeen years of 28,154. The calculated average annual increase in the number of certified lunatics in England and Wales for the subjoined quinquennial period is as follows:—1856-61, 3·6; 1861-66, 4·46; 1866-71, 3·78; 1871-76, 2·76. As to the increase of pauper lunatics, the returns to Parliament show that in 1860 there were about 33,000 chargeable to the unions, in 1870 there were 48,433, and in 1876 no less than 57,407.

COMMUNICATIONS have been received from—

Dr. Godson, London; Dr. Stephen Mackenzie, London; Dr. T. Whipham, London; Mr. John Chatto, London; Mr. Thomas Barlow, London; Dr. W. Allen Sturge, London; Dr. Herman, London; Dr. E. Sparks, Dorset; Dr. G. C. Ogilvie Will, Aberdeen; Dr. J. Mitchell Bruce, London; Mr. T. M. Stone, London; Mr. C. J. Cullingworth, Manchester.

BOOKS AND PAMPHLETS RECEIVED—

E. M. Dixon, B.Sc., Report on the Air of Glasgow—Dr. F. G. Rafinesque, Étude sur les Invaginations Intestinales Chroniques—W. G. Russell, M.B., Domestic Medicine and Hygiene—Thirty-ninth Annual Report of the Registrar-General of Births, Deaths, and Marriages in England—J. C. Parkinson, J.P., Newport and Cardiff as Shipping Ports—George M. Beard, M.D., Certain Symptoms of Nervous Exhaustion—A General Report of the Cases under Treatment at the Seamen's Hospital, Greenwich—James R. Chadwick, M.D., of Boston, The Functions of the Anal Sphincters, so-called—Joseph Kidd, M.D., The Laws of Therapeutics—R. Liebreich, M.R.C.S., School Life in its Influence on Sight and Figure (two lectures)—John W. Tripe, M.D., Report of the Board of Works on the Sanitary Condition of the Hackney District for the Year 1877—Francis Vacher, Report on the Sanitary Condition of Birkenhead and Claughton-cum-Grange for the Year 1877.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médicale—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Nature—Medical Examiner—Centralblatt für die Medicinischen Wissenschaften—Cincinnati Lancet and Clinic—Brain—Sunday at Home—Leisure Hour—Boston Medical and Surgical Journal—Gazette Hebdomadaire—Australian Practitioner—Medium—Science and Gossip—Western Daily Mercury—National Anti-Compulsory Vaccination Reporter—Glasgow Medical Journal—Veterinarian.

APPOINTMENTS FOR THE WEEK.

August 3. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

5. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

6. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

7. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 1½ p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

8. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

9. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 27, 1878.

BIRTHS.

Births of Boys, 1243; Girls, 1171; Total, 2414.
Average of 10 corresponding years 1868-77, 2205·2.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	938	854	1792
Average of the ten years 1868-77	846·0	791·9	1637·9
Average corrected to increased population ...	...	...	1753
Deaths of people aged 80 and upwards ...	...	...	32

Note.—The births and deaths registered last week may be compared with the average numbers in the corresponding weeks of the ten years 1868-77 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	7	4	2	19	...	1	1	70
North ...	751729	...	5	9	2	21	...	6	1	92
Central ...	334369	...	...	...	...	9	1	2	...	35
East	639111	...	1	4	..	22	...	1	1	81
South	967692	11	8	10	3	30	...	6	1	156
Total	3254260	11	21	27	7	101	1	16	4	434

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·700 in.
Mean temperature	65·2°
Highest point of thermometer	81·4°
Lowest point of thermometer	54·2°
Mean dew-point temperature	58·9°
General direction of wind	N.E. & S.W.
Whole amount of rain in the week	0·21 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, July 27, 1878, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1878.*	Persons to an Acre. (1878.)	Births Registered during the week ending July 27.	Deaths Registered during the week ending July 27.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3577304	47·5	2414	1792	81·4	54·2	65·2	18·44	0·21	0·53
Brighton	103923	44·1	68	41	80·2	56·0	65·5	18·61	0·67	1·70
Portsmouth ...	129461	28·9	85	58	75·4	53·0	63·6	17·56	0·51	1·30
Norwich	84620	11·3	59	38	79·0	57·0	63·4	17·44	0·06	0·15
Plymouth	73599	52·8	42	37	77·0	57·5	65·4	18·55	0·67	1·70
Bristol	206419	46·4	141	71	84·0	52·0	64·6	18·12	1·32	3·35
Wolverhampton ...	74240	21·9	46	29	86·0	52·2	62·6	17·01	0·56	1·42
Birmingham ...	383117	45·6	279	181	...	...	...	...	...	...
Leicester	121473	38·0	74	69	85·2	53·5	62·1	16·73	1·86	4·72
Nottingham ...	165267	16·6	110	71	86·4	51·9	63·7	17·61	1·27	3·23
Liverpool	532681	102·2	382	385	83·5	54·2	62·3	16·84	1·00	2·54
Manchester ...	360514	84·0	239	223	...	...	...	...	...	...
Salford	170251	32·9	145	117	89·5	48·9	62·8	17·12	1·08	2·74
Oldham	107366	23·0	71	50	...	...	...	...	...	...
Bradford	185088	25·6	133	101	87·8	55·4	64·4	18·00	0·98	2·49
Leeds	304948	14·1	236	214	87·0	56·0	64·8	18·23	0·56	1·42
Sheffield	289537	14·7	195	184	86·1	55·0	61·9	16·61	0·87	2·21
Hull	143139	39·4	126	120	80·0	52·0	61·3	16·28	0·48	1·22
Sunderland ...	112459	34·0	69	57	75·0	55·0	60·8	16·01	0·12	0·30
Newcastle-on-Tyne	144570	26·9	122	73	...	...	...	...	...	...
Edinburgh	222371	53·1	140	79	74·2	49·5	61·3	16·28	0·47	1·19
Glasgow	566940	94·0	363	262	80·0	52·0	63·4	17·44	0·35	0·89
Dublin	314666	31·3	139	161	79·4	46·3	62·8	17·12	0·61	1·55
Total of 23 Towns in United Kingdom	8373953	37·9	5678	4413	89·5	46·3	63·3	17·39	0·72	1·83

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·70 in. The highest reading was 29·91 in. at the beginning of the week, and the lowest 29·50 in. on Wednesday evening.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1878 by the addition of seven years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. Nottingham, Salford, and Oldham, however, form exceptions to this rule, as the estimates for these three towns have been revised with the aid of local information as to the rate of increase of inhabited houses. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

THE LUMLEIAN LECTURES

ON

INSANITY IN ITS LEGAL RELATIONS.

Delivered at the Royal College of Physicians, London.

By J. C. BUCKNILL, M.D., F.R.C.P., F.R.S.,

Late Lord Chancellor's Visitor in Lunacy, and Medical Superintendent of Devon County Asylum.

Lecture III.—Part I.

I have referred to that monopoly of observation of the characteristics of insanity which the physician enjoys, through the operation of the statutes, in asylums and hospitals for the insane, and in the care of certified lunatics, which enables him to explain the motives of insane criminal acts; for there are few insane persons who, if they were left entirely without guidance and control, would not be liable to commit some law-breach either of omission or of commission. Still there is a marked difference between the inmates of an ordinary hospital for the insane and those of Broadmoor, where persons who have committed crime and have been acquitted on the ground of insanity are detained during the Queen's pleasure. I can speak from observation and personal inquiry of the inmates of Broadmoor, for, besides former official visits, Dr. Orange has most kindly, on several recent occasions, permitted me to study the inmates of his wards with that care and patience which is so needful in an investigation of states of mind, and with the aid and guidance of his own full and accurate knowledge.

One remarkable characteristic of criminal insanity can scarcely fail to strike any earnest investigator at Broadmoor, which is, that in the most unlikely instances he will discover a criminal motive. The absence of such motive is said to be one of the most trustworthy marks of the offender who is innocent on account of mental disease. But if this maxim were accepted, there are few of the inmates of Broadmoor who would not have merited punishment; and Dr. Orange fully confirms me in the statement that it is hazardous in the extreme to infer the absence of motive, and even of criminal motive, from the kind of histories of an offender and of his offence which are usually given for the guidance of courts.

On reflection, we must perceive that in every act which is not unconscious or automatic there must be a motive of some kind or other, but that this motive of insane conduct should so commonly be criminal in its character seems to be opposed to the accepted views of writers on the subject. And yet it is not difficult to see how even a pure delusion becomes supplemented with such a motive. A man entertains the delusion that his wife has betrayed and dishonoured him, and he kills his children with the motive of inflicting misery and punishment upon their mother, whom he detests. Another entertains delusions of persecution, and he commits homicide, not to escape from persecution, but to inflict vengeance upon his enemy. Even in the most unlikely cases, the existence of evil motive constantly discovers itself on patient investigation. A man steeped in epilepsy, who had killed his wife in an access of epileptic fury, recently told me that he remembered all about it. He was enraged with his sister for leading a vicious life; she being at his door he wished to get at her to wreak his passion, but his wife intervening, he struck her instead, and killed her. An epileptic youth was bargaining with his grandfather for the purchase of a pistol, which he took into the garden to try at a mark. On returning to the cottage he shot his grandfather, admitting subsequently that, as the old man sat over the fire, he offered such a tempting mark—"such a jolly cockshy," was the term he used—that he could not resist, and so a homicide was committed with just the motive which leads a street Arab to throw a stone at a lamp.

There is a woman at Broadmoor who cut the throat of her young infant. For some time she declared that she had no recollection whatever of the occurrence, but eventually she was led to narrate how the neighbour who was nursing her left her for a day alone a week after confinement, saying that she was well enough to attend to herself. She felt annoyed at having to warm her food, and therefore did not take sustenance enough. The result was that she could not properly suckle the infant, which became irritable and restless; and she thought that, as people cared so little about her, she did not care that the infant should live, and therefore she killed it. No doubt in these instances—and they might be added to to any extent—the motive was most inadequate and unreasonable and the offenders were irresponsible for their actions, but they are fair illustrations of the general fact that there is always a motive for every offence committed consciously, and that with rare exceptions that motive is some form of what the law calls malice. Of course, many exceptions as to the character of the motive may be met with, and others may be imagined. For instance, that case which is reiterated by the lawyers of a lunatic in supposed self-defence killing a man who he thinks is about to kill him; or that other one of the man who, under the delusion that he was breaking a jar, killed a man.

I know not whether physics blind men to metaphysics, or the study of automatic and consensuous actions to the nature of those which are conscious; but certain it is that while medical men are given to speak with facility of action without motive, or of motiveless conduct, the lawyers, whose province it is to estimate the moral character of actions, from a contract to a homicide, are trained to an analysis of conduct of which motive is an indispensable element. The able lawyer I have already quoted explains that conscious action is compounded, first of motive, intention, or design; secondly, of that form of wishing which is called will; and thirdly, of the appropriate bodily movements.

In the charge to Dove's jury(a) the following more simple distinction was made between the mental and the physical part of action:—"It is," said the judge, "the setting and keeping the mind in motion towards an object plainly conceived that constitutes the mental part of an act. If a man fills himself with a passionate intense longing for a forbidden object or result, he becomes, as it were, a machine in his own hands. Every act becomes irrevocable by the agent before it is consummated."

Here, again, is the tripartite arrangement—the conception of an object, the longing for its attainment, and its consummation; and a main difference between offenders is the different mental point at which an act is still revocable. In the thorough madman there is no such point, for he is a machine in his own hands from the commencement; the conception of the object, the longing for it, and the doing of it, being the result, not of mental, but of material things which are not in his own hands. The conception and the longing combined are the motive; but as longing or wishing can only vary by being more or less strong, it is the conception of the object which gives the character to it. How rarely can the conception of an act of violence, whatever its origin, be amiable or altruistic compared with the infinite variety of circumstances in which it must be of an opposite complexion?

The primary cause of the character of motive lies in the formation of disposition, and with this judicial proceedings have no direct relation. But a lunatic's disposition is always in part, and sometimes entirely, the product of disease; and if this be so—if disposition, if conception of the object and that form of wishing which is called will, be all the consequence of material things which are not in the hands of the agent,—it follows that the whole of that mental state to which, or to part of which, the term "motive" may be applied is not in his hands, and the agent is no more responsible for it than he is for the material things—to wit, the state of certain inflamed or degenerated portions of nerve-tissue, which is the cause of it all.

These considerations will, I trust, induce jurists to acknowledge that if a man has become an offender against the law, even with malice aforethought, not the product of his own evil nature, but that of deranged nutrition of nerve-tissue; and if, moreover, he be such an offender that no effort he can make and no threat of the law can withhold him from the course of conduct resulting therefrom, then neither will the spirit of justice be rightly directed in

(a) It would be more accurate to refer these words and others I have quoted in my second lecture to the judge's notes than to his charge. I have taken them from Sir Fitzjames Stephens' account of this *cause célèbre* in his "General View of the Criminal Law," which, he says, "is taken from the notes of Baron Bramwell, who was so kind as to lend them to me for the purpose. I have followed throughout the very words." In the brief summary of the charge reported in the *Times* it is stated that the judge "read to the jury the whole of the evidence, commenting upon it as he proceeded."

retaliating for his misdeeds, nor will the preventive aims of law be served by his exemplary punishment.

The fact is that we have long been dwelling in that kind of paradise which wise men try to avoid, under the erroneous supposition that insane people commonly commit criminal actions without criminal motives. But if this be wrong, as I maintain, we must seek for a new adjustment of our principles. We know too little of the correlation between pathology and conduct to occupy that standpoint which would be the best, but fortunately there is one attribute of conduct produced by disease which is sufficiently simple to be intelligible by men of plain common sense, sufficiently constant not to cheat us with false hopes of guidance, and directly applicable to the end in view; and this is the uncontrollable character of conduct resulting from disease of the brain. Surely it must be that this quality of conduct resulting from disease has always been at the root of the law, although even up to the present time it has never been expressed in the law; for, if this quality be abstracted, what reason would remain for excusing a man from punishment on account of ignorance or unreason, even if he be insane? If a madman could be made to control his conduct like other men, one can scarcely believe that any tenderness for his misfortune would be able to overrule the obvious expediency of compelling him to do so; while in his deprivation of self-control and his insubjection to imposed control we have a test of his madness and a practical reason for his irresponsibility.

The following passage from Dr. Mortimer-Granville's important work on "The Care and Cure of the Insane" will confirm and support the opinions I am trying to inculcate:—"Intentions can only be inferred from acts. Philosophy may recognise the existence of motives without acts, but observation and inference—the only faculties with a *locus standi* in the forensic arena—deal only with deeds done and motives declared or inferred from acts. When a person kills or steals it is assumed he meant to kill or steal, unless it can be shown from collateral circumstances, or by inference from the method or nature of the specific act performed, that the latter was not purposely accomplished, or in the doing so far exceeded the implied intent as to leave room for the hypothesis of misadventure. The failure to discover a motive may create a doubt, but, unless the accused be allowed the advantage of the uncertainty, the plea of insanity set up on his behalf will not save him. Probably nine-tenths of the violence and misconduct of lunatics is vicious rather than morbid. Those who have studied insanity at close quarters—a widely different matter, be it remembered, from having occupied the position of medical superintendent at a lunatic asylum, which simply implies that a man has had an opportunity he may or may not have had time or the wit to use—will bear me out in the assertion that there is not only much method, but a very plain motive, in the mad doings of most depraved lunatics. Indeed, that is one of the pressing reasons why criminal lunatics ought to be excluded from institutions devoted to the care and cure of the insane."

But notwithstanding that it must be the duty of a court in all difficult cases to take into consideration the state of the whole mind of an insane offender, as it may have been changed by disease in the direction of loss of control, many cases occur in which the task is comparatively simple on account of the mind having been so profoundly affected in one of its main faculties that further inquiry may be needless. This consideration, and also the fact that we can best arrive at a knowledge of the whole by examining and estimating the condition of what may be, or at least appear to be, parts or separate functions of the whole mental state, lead us into that sort of rough mental analysis which is observable in modes of thought, as they may be traced both in legal proceedings and in the common life of men. It therefore appears to me of the greatest practical importance that physicians conversant with insanity should attempt so to arrange their knowledge that they may be able to present it to courts in a form whereby it may be understood by the rules of common sense, and applied by men of little cultivation or instruction. And I think this purpose would be greatly aided if we were to attempt, I will not say a classification, but a methodical view of the diseased conditions of mind which lead to the commission of offences. The term "mental derangement" conveys the notion indeed which ought never to be lost sight of, that insanity places the several mental functions out of their proper proportion and correlation, and that a mind thus deranged may be quite incapable of sane action, although some of its functions may seem to be more or less normal.

The consideration of separate states of mind leading to insane offences may, I think, be usefully methodised into the consideration (1st) of offences the result of Unconsciousness caused by disease; (2nd) of offences the result of Ignorance caused by disease; (3rd) of offences the result of insane Hallucination and Delusion; and (4th) of offences the result of Passion caused by disease. It may be that, with the exception of unconsciousness, these several mental states are not met with alone or in unmixed forms; but as it is certain that in the great majority of concrete instances one or other of these several states of mind has a preponderating influence in the causation of illegal conduct, we shall, I think, better arrange our own knowledge, and be better able to make ourselves understood, if we adopt this concise arrangement, which may further be developed into that more elaborate grouping of the signs of insanity to which I have already referred.

Offences the result of unconsciousness have recently attracted great attention both in clinical teaching and in courts of law. They may be divided into those of somnolence and those of epilepsy. Of the former we have had no recent cases in our courts. One English and three foreign instances are collected by Caspar, but no sufficient details have been given to enable us to form any opinion as to whether they were mere excuses for murder, or homicides committed under the hallucinations of dreaming.

The unconsciousness of the epileptic state, and the amount of consensuous muscular movement which may really be effected during such unconsciousness, is one of the most interesting physiological questions which has ever been raised by legal proceedings, and one of the most important legal questions upon which physiology has thrown light. I find it admitted in legal writings that an epileptic may in a convulsion give a haphazard fatal blow for which he is in no way responsible. He is neither a lunatic nor a criminal, but has killed a man by misadventure.

A step beyond this is illustrated by the case of a woman, Elizabeth C., whom I have seen and examined at Broadmoor, and whose instructive case has been supplied to me by Dr. Orange, as follows:—One morning in the end of June, 1876, while dressing her infant, she got up with the view of getting some bread-and-butter for the other child, who had asked for it, and, having the infant in her arms, she approached a cupboard to get a knife to cut the bread. She appears at this stage to have been seized with a fit, during which she cut one of the infant's hands clean off at the wrist. Speaking unreservedly and without any appearance of evasion, she says she does not recollect anything about the infliction of the injury, and that when she first recovered consciousness she found neighbours and two policemen in her room, and the latter taking the hand, which she had wrapped up and was hugging, from her. She was fond of the child, and distinctly states that she was never possessed of any thought or desire about doing it harm. She was under outdoor hospital treatment for epilepsy, and had on two occasions fallen upon her side (the right) against the fire and received burns, scars of which still remained on the side and elbow. It would further appear, from her own statement, that her husband had been in the way of locking up the knives, etc., not absolutely out of her reach, but so that they might never be lying about the room. She gives as a reason for this that she had been found to have fits with sharp instruments in her hand; and recounts one occasion on which, while sitting at the table with her husband and cutting bread, she at the same time cut a small slice off her thumb, being at the time unconscious, and subsequently observed to be so by her husband, who was the first to notice the cut. She states, too, that she used occasionally, while in this unconscious state, to get about the room and even dress herself or make up her bed.

We can scarcely doubt that this poor woman destroyed her child (for the child died) by consensuous or sensori-motor movements over which she had no control; and for which, therefore, she was absolutely irresponsible. It was, in reality, a case of homicide by misadventure; and wherefore the jury found the woman not guilty on the ground of insanity, so that she has been relegated to Broadmoor, I cannot understand. I do not know any other case in which an

offence has clearly been committed under parallel conditions, although no doubt this single case forcibly illustrates the defence made in some recent trials in which there has been much difference of opinion among medical men.

Dr. Hughlings-Jackson has contributed a most able and instructive paper, directly bearing upon this question, to the fifth volume of the *West Riding Asylum Reports*, entitled, "On Temporary Mental Disorders after Epileptic Paroxysms." Dr. Jackson's cases do not include any of law-breach, although, as he says, they have a direct bearing upon them, having "an important medico-legal interest." "It is convenient," he says, "to have one name for all kinds of doings after epileptic fits, from slight vagaries up to homicidal actions. They have one common character—they are automatic; they are done unconsciously, and the agent is irresponsible. Hence I use the term *mental automatism*. I say *mental*, as the doings are probably external signs of crude mental states—external signs of epileptic dreams."

Perhaps it may be hypercriticism to suggest that doings which are mental can scarcely be automatic, and that we are not unconscious of our dreams. In a certain sense all mental action may be said to be automatic, being the result of sensation and previous ideation; and in a more limited sense, we have the unconscious cerebration of Carpenter and the reflex mental action of Laycock; but it seems rather premature to admit these speculative opinions even into clinical teaching, and surely their influence ought not to be permitted to modify the plain meaning of terms used in legal inquiries. I cannot omit Dr. Jackson's psychological explanation, which is most ingenious and probable. "I believe," he says, "there is in such cases, during the paroxysm, an internal discharge, too slight to cause obvious external effects, but strong enough to put out of use for a time more or less of the highest nerve-centres. The mental automatism results, I consider, from over-action of the lower nerve-centres, because the highest or controlling centres have thus been put out of use. The automatism is not in these cases, I think, ever epileptic, but always *post*-epileptic. The condition after the paroxysm is duplex—first, there is a loss or defect of consciousness; and there is, secondly, mental automatism. In other words, there is (1) loss of control, permitting (2) increased automatic action." In support of these views Dr. Jackson records a large number of instructive cases in which the epileptic continues, after the paroxysm, to do the thing unconsciously and imperfectly which was in his mind when the paroxysm came on. Thus "a patient of mine," he says, "was seized with a fit whilst feeling a gentleman's pulse; when he came round in another room he began to feel his sister's pulse, she being near him."

The most elaborate case, having also the strongest medico-legal bearings, is that of an epileptic who, just before he passed into the *status epilepticus*, had arranged that his sister should have cocoa for supper, after which he said that, being alone, "I felt symptoms of an attack, and sat down, I believe, in a chair against the wall; and here my recollection failed. The next thing I was conscious of being in the presence of my brother and mother, who had been sent for, as they lived opposite; and I have since been informed by my sister-in-law that she came into the kitchen and found me standing by the table mixing cocoa in a dirty gallipot half filled with bread-and-milk, intended for the cat, and stirring the mixture with a mustard-spoon, which I must have gone to the cupboard to obtain."

In another case, reported by Dr. Hughlings-Jackson, the epileptic was found by his mother in a state of automatism brandishing a clasp-knife, but he had got hold of it by the blade, and not by the haft. She took it from him and concealed it, but found him soon afterwards again brandishing it in a threatening manner, but this time it was shut up.

No doubt can be thrown upon the genuineness of these accounts from interested motive on the part of the narrators, who, with different temperaments or under other circumstances, might have committed crimes. Dr. Hughlings-Jackson, while he points out the important bearing of his principles upon medico-legal investigations, has expressly refrained from applying them to the solution of particular instances of crime. They have, however, been so applied by others, properly, as I have said, in the case of Elizabeth C., but in others with a laxity of comparison which, if permitted, would make Science the handmaid of Injustice. In order to apply the principles of clinical medicine to the exoneration of criminals, not a vague resemblance which may be quite deceitful, but a real and natural uniformity, must be established by a strict comparison of facts.

As an example of the absence of such uniformity, I may refer to the defence of Frederick Treadaway, which was that he had automatically killed John Collins while in a state of unconsciousness after a seizure of epileptic vertigo. The prisoner was found guilty and left for execution. He was subsequently examined by yourself, Mr. President, and by Dr. Crichton Browne, and upon your joint report, Mr. Cross advised the Queen to commute his sentence into penal servitude for life. Your report, sir, has not been made public, but I think I shall not be far wrong if I assume that you came to the conclusion that the verdict of the jury was right, and that you recommended mercy on the ground that the responsibility of an epileptic might be diminished, even although he were fully conscious at the time of his offence, and that the criminal, having had one fit in the dock, he might have another fit on the scaffold—an occurrence which might readily produce a mischievous impression on the mind of the public. If such, sir, were the gist of your report, its publication would, I think, have been satisfactory both to the profession and to the public; for while it was wise and merciful, it has not established a mischievous precedent of explaining crime by a pathological state not supported by evidence. On comparing the clinical with the criminal case—that is to say, the cocoa-mixing case with that of Treadaway, we observe that in the former there was undoubtedly a fit, the unconscious state lasting some time, long enough for friends to be sent for, and that the automatic actions, although carried out in general conformity with the preceding state of ideation, were irrational and inconsequent, the cocoa for supper being mixed in a dirty gallipot of cat's food with a mustard-spoon.

If we compare the cases I have referred to in Dr. Hughlings-Jackson's paper (and they are the strongest and most applicable to legal inquiries in the whole series) with the circumstances under which Treadaway committed his crime, we shall find great and fundamental differences. Treadaway had just left his father's house in trouble. The day before the homicide he bought a revolver pistol. He had a long interview with his victim, in which his conversation and behaviour had been rational and tranquil. There had not been the slightest symptom of epileptic paroxysm or even of vertigo. When Collins's wife heard the report of the pistol from an adjoining room, and asked Treadaway what that meant, he replied that he did not know. Then he shot Mrs. Collins, not killing her. She screamed murder, and he tried to stop her mouth with one hand and to strangle her with the other. Then he beat her head on the pavement several times. Then he escaped from her, opening the door himself, and running quickly, holding his hat on with one hand, and the pistol concealed under his coat with the other hand. In order that Treadaway's conduct should have resembled the cocoa-mixing case or the knife-brandishing case, the man ought to have held the pistol by the barrel, or committed some other absurd blunder of action, whereas everything he did was directly and rationally consistent with the criminal purpose. It is probable that he had attempted to borrow money of the old man, and shot him on being refused; and to explain his conduct by automatism, or even by mental automatism, is impossible.

During the present spring assize at Cambridge, an epileptic post-office clerk, Frederick John Paton, who was proved to be an habitual letter thief, was defended on the ground that "*he was not conscious at the time that he committed the offence.*" A suspicion having arisen that Paton was a thief, a detective officer placed a marked half-sovereign in a letter, which was at once abstracted and found in the criminal's possession. An accumulation of gloves, trinkets, and other stolen property was also found in his chambers, and the fact that he had appropriated this property, and had not converted it to his own use or benefit—that is to say, had not sold it and spent the money—was urged as an argument in support of the defence, although it might only indicate that he retained some amount of cautiousness. That an epileptic post-office clerk might automatically attempt to sort letters is quite probable; that he might attempt automatically to open letters is not impossible, notwithstanding that it would be directly contrary to his habitual conduct, or to the idea in his mind at the invasion of the fit—the two circumstances which are said to characterise this form of consensuous action. But that any epileptic or any other person could, in

a state of unconsciousness, open only such letters as by the sense of touch he might be led to think had valuable contents, like the detective's letter containing the marked half-sovereign, that is a proposition which no juryman in his right senses could, I think, be brought to believe. The case, however, serves well to illustrate the lengths to which this novel theory of irresponsibility, on account of epileptic unconsciousness or mental automatism, may, in the poverty of despair, be applied.

FORTY-SIXTH MEETING OF THE BRITISH MEDICAL ASSOCIATION,

HELD IN BATH, AUGUST, 1878.

PRESIDENT'S ADDRESS.

By RANDLE WILBRAHAM FALCONER, M.D., F.R.C.P., D.C.L.,
Consulting-Physician to the Royal United Hospital, Bath; etc.

GENTLEMEN,—Thirty years ago, our Society, then known as "The Provincial Medical and Surgical Association," for the second time held its anniversary meeting in the city of Bath. Of those who were present on that occasion, many, their life's labour finished, have gone over to the majority; others have sought their fortunes in distant localities; while of those who remain a few have readily united with another generation of practitioners to offer for the third time a cordial welcome to the members of the British Medical Association.

Since the annual meeting in 1848, many changes have taken place in our Association. Then the business to be transacted occupied only two days, now it occupies nearly double that time; then there were only 1300 or 1400 members, now we have more than 7500. The annual income was about £1400, while last year it amounted to more than £11,500. In 1867, the *Daily Journal* was first issued at the meeting in Dublin, and the sectional system first brought into practice. To the two addresses of Medicine and Surgery, a third has been added. Our branches have increased in number, and this year for the first time we have a colonial branch, that of the island of Jamaica. These facts point to the extension of our power. The work actually done by the Association is manifested by the many committees which have been established for the promotion of those objects coming within its legitimate scope.

In the early days of our Association the question of medical reform had attracted the serious attention of its members, and by their efforts in a great degree the first Medical Reform Bill received the sanction of Parliament. All that was then sought for was not obtained; but by the sedulous attention of the Medical Reform Committee appointed in 1852, up to the present time, advances have been made on the lines originally laid down by the Association, until this year the "one-portal principle," or conjoint scheme of examination, has been made compulsory in the Medical Act Amendment Bill introduced by Government during the present session of Parliament; and many of the most prominent members of the General Medical Council have acknowledged that their own body requires reforming, and the necessity that exists for the representation of the great bulk of the profession in that Council. Towards the attainment of these important ends your Medical Reform Committee has always directed the attention of the members of our Association, and this in no selfish spirit. The impression has erroneously gone abroad that representation in the General Medical Council has been sought for the Association only; but the true statement is, that the action of the Association has ever been on behalf of the whole of the profession, and for the whole profession have its energies and a proportion of its funds been expended. Complicated as this question may appear to be, there can be little doubt that it cannot be ignored in the future, and that, sooner or later, the just claims of the profession will be granted.

While the Medical Reform Committee was empowered to deliberate on this important subject, to another Committee was delegated the duty of watching the introduction into the Houses of Parliament of any Bills which, either directly or indirectly, were likely to affect the interests of the profession, whether Military or Naval, or the status of medical officers of the Poor-law or Public Health Services.

In 1863 a Parliamentary Committee was appointed, consisting of special members and representatives selected by every branch of the Association. The reports of the proceedings of this Committee are recorded from time to time in the pages of the *Journal*, and testify to the vigilance and activity of its members.

For a long time it had been held that, in order to estimate rightly the sanitary condition of a locality, so as to arrive at its true character as regards healthfulness, it was necessary to supplement the reports of the Registrar-General by returns, made at stated periods, of the prevalence of disease in selected districts, without reference to their mortality. To encourage this inquiry, and also to obtain the evidence of members of the Association upon medical questions having a practical bearing, a Registration of Disease Committee was appointed in 1865; its reports have always possessed great interest, and have been drawn up with much care and ability. It is only those who are acquainted with the difficulties which have to be overcome in prosecuting inquiries of this kind, under existing circumstances, can estimate the true value of these reports.

In 1868, when public attention was becoming alive to sanitary subjects, a joint Committee was formed, consisting of members of the British Medical Association and members of the Social Science Association, whose duty it was to consider all those subjects which are comprised under the term Public Medicine. The efforts made by this Committee to promote a radical change in sanitary administration, and also the memorial founded on the resolutions adopted at the Sanitary Conference held in London in 1876, as well as the very valuable communications made to the Association by the members of this Committee, those of the late Dr. Rumsey of Cheltenham, of Mr. Michael, and Dr. Stewart, bear testimony to the arduous exertions of this Committee.

For a long time the Committee of Council, with the sanction of the Association, had at intervals, according to the financial state of the Association, granted sums of money for the promotion of original research; on some occasions these grants were supplemented by subscriptions obtained from members of the Association. To these we owe the valuable reports made by the late Professor J. Hughes Bennett, "On the Action of Mercury," and the "Antagonism of Medicines"; but, as the funds of the Association increased, it was deemed desirable to appoint in 1874 a Scientific Grants Committee, who should select the subjects for investigation, and regulate the amount of pecuniary aid to be given in each instance. To this Committee the Association has hitherto annually given the sum of £300 for distribution. Recently, the sum of £100, a special grant, has been placed at its disposal for the purpose of investigating the Pathology of Hydrophobia and Rabies. A preliminary report on this subject will be presented at this meeting by Dr. Burdon-Sanderson and Mr. Callender. The investigations made by Professor Rutherford, Professor McKendrick, Drs. Braidwood and Vacher, and Dr. Fothergill, through grants provided by this Committee, have already been published in the *Journal*.

In 1875, the late Dr. Dalrymple, of Norwich, and at one time the representative in Parliament of this city, devoted much attention to the condition of Habitual Drunkards, and drew attention to the propriety as well as necessity of protecting the individual and his relatives from the evils of habitual intoxication. The Association, recognising the importance of this subject to the well-being of the community, appointed a Committee to consider the advisability of obtaining legislative restrictions applicable to Habitual Drunkards. This Committee has given much and continued attention to their special subject, and the result of their labours, with the assistance of Dr. Cameron, has been the introduction of a Bill into the House of Commons, which has passed a second reading. This is probably sufficient to indicate the satisfactory results of their deliberations.

In 1877, the question of Hospital Out-patient Reform was prominently brought to the notice of the Association, and a committee was appointed to procure such changes in the administration of out-patient relief at hospitals as they might find necessary, and to carefully investigate and report on the working of the present system of provident dispensaries in Manchester. This Committee was appointed on the

recommendation of the Public Medicine Section, at the meeting of the Association in Manchester last year. There can be no doubt that its report, which should be presented to this meeting, will contain much valuable material for discussion.

Among the awards offered by the Association, in addition to the Hastings Prize Medal, there was in 1875 a prize established to be given biennially, or less frequently, for the encouragement of original researches into the origin, spread, and prevention of epidemic diseases; or such cognate subjects as the Committee of Council may determine. The amount of the prize consists of the accumulated interest of £400, given by Dr. Stewart, being part of a sum raised for a memorial of eminent services rendered by him to the Association.

In the present year, Mr. Middlemore, of Birmingham, has presented to the Association the sum of £500, the interest of which is to be given triennially to the author of the best essay on the scientific and practical value of the improvements which have taken place in Ophthalmic Medicine and Surgery during the previous three years.

This year, the Committee of Council determined on founding a medal for "Distinguished Merit," to be awarded to any member of the profession, wherever residing and of any nation, for heroic conduct in the discharge of professional duties, or for special services rendered to the Association. The first presentations of this medal were made to the medical men who distinguished themselves in the well-known accident which occurred in the coal-mines near Pontypridd, in Glamorganshire. The intrinsic value of this medal will, it is obvious, be enhanced by the unfrequency of its award.

Lastly may be mentioned the changes which have been made in our *Journal*, and the ability with which it is conducted by our editor, giving to it an influence and authority which is of the utmost importance to the success and well-being of our Association.

Such are the means, very briefly and imperfectly described, by which our Association seeks to promote the interests of our common profession and the community at large.

The locality in which we are now assembled contrasts strongly with the busy scenes of manufacturing industry which of late years have been visited by our Association. Bath is a residential city, resorted to on account of its climate, especially favourable to those who have passed the meridian of life, on account also of the many advantages which it presents in a social and educational aspect, and on account of its mineral waters.

There is no manufactory of any great extent, if we except that of Messrs. Carr, of Twerton, not far distant from the city, where a large quantity of the celebrated South of England cloth is fabricated.

Macaulay, in his "History of England," referring to the state of England in the sixteenth and seventeenth centuries, when speaking of the watering-places of England and their remarkable increase, adducing as examples Cheltenham, Brighton, Buxton, and Tunbridge Wells, goes on to say, "But at the head of the English watering-places, without a rival, was Bath. The springs of that city had been renowned in the days of the Romans. It had been during many centuries the seat of a bishop. The sick repaired thither from every part of the realm. The king sometimes held his Court there. Nevertheless, Bath was then a maze of only four or five hundred houses, crowded within an old wall in the vicinity of the Avon. Pictures of what were considered the finest of those houses are still extant, and greatly resemble the lowest rag-shops and pot-houses of Ratcliff-highway. Even then, indeed, travellers complained of the narrowness and meanness of the streets. That beautiful city which charms even eyes familiar with the masterpieces of Bramante and Palladio, and which the genius of Anstey and Smollett, of Frances Burney and of Jane Austen, has made classic ground, had not begun to exist. Milsom-street itself was an open field lying far beyond the walls; and hedgerows intersected the space which is now covered by the Crescent and the Circus. The poor patients to whom the waters had been recommended lay on straw in a place which, to use the language of a contemporary physician, was a covert rather than a lodging. As to the comforts and luxuries which were to be found in the interior of the houses of Bath by the fashionable visitors who resorted thither in search of health or amusement, we possess information more complete and minute than can generally be obtained on such subjects."

A writer who published an account of the city about sixty years after the Revolution, has accurately described the changes which had taken place within his own recollection. He assures us that in his younger days the gentlemen who visited the springs slept in rooms hardly as good as the garrets which he had lived to see occupied by footmen. The floors of the dining-rooms were uncarpeted, and were coloured brown with a wash made of soot and small beer, in order to hide the dirt. Not a wainscot was painted. Not a hearth or a chimney-piece was of marble. A slab of common free-stone, and fire-irons which had cost from three to four shillings, were thought sufficient for any fireplace. The best apartments were hung with coarse woollen stuff, and were furnished with rush-bottomed chairs. The city, however, in a short time was extended beyond the narrow limits within which it was confined, and in somewhat more than a century the larger buildings which give importance to its appearance were erected.

The city is built on each side of a valley through which the river Avon flows from east to west, making midway in its course a considerable bend, within which was the site of the Roman city, and afterwards that of the mediæval and modern towns. From the right bank of the river the land rises by more or less gradual ascents until it reaches the highest crest of Lansdown Hill, 813 feet above the level of the sea. On the left bank the ascent is more gradual, but does not attain the same altitude, the highest point, called Crossway, being 597 feet above the level of the sea. The larger portion of the town stands on the right bank of the river and extends up the hill. The humbler portion of the inhabitants reside in the vicinity of the river, while the business portion of the community occupy the site of the old town and somewhat beyond its boundaries, and the higher levels are occupied by the more opulent inhabitants. The geological characters of the locality are deserving of notice.

The general aspect of the town, viewed from almost any of the surrounding elevations, is strikingly handsome, much of its appearance depending on the regularity of its buildings and of the material of which it is built—namely, the Bath oolite, which is abundant in the neighbouring hills, and is worked at a comparatively small cost. The appearance of the town as regards its physical beauty is mainly due to its geological character. There is a comparatively narrow track of alluvium at the bend of the river, and this is found also to slightly prevail on the east and west. On the lias which succeeds it the much larger portion of the houses are erected, and extends from near the river northwards to a height of nearly 227 feet above the lower level of the town. Next to this comes the marlstone, forming a deep band, so to speak, which appears behind Camden-crescent on the east, and on which All Saints' Chapel is erected on the west; above this, again, is the inferior oolitic sand from which several springs arise, used for domestic purposes. Above this is the inferior oolite on which Sion-place, a portion of Somerset-place, and Lansdown-crescent are built. Of this stratum the whole of the upper part of Lansdown is formed, while at Mount Beacon and Richmond-hill there rests upon it a limited amount of fuller's-earth. On the left bank of the river there is a large extent of alluvium on the east, which appears in a much less degree towards the west. In the former portion, especially in close proximity to Sydney-gardens, it is interspersed with gravel; on this side there is a less extent of lias, while immediately above it is the inferior oolitic sand, and above this again the inferior oolitic limestone.

The buildings which stand on the oolitic limestones and sands rest on dry ground; those on the marlstone on ground more or less moist, while those on the lias and alluvial ground would be damp. In the lower part of the town, this is in a very great measure obviated by the large accumulation of the *débris* of former buildings, and from the houses being vaulted to a considerable height above the natural level of the soil, especially the North and South Parades; while the old pictures which represent the original undulations of the soil in the upper part of the town show them to have been levelled by filling up the depressions, and by vaulting the buildings; a practice, it may be observed, which is adopted in by far the larger portion of the whole town.

The waters of this place naturally divide themselves into

two classes: first, the water employed for domestic purposes; and secondly, the mineral water. Of the latter, notice will be taken hereafter.

The history of this town shows it to have increased in some instances, at considerable intervals of time, by the erection of large streets and masses of buildings, which led to the establishment of distinct companies for the supply of water to their inhabitants, or to a few streets by the individual owners of them. Down to 1835, there were certain springs on Beechen Cliff, Beacon Hill, and Bathwick Hill, which constituted the only water-supply in the possession of the Corporation for the use of their tenants, while the houses beyond the boundaries of the old city received their water from either private companies or from individuals. In 1851, the Bath City Act was passed; and this occurred at a time when sanitary measures were attracting public attention, and attempts were making to abolish cesspools, and privies and ill-constructed water-closets were being done away with. This led to the larger use of water for domestic purposes. In this year, the estimated supply of water to each individual of the 2381 water-tenants of the Corporation was calculated at 6 gallons a head. In 1861, however, the number of water-tenants had increased to 4073, and the supply amounted to 13 gallons each; the steps taken by the Corporation in the interval between 1835 and 1861 having increased the water-supply from 94,000 gallons to 348,000 gallons. In 1870 another Act was passed, and certain springs were acquired, the supply from which is known as the Monkswood Water, which yield daily 643,000 gallons, with a pressure of 230 feet. In addition to these, possession of two other springs, known as the Oakford and Eyford Springs, was obtained. The daily yield of water from these sources is 268,000 gallons; "whilst, in winter, the flow almost exceeds computation." The result of this was that a daily allowance of water to the amount of 17 gallons was given to each of the 53,000 inhabitants of the city, which, added to the previously existing supply, made a total daily allowance of 26 gallons to each individual. By the acquisition of other springs and waterworks, the property of private companies and individuals, the above daily allowance of water was increased to 28 gallons to each of the same number of inhabitants. A valuable municipal report on this subject says: "Actual figures would be unreliable, but probably the increase of water thus obtained for domestic purposes would bring the daily allowance very close to the extreme maximum of 30 gallons per head, and this in accordance with gaugings in dry seasons." Provision is made for the storage of water in reservoirs at Batheaston and also at Monkswood.

The number of houses supplied in the borough is 7712, representing 50,128 inhabitants; outside the borough, 99 houses, representing a population of 643; giving a total of 50,771 persons. Many, however, of the inhabitants are supplied with good water from wells and springs who are not included in the above calculation. The whole of the borough, however, is not supplied with water, and this is attributable mainly to the varying levels of the locality, ranging from 60 to 600 feet above the level of the sea. The total cost of providing the supply of water as it now exists amounted to £126,343 4s. 2d. The average cost of the supply is about 3s. 7d. a year to each individual of the population, or, taking another calculation, the price of 1000 gallons is 4d.

The greater portion of the city is supplied on the intermittent system—that is to say, water is turned on at stated times, and reserved for use in cisterns. When the supply of water was small, this system was a necessity, and this arrangement prevailed in almost every house. The constant service system, where the pipes are kept permanently charged with water, is both more efficient and economical; but the enormous cost to the inhabitants which new fittings would necessitate is a serious obstruction in the way of this improvement.

But while the municipal authorities have been careful to provide an abundant supply of water for the inhabitants, they have been equally careful that the quality of the water should be pure and wholesome. The whole, or by far the larger proportion, of the water is obtained from the oolitic and liassic strata of the locality and its neighbourhood. Two analyses of the springs have been made, one by the Rivers' Pollution Commissioners, and a second by Mr. Charles Ekin, chemist, of this city (Table A), which demonstrate their purity. It may be fairly said that the water-supply for drinking and domestic purposes to the population of Bath is most abundant and wholesome.

TABLE A.—*Analysis made by Mr. Charles Ekin, F.C.S., of 8, Argyle-street, Bath, March 5, 1878.*

I have analysed nine samples of water received from Mr. Mitchell, labelled 1 to 9, each sample being contained in one of my own half-gallon glass-stoppered bottles. All the samples were bright and clear, without taste or smell, and contained as follows (parts in 70,000, or grains per gallon):—

No.		Chlorine.	Nitrogen as nitrates.	Nitrogen as nitrites.	Ammonia.	Albuminoid organic matter.	Hardness.*		
							Temporary.	Permanent.	Total.
1	Sydney Gardens†	2·03	0·48	...	...	0·072	14·3	6·9	21·2
2	Sham Castle‡	1·18	0·08	...	...	0·03	7·8	3·4	11·2
3	Batheaston Reservoirs‡ ...	1·12	0·17	...	...	0·064	13·6	4·4	18·0
4	Oakford‡...	1·2	0·14	...	0·0015	0·06	15·4	4.8	20·2
5	Holts Down‡	0·86	0·23	...	0·002	0·045	11·0	4·2	15·2
6	Charmy Down‡...	0·78	0·24	...	...	0·02	10·1	4·3	14·4
7	Monkswood Reservoir‡ ...	1·1	0·14	...	...	0·049	13·8	4·4	18·2

* Each degree of hardness is equal to one grain per gallon of carbonate of lime, or its equivalent in other hardening salts, and indicates the destruction and waste of twelve pounds of the best hard soap by 7000 gallons of water when used for washing. The temporary hardness of the water can be entirely removed by boiling, or by Clarke's softening process. † Closed. ‡ All good.

(Signed) CHARLES EKIN, F.C.S.

Analysis Published by the Rivers' Pollution Commission.

	Temperature (Centigrade).	Total solid impurity.	Organic carbon.	Organic nitrogen.	Ammonia.	Nitrogen as nitrates and nitrites.	Total combined nitrogen.	Previous sewage or animal contamination.	Chlorine.	Hardness.		
										Temporary.	Permanent.	Total.
Monkswood Springs...	10·0	35·18	·131	·012	...	·328	·340	2,960	1·55	23·1	6·0	29·1
Spring on Hampton Down (Sham Castle)	8·1	22·40	·140	·007	...	·100	·107	680	1·30	15·1	3·5	18·6
Eyford Spring (part of Oakford water)...	10·0	30·76	·009	·004	...	·130	·134	980	1·46	21·8	5·4	27·2
Spring at Batheaston	...	31·60	·337	·013	·002	·507	·522	4,770	1·66	17·5	6·7	24·2

As regards sanitary arrangements, it will be noticed that, with the exception of the lowest portion of the city, the ground upon which it is built presents great natural facilities for efficient drainage. The provisions made for carrying away the sewage, as well as surface-water, may be considered, as a whole, extremely good; nearly every portion having sewers varying from something over 4 ft. to 9 in. in diameter, the larger ones being of an oval form, and constructed of stone; the latter of stoneware pipes. Unfortunately, however, the whole of the material collected by the sewage and drainage of the city finds its way into the river, which, if it were not in a great measure cleansed by the occurrence of floods and freshets from the watersheds of the neighbourhood and far distant hills, would be greatly detrimental to those who inhabit its banks. Attempts have, from time to time, been made to oviate as far as possible any injurious effects from this source. Some of the drains have been continued to below the ordinary water-level of the

river, with a view to prevent the escape of gas; while the larger, which have not been prolonged into the bed of the river, are trapped with iron valves. The cleansing of the river, and restoring it as far as possible to its former vaunted purity, must be, after the completion of the water-supply, the next care of our municipal authorities. The mode which appears most feasible for this purpose is by intercepting the sewage at the banks of the river by a large drain, and so carrying it away from the town to a proper outfall.

House-drainage is, on the whole, in good condition, and the sources of noxious smells are attributable more to the carelessness of the inhabitants of houses than to a positive deficiency in the mode of drainage. The civil engineer states that cesspools, which at one time were very numerous, have been almost wholly abolished, and the old privies which were found in the courts, allies, small tenements, and in some of the best residences for the use of domestics, have been replaced by properly constructed closets, with a good supply of water.

Slaughter-houses, forty in number, are found in different places, chiefly in the lower parts of the town. They are under strict inspection, and are visited weekly, or more frequently if thought necessary, and are regulated by municipal by-laws, which are rarely infringed. Some years ago, an attempt was made to establish an abattoir without the boundaries of the city, and a considerable sum of money was offered as a voluntary gift by two residents towards the cost of its erection. The attempt, however, was unfortunately not successful.

The common lodging-houses, eight in number, are all in one street, in the lower part of the town. They are kept in order under local by-laws, and are inspected weekly or oftener, as there may be need. The inspector of nuisances states that they are well kept both as to general cleanliness and ventilation, and, in his opinion, are altogether in a better condition than houses of this character in most other places. Most of the small tenements, inhabited by the humbler members of the population, come under the notice of this officer. His visits are rarely objected to, and, as a rule, the tenements are found in a very satisfactory state.

The ratio of mortality to the population of the borough, which, according to the census of 1871, was 52,585, and this year is estimated at 54,562, is generally high, but liable to extreme variations. The high rate, it is suggested, may be in a measure due to the influx of a large number of persons during certain periods of the year, believed to amount to between 2000 and 3000 annually, to the advanced ages to which many of the residents attain, or not improbably to the number of deaths among children under five years of age. On referring to the records of the medical officer of health, the late Mr. Clement Barter, M.B., the mortality for five years, from 1873 to 1877, appears to be as follows:—

In 1873 there were 1277 deaths—329 referable to general diseases, which term includes contagious, zymotic, and constitutional diseases; 728 to local diseases, and 220 to conditions not necessarily associated with either general or local diseases. Of the whole number of deaths 380 occurred under five years of age, and 897 above that period. The death-rate was 24·2 per 1000. Epidemic measles, followed by bronchitis and pneumonia, caused a large number of deaths, especially among young children. Seventy-six deaths occurred from zymotic diseases—of these seventeen were from typhoid fever. Several cases of this fever arose from the adulteration of milk with water, which was reported by a competent authority to be "simply diluted sewage," and totally unfit for drinking purposes. Fifty-four persons died under the age of eighty, 49 under that of ninety, and 10 under a hundred years.

The prevalent diseases of the year were acute bronchitis and pneumonia. From the former there were 120 deaths, of which 64 occurred in young persons under five years of age, and 56 at all ages above that point up to ninety. From pneumonia there were 64 deaths—37 under five years of age, and 27 above it. There were also 70 deaths from chronic bronchitis, occurring wholly in persons between the ages of fifty and one hundred.

In 1874, the total number of deaths was 1222, or 55 less than in the preceding year—296 died of general diseases, 33 less than in 1873; 728 of local diseases, the same as in the previous year; and 198 of diseases not of the general or constitutional class, being 22 less than in 1873. Pulmonary diseases caused a large proportion of deaths this year. The temperature at the latter part of the year was very low. In 1874, affections of the lungs and air-passages prevailed, which proved fatal to both the young and those advanced in life. There were 18 deaths from whooping-cough—17 occurring in children under five years of age; 114 deaths from phthisis, of which 111 occurred in those above five years of age, and specially fatal to those whose ages varied from ten to seventy years; 103 deaths were recorded from acute bronchitis, of which there were 60, 51 of which occurred between the ages of fifty and eighty. The deaths among young children amounted to 43, and were confined to those from under one month to three years of age.

The death-rate from zymotic or contagious diseases was slightly more than 1 per 1000, and the number of deaths was 16 less than in the previous years. One hundred and twenty-four persons are reported to have died of old age, 109 being upwards of seventy years of age, and 16 above ninety. The number of deaths under five years of age was 75, or 305 less than in 1873.

In 1875, the rate of mortality rose to a height which it reached on three occasions only during the preceding fifteen years. The number of deaths was 1310, being 88 in excess of the past year. This increase is attributed to the severe weather of the winter of 1874-75; the sanitary condition and arrangements of the city being very good. Forty-eight deaths only of the zymotic class were registered, 12 less than in 1874. Those from constitutional diseases were 263; while the deaths from local diseases were 248, or an excess of 88 over the same class in 1874. There was a large mortality from diseases of the organs of respiration, amounting to 298; 201 were attributed to bronchitis, 62 to inflammation of the lungs, 13 to pulmonary congestion, 7 to asthma, and 6 to pleurisy. One hundred and fourteen persons were registered as having died of old age, of which number 57 were above eighty and under ninety years, and 13 upwards of ninety years of age. The average mortality of the year was 24·9 per 1000.

This year was marked by a greater rainfall than had occurred for fifteen years (1862); 39·811 inches were registered as having fallen in 198 days, and was a year of exceptional mortality: the diseases of most frequent occurrence were phthisis, infantile convulsions, bronchitis, and inflammation of the lungs.

In 1876, scarlet fever, phthisis, bronchitis, and diseases of the heart contributed the largest number of deaths to the mortality.

In this year Mr. Clement Barter, M.B., the Medical Officer of Health, died, to the great regret of his many friends, after having very conscientiously performed his duties. He was succeeded by Dr. Brabazon, the present Medical Officer of Health, from whose report the remainder of the information for the years 1876-77 are obtained.

Owing, however, to the decease of the former Medical Officer of Health, and the necessary interval before the appointment of his successor, the reports are not so full and complete for the whole of this as for preceding years. As far as can be ascertained, the deaths from all causes amounted to 1334, showing an increase of 24 over the year 1875. Of the zymotic and constitutional class there were 326 deaths, of which there were 104 from scarlet fever, and 17 from typhoid fever. Of local diseases there were 511 cases: of these 99 were due to phthisis, 40 to paralysis, and 129 to bronchitis; 82 died of old age, one of whom was ninety-nine years of age. The average mortality of the year was 21·2 per 1000.

In 1877, the mortality had fallen to 1153, or 181 deaths less than in the previous year. To zymotic or contagious diseases 333 deaths were attributable; to local affections, 579; to other causes, 241. There were 52 deaths from measles, 98 from phthisis, 134 from bronchitis, 103 from diseases of the heart, 120 from old age, of which 53 were between sixty and eighty years of age, and 66 were eighty and upwards. The average mortality for the year was 21·6 per 1000. It is, however, deserving of notice that the total mortality during the month of November in this year fell to 5·9 per 1000.

Some interest, as was before alluded to, has from time to time been shown in reference to the high mortality of this place, and various explanations have been suggested to account for it. By some it has been attributed to deaths occurring among the large number of sick folk who resort hither for

their health's sake. This latter is purely conjectural, inasmuch as no data exist by which it can be supported.

The ratio of mortality in 1873 was 24·2 per 1000; in 1874, 23·2; in 1875, 24·9; in 1876, 21·2; and in 1877, 21·6—giving an average in these five years of 23 per 1000, or a fraction, ·5, more than the annual rate, 22·5, of mortality for England and Wales, and 1·9 less than the annual mortality, 24·9, for the urban registration districts.

The deaths of children under five years of age in Bath in 1873 were 380; in 1874, 302; in 1875, 303; in 1876, 308; in 1877, 313—the total, amounting to 1606, giving an average for this period of 321 per annum, or 6·11 per cent. of the whole population. The deaths of those of sixty years of age and upwards was, in 1873, 469; in 1874, 486; in 1875, 511; in 1876 (in this year seventeen ages were not given), 364; in 1877, 455 (in which year there were registered 102 deaths of persons of eighty years and upwards)—the total amounting to 2285, an average of 457 per annum, or 8·70 per cent. of the whole population.

In referring to the climate of Bath, Dr. Granville, in his "Handbook to the Hot Springs of Bath," 1841, remarks that "some say that it is cold, others that it is temperate; there are those who insist on its perfect dryness, while many contend that its prevailing dampness from frequent rain is notorious. Lastly, we hear often of its variableness and exposure to strong winds, and nearly as often this statement has been contradicted." These opinions may be reconciled when the variableness of the climate of the South-Western District is taken into consideration, and the positions of the various portions of the locality and its geological features are borne in mind.

The most recent and valuable contribution made to the following information which exists regarding the climate of Bath is that by the Rev. Leonard Blomefield, and published in the *Proceedings of the Bath Natural History and Antiquarian Field Club*, vol. iii., No. 3. From this source the most reliable information on this subject is obtained.

The conclusions, which are founded on observations during ten years, commencing March, 1865, and terminating with February, 1875, were made at the Bath Literary and Scientific Institution.

The mean temperature of Bath from nine years' observation—*i.e.*, from 1866-74—is 50·5, and the result is the same from ten years' observations from 1865-75. The highest yearly mean during nine years was 52·0, while the lowest was 49·4 in 1870; the range, therefore, may be set at 2·6°. The months in excess occur chiefly in spring and summer; those in which a deficiency occurs are in autumn and winter. The mean monthly temperature rises slowly from January to March, but makes a rapid advance in April and May; a greater increase of temperature takes place in June and July; in August it remains nearly the same as in July. There is a decided diminution in September and October, which is increased in November, and in December the mean is at its lowest.

The greatest heat in the ten years' observations occurred in the years 1868-70; the maximum being 90·5° in 1868. There is no year in which it did not attain to 83°; the mean absolute highest for the whole period being 87°.

The greatest cold occurs in December and January: once it occurred in February and in March during the nine years observed.

The mean monthly range, or mean difference between the highest temperature and the lowest in each month, is least in February, being 10·0°, November, December, January, and March having no very marked difference, but the range is in all greater than that of February by 3° or more. A considerable rise occurs in April and May, and the monthly range, 17·6°, gains its maximum in the latter month.

The mean daily range rises from the lowest 9·6°, in January, to its highest, 17·8°, in July. The greatest rise occurs in April, the daily range of which month is 3·4° in excess of that of March.

As regards the seasons of the year, the mean temperature of spring varies from 47·4° to 50·5°, the range being 3·1°; that of summer from 60·0° to 63·5°, the range being 3·5°; of autumn, the variation is from 48·5° to 52·7°, the range being 4·2°.

Mr. Blomefield, in comparing the temperature of Bath with Oxford, Greenwich, Royston, and Norwich, comes to the following conclusions:—"In spring, Bath has a higher mean temperature, while the night temperatures are not so low, and the mean daily range is less, when compared with Greenwich and Royston especially. In summer the mean temperature is not different from that of the other towns, but the extreme night and day temperatures are both of them more moderate, the mean daily range being still more contracted than in spring, in relation to those towns. In autumn the mean temperature is only very slightly higher than that of other places; the extreme day temperatures scarcely so high as some of them, but the nights are not so cold, the minimum not falling so low. In winter the mean temperature is decidedly higher, the extreme day and night temperature also both higher, though the mean daily range shows scarce any difference."

Comparing the temperature of Bath with that of Exeter and Clifton—premising, however, that the series of observations made by Dr. Shapter, of Exeter, and Dr. Burder, of Clifton, are not for the exact same periods as those made at Bath—it is found that the first four months of the year are colder than at Bath, the mean difference in favour of the latter locality amounting to 1·1°. May and June have a lower mean temperature at Bath than at Exeter; while the months of October, November, and December are colder in Bath than in Exeter, the mean difference in favour of Exeter being 1·7°. The mean temperature for the whole year is 50·7°—higher than the mean yearly temperature at Bath, though only by two-tenths of a degree.

As regards Clifton, the mean temperature of every month excepting October is lower there than at Bath. The greatest difference is found in the first four months of the year; the difference amounts to 3·2°, Clifton being much colder than Bath at that season. The least difference between the two localities is found in May, June, and August; the difference, however, amounts to only 1·7°. The mean temperature for the whole year at Clifton is given by Dr. Burder at 48·4°, or more than 2° below that of Bath.

If Bath be compared with Taunton, Barnstaple, and Truro, its temperature is lower than either of the last-named places in all seasons except summer. In winter the difference is more than 2° as compared with Barnstaple, and 3° as compared with Truro.

So far as existing observations show, the temperatures of Bath and Taunton are not very dissimilar; but in autumn and winter the mean diurnal range is more than 2° greater at Taunton than at Bath.

As regards the relative humidity of the climate of Bath, it is less humid in spring than either of the three towns above mentioned, no great difference existing between Bath and Truro. In autumn the humidity is nearly the same as that of Barnstaple, but in excess of Taunton and Truro. In winter, Bath is less humid than Taunton, and not very different from Barnstaple and Truro. The whole comparison appears to be that Bath, in relation to places either eastward or westward, has an excess of humidity during summer and autumn, but a deficiency in winter and spring.

The mean yearly rainfall at Bath is estimated by Mr. Blomefield at 29·986 inches, and, "allowing for errors," he adds, "it might probably be set at 30 inches at least, if not more." The mean fall of rain in spring amounts to 5·492 inches; in summer, to 6·227 inches; in autumn, to 8·892 inches; and in winter, to 9·730 inches. From this, it appears that the rainfall is least in spring, increases in summer and autumn, and is greatest in winter. The driest period of the year in Bath is, on an average, the months from March to June, both included. In none of these months does the mean fall of rain amount to two inches, the least fall occurring in June. Rain appears to fall on 160·9 days of the year. Heavy falls of rain are of short duration, and the heaviest do not exceed an inch and a half. An exceptionally large amount occurred in the very wet year of 1875 in July, when it reached 2·750 inches in twenty-four hours. The annual rainfall at Exeter is, according to Dr. Shapter, from observations extending over forty-four years, 29 inches, or nearly one inch less than that of Bath, while that of Clifton is stated by Dr. Burder to be 31·02 inches, or one inch more than that of Bath. From observations, however, said to have been carried on in continuation of Dr. Burder's, for twenty-two years, ending with 1874, the mean yearly fall of rain at Clifton is stated to be 32·194 inches, or more than two inches above the Bath average; but this statement might admit of modification, if observations at both places were made for

an equal period and for identical years. There are variations in the estimate of the rainfall in different localities not far distant, and varying in their height above the level of the sea, depending upon the form of and elevation of the neighbourhood of Bath, which materially affects all such observations. But, however great the rainfall here may be, the natural and artificial drainage is so favourable that it would not be at all difficult, even in some of the lower portions of the town, to find, after even a heavy fall of rain, many spots where exercise on dry ground may not be enjoyed.

A few remarks on the prevailing winds may fitly close these statements. The most prevalent winds are those from the west and north-west quarter of the compass. The north and north-east winds reach their maximum in spring, as in most other places in England. The south and south-west winds attain their maximum in winter. The west and north-west winds characterise the summer months, while in every season except winter they predominate over all others. South-east winds seldom continue long, though more frequent in spring than at other periods of the year.

The mineral waters of Bath, to which the origin and celebrity of the city are due, present to the physician, as well as to the student of natural phenomena, an object of interest. Among the earliest indications of their use are the remains of Roman edifices and baths in close proximity to the springs. In 1755, the ruins of a bath were found on the south side of the Abbey Church, which occupied an area of 240 feet from east to west, and 120 feet at the broadest part, from north to south, and were highly decorated with tesselated pavements, columns, pilasters, and every ornament of classical architecture. The remains, also, of a temple dedicated to Sul Minerva, probably the equivalent of the Pantheon of Minerva Medica, which was found among the more remarkable structures at Rome, was discovered when digging the foundation of the present Pump Room.

In 676 of the present era, Osric, who built a monastery here, visited its hot waters; and Offa, about a century afterwards, made it the residence of his Court for some time. Athelstan and Edgar are also said to have delighted in the use of its medicinal springs; and indeed almost all the Saxon kings either visited Bath, or enriched it by their munificence.

In 1106, John de Villula, Bishop of Bath and Wells, built two new baths for the convenience of the monastery within its precincts, one of which he named the Abbot's Bath, and dedicated to the use of the public, while the other was reserved for the use of the prior of the monastery.

In 1138, Robert, Bishop of Bath and Wells, founded a hospital for lepers, and dedicated it to St. Lazarus, attaching to it a bath called the Leper's or Lazour's Bath, which was supplied by the overflowings of the hot bath situated close to it. This bath was remaining, but little used, in 1773. The period at which it was destroyed is uncertain. The hospital contained seven beds. A somewhat grotesque representation of the lepers resting after bathing will be found in Guidott's Treatise on the Bath Waters, published in 1691.

The baths remained in the possession of the priors and monks of the Benedictine Monastery of Bath until the dissolution of religious houses in the time of Henry VIII.

Leland, not long before this period, visited Bath, and mentions *the Crosse Bath*, so called "bycause it hath a cross erected in the midle of it." "This bath," he says, "is much frequented of people diseased with lepre, pokkes, scabbes, and great aches, and is temperate and pleasaunt." He then goes on to speak of the "*Hote Bathe*" and the "*King's Bathe*." Of the former he remarks, "This is caullid the Hote Bathe; for at cumming into it, men think that it wold scald the flesch at first, but after that the flesch is warmid it is more tolerable and pleasaunt." The cross to which Leland refers appears to have been replaced by another erected by John Drummond, Earl of Melfort, Secretary of State to James II., in commemoration of his queen having used the baths with happy results in 1688. This cross becoming dilapidated, was removed in 1783. In 1590, Queen Elizabeth granted a new charter to the city, by which the possession of the mineral springs and baths was confirmed to the Mayor and citizens of Bath. In 1668, Pepys visited Bath, and records his visit under date June 15 thus: "Looked into the baths and find the King and Queen's full of a mixed sort, of good and bad, and the Cross only almost for gentry, so home with my wife, and did pay my guides, two women 5s., one man 2s. 6d."

At the present time there are four establishments for bathing, named the King and Queen's Private Baths, the Royal Private Baths, the Hot Bath, the Cross Bath, and the New Royal Private Baths, the latter forming the lower portion of the southern wing of the Pump-Room Hotel, but the property of the Corporation. There is also the Grand Pump-Room, where the waters are drank. All these, as well as the Mineral Water Hospital, are open to the inspection of the members of the Association, and will therefore need no description here.

The source of the mineral springs which supply these several baths is unknown. The accidental tapping in 1835 of the main spring by the sinking of a well 170 feet deep at 250 yards from the King and Queen's Baths, and 200 yards from the Hot and Cross Baths towards the west, which affected the supply to all these baths, gives the impression that their source may be found in that direction. The volume of water discharged daily by these springs is computed at 181,440 gallons.

It is not improbable that they find their way through fissures or dislocations in the lias, upper red sandstones, and marls, and also in the coal measures; and the fact that particles of coal are found among the sand thrown up by them tends to give support to this impression. Hot springs frequently occur near the line of junction of two geological formations, and those of Bath arise near the junction of the lias with the upper oolite.

The temperature of the water of all the springs appears to have been constant, except on three occasions. The spring supplying the hot bath has a temperature of 120° Fahr., that of the King's Bath 117° Fahr., and that of the Cross Bath 104° Fahr. They exceed in temperature all the warm springs in this country.

The heat of the springs has been represented as arising from the action of a volcano beneath the town; but, on the one hand, the presence of thermal waters is by no means always connected with volcanic agency—in fact, there are no other thermal springs in Europe which rise so far removed from the region of earthquakes or active volcanic agency; and, on the other, the geological features of the district indicate a tranquil deposition of the materials constituting the several strata, while the separation between the upper stratum of the high land of the valley is more properly to be ascribed to denudation than the throes of a volcano, at a time probably when the valley formed part of an estuary, the waters of which debouched in the direction of Weston-super-Mare, over a tract of country now known as the Zoy-lands (*i.e.*, sea lands), while the fissures and dislocations of the lower strata, through which the mineral waters reach the surface, may be attributed to disturbing causes acting from a distance. It is more reasonable to attribute the heat of the Bath waters to a cause to which both thermal springs and volcanoes may be satisfactorily referred—namely, the central heat of the earth—than to any local subterranean volcanic fire.

The quantity of water supplied by the springs, which amounts to 181,440 gallons daily, appears to have been unaffected, since they first became subjects of investigation up to the present time, by any meteorological change. They are, as an old writer has said, "Perennial springs, whose water is neither increased by the greatest glut of rain, nor lessened by the greatest drought." The constancy of their flow into the baths has been thrice interrupted—once by the sinking of a shaft in search of coal in the neighbourhood of Batheaston, towards the east; again, in 1811, when an escape of water took place from the springs, rendering it necessary to "puddle" the ground through which they rise; and more recently, in 1835, by the digging of a well 170 feet deep, at a distance on the west of 250 yards from the King's and Queen's Baths and 200 yards from the Hot and Cross Baths. The stream of hot water burst into and overflowed the well, and the supply to all the baths was materially diminished, as also the temperature of the water. The latter circumstance may be accounted for by the water in the baths cooling more rapidly when but slowly supplied to them. The stream, however, was with some difficulty restored to its natural channel, and the baths afterwards filled in the usual time. The solid contents of the daily discharge of water is computed by Professor Ramsay to be 3402 lbs., or 420 tons a year. According to this authority, "a cubic yard of limestone may be roughly estimated to weigh one ton If, therefore, these salts were compressed and solidified into

the same bulk as limestone, we should find the annual discharge of the Bath wells to form a square column 9 ft. in diameter and 140 ft. high."—("Physical Geology and Geography of Great Britain," page 117.)

In small quantities, when recently drawn from the spring, the water is clear, colourless, and sparkling. In large quantities it presents a pale sea-green tint. It is free from any odour, and possesses a pungent, slightly saline, and somewhat chalybeate or inky taste, and, though perhaps a little distasteful at first, the invalid with whom it agrees in a short time comes to relish it.

The Bath waters have been frequently analysed. The water examined was in each instance drawn from the King's Bath spring, the specific gravity being 1·002. They were analysed in 1806 by Phillips, in 1820 by Scudamore, in 1829 by Walcker, in 1844 by Noad, in 1848 by Merck and Galloway, in 1870 by Muspratt, and by Heriot in 1874. The details of these analyses have been printed for circulation at this meeting (Table B).

TABLE B.—*Analyses of the Waters.*

In an imperial gallon, 70,000 grains.	Phillips (1806).	Scudamore (1820).	Walcker (1829).	Noad (1844).	Merck and Galloway (1848).
Carbonate of lime ...	7·680	5·280	10·667	...	8·820
Carbonate of magnesia	...	...	...	...	0·329
Carb. of oxide of iron	0·274	0·200	0·243	0·521	1·071
Carbonate of soda ...	...	...	...	5·760	...
Sulphate of lime ...	86·400	98·320	81·624	96·240	80·052
Sulphate of potassa ...	...	...	2·927	...	4·641
Sulphate of soda ...	14·400	1·520	19·371	...	19·229
Chloride of sodium ..	31·680	12·240	15·122	27·456	12·642
Chloride of magnesium	...	15·360	13·339	7·142	14·581
Alumina	...	...	0·150	...	...
Silicic acid	1·960	1·920	3·233	3·360	29·82
Quan. directly observed	142·394 144·125	134·840 ...	146·676 147·622	140·479 149·072	144·018 ...
Carbonic acid	11·25 c.i.	...	7·60 c.i.	...	26·45 c.i. at 115° (F.)

Iodine and manganese traces, by Merck and Galloway; lithium and strontium, by Roscoe, 1862-64. Gases: nitrogen, 97 per cent. (Daubeney); carbonic acid (see analyses). Specific gravity, 1·002. Temperature: King's Bath, 117°; Hot Bath, 120°; Cross Bath, 100° (Fahr.).

Analysis (MS.) by Dr. Sheridan Muspratt, November 15, 1870.
Mean specific gravity, 1·0031742.

In an imperial gallon; or 70,000 grains.	King's Bath.	Hot Bath.	Cross Bath.
	Grains.	Grains.	Grains.
Carbonate of lime	8·852	8 903	9·001
Carbonate of magnesia	0·325	0·378	0·398
Carbonate of iron	0·643	0·579	0·599
Carbonate of manganese	Trace	Trace	Trace
Carbonate of soda	14·817	14·391	15·017
Sulphate of lime	71·068	70 8)2	69·894
Sulphate of magnesia	35·614	35·058	35·044
Chloride of sodium	18·022	17·864	17·886
Chloride of potassium	1·734	1·887	1·812
Chloride of lithium	Mere trace	Mere trace	Mere trace
Chloride of strontium	Trace	Trace	Trace
Silicate of soda	0·411	0·404	0·399
Ammonia, alumina	Traces	Traces	Traces
Arsenic, copper, etc....	Mere trace	Mere trace	Mere trace
Total ingredients	151·486	150·266	150·150
Directly estimated by evaporation, desiccated at 240° Fahr.	153·001	151·998	152·134
	Cubic inch.	Cubic inch.	Cubic inch.
Carbonic acid	25·55504	24·8969	24·7427
Nitrogen	1·709060	...	...
Carbide of hydrogen (light) ...	Trace	Trace	Trace

Analysis by Mackay Heriot, F.G.S. (Captain R.M.L.I.).

Constituent parts in 100,000.	King's Bath.	Hot Bath.	Cross Bath.
Calcium...	337	401	388
Magnesium	47·4	52·2	46·8
Potassium	39·5	31	37·4
Sodium	129	137	140
Lithium...	Traces	Traces	Traces
Iron	6·1	6·7	4·5
Sulphuric acid...	869	884	895
Carbonic acid (combined)	86	89	83·5
Chlorine	280	275	280
Silica	30	39	38
Strontium	Traces	Traces	Traces
Alkaline sulphides	Traces	Traces	Traces
Carbonic acid gas at normal temperature and pressure (cubic centimetres per litre	65·3	80·4	51·5
Total solid contents in 100,000 ...	1864·0	1911·9	1913·3
Specific gravity	1·0015	1·002	1·602

Temperature: King's Bath, 117° Fahr.; Hot Bath, 120° Fahr.; Cross Bath, 104° Fahr. The nitrogen daily evolved from the springs amounts to about 250 cubic feet.

Cuff is said to have detected iodine in the waters; Noad remarks in reference to this substance that, "according to Stromeyer, starch will detect free iodine in a liquid containing $\frac{1}{3000}$th of its weight of that principle: if, therefore, any iodine does exist in the Bath waters, it must be in a proportion less than the above, and probably beyond the reach of chemical detection." Merck and Galloway found traces of both iodine and manganese. The latter had been previously detected by Mr. R. Biggs of this place. Gibbs first detected silex, and Scudamore magnesia. Roscoe, of Manchester, discovered lithium and strontium.

The small amount of mineral ingredients contained in these waters, the lowest estimate being 134, and the highest 151 grains in an imperial gallon, has not unfrequently been referred to as a valid reason against their efficacy. It is, however, worthy of notice that many of the well-known Continental springs, which have for a long time enjoyed, and still continue to enjoy, a deserved reputation in promoting recovery from the diseases in which they have been found to be efficacious, contain a considerably smaller proportion of ingredients than the Bath waters.

The most abundant ingredients of the waters, taking the analyses as a whole, are:—1. Sulphate of lime; 2. Chloride of sodium; 3. Chloride of magnesium; and 4. Sulphate of soda. The proportion of iron which has been detected is comparatively small; still its taste is quite perceptible in the water, and its effects on the system are more decided than could have been expected from the small portion which has hitherto been revealed by analysis. It is found plentifully, in combination with lime and magnesia, deposited in the channels through which the water is conveyed to the private baths, and also on to the pavements of the public baths.

The gases evolved from the waters are carbonic acid, nitrogen, and oxygen. The result of Professor Daubeney's investigations, as stated by him in a paper read at the meeting of the British Association, held in Bath in 1864, is as follows:—"The spring that supplies the King's and Queen's Baths the most of any, discharges 281 gallons of water, or, in round numbers (reckoning 277 cubic inches to the gallon), 34,900 cubic inches, per minute. Of this water, 100 cubic inches were found by me to disengage, after long continued boiling, 3½ cubic inches of air, consisting of 2·9 cubic inches of carbonic acid, 0·4 of nitrogen, and 0·2 of oxygen, so that there will be present in 34,900 cubic inches, of carbonic acid 1012, nitrogen 140, oxygen 70, which quantity, added to that of the free gas disengaged per minute from the spring, would make up the following amount—viz., carbonic acid present in the water 1012, disengaged or free 12—total, 1094; nitrogen present in the water 140, free 245—total, 385; oxygen present 70, free ditto 10—total, 80;—grand total, 1489 cubic inches."

As regards the carbonic acid found in these springs, the analyses by Merck and Galloway, and also by Muspratt, give somewhat more than three cubic inches of this gas to each pint of water; while the earlier analysis by Phillips gives somewhat more, and that by Walcker somewhat less, than one cubic inch to the same quantity of fluid.

The quantity of nitrogen contained in the Bath waters, amounting to 97 per cent. of the gaseous matter yielded by them, is deserving of notice. Dr. Lyon Playfair, writing on the gaseous contents of the Buxton water, observes that "the gases are nearly of the same composition as those of the thermal spring at Bath, and there is no reason to doubt that dissolved carbonic acid and nitrogen may exert important physiological effects." It is difficult to explain precisely the manner in which nitrogen, from such sources, produces a beneficial effect on the system; but that it holds important relations with the animal economy is undoubted.

Some time since, Professor Williamson was kind enough to favour me with the following communication on the gaseous contents of the King's Bath spring:—"The mean of two analyses of one specimen in which all the constitutents were determined, gave nitrogen 96·222, carbonic acid 3·002, oxygen ·578, marsh gas ·198. With respect to the quantity of gas evolved from the King's Bath spring (the only one examined) the mean of six measurements gives 2297 cubic centimetres per minute. It seems unquestionable that atmospheric air is acted upon by carbonaceous deposits which are evolving marsh gas by their decomposition, and that carbonic acid is formed at the expense of the greater part of the oxygen of the air. Most of the carbonic acid, no doubt, remains dissolved in the water."

It may here be mentioned that vegetable matter is found at certain seasons of the year floating on the surface of the mineral water, adhering to small masses of its deposit, and sometimes adhering to the walls of the open baths; it consists of the *Oscillatoria* or *Conferva tenuissima*, first found in the Bath waters, and described by the late Dr. John Ford Davies. "Its singular appearance," observes Sir J. E. Smith, "arises from the filaments being collected together into little ascending tufts, apparently rooted in the muddy deposit of the water. Each tuft proves on examination to consist of simple uniform, even filaments, crowded together and quite pellucid, and equally destitute of joints and branches; their diameter is not more than the 8000th or 10,000th part of an inch."

It is not, however, to the presence of one or more particular mineral ingredients of a spring, except where they are found in large proportions, that its efficacy is to be attributed, or on which its selection as a medicinal agent will depend. It is to the union of the several substances contained in the water, the quantity of fluid with which they are combined; and, still more, to the recorded experience and concurrent testimony of credible witnesses, that we must chiefly refer for instruction and guidance in the choice and employment of a mineral spring.

When the waters are drank fresh from the spring, they raise and accelerate the pulse, increase the temperature of the body, and excite the secretions; and these effects, which are generally manifested soon after drinking them, are more permanent than might at first be anticipated. They have a tendency to produce constipation when taken in small quantities; but the older writers mention their purgative effects; the dose, however, they administered amounted to one, two, or three quarts daily, which produced two or three copious evacuations. The ordinary quantity—namely, four, six, or eight ounces taken daily—tends to produce a regular action of the bowels, while a larger quantity will sometimes cause purging.

The effects of the waters, which indicate that they will prove beneficial by drinking of them, are a glow of warmth in the stomach, an increased appetite, an improvement of the spirits, an augmented secretion of the saliva, and an excitement of the urinary discharge, the latter constituting one of the best indications of their being likely to produce a good effect; next to which may be placed the rapidity with which they quench thirst. If however, they produce headache, thirst, a dry tongue, a sense of weight in the stomach, diminish rather than improve the appetite, induce nausea and sickness, and fail in promoting the flow of urine, they will be of no advantage unless their tendency to cause these effects can be obviated. This may in many instances be brought about by diminishing the dose, by altering the period of the day at which they are taken, by allowing the water to cool before drinking it, and especially by relinquishing their use before breakfast. The employment for a short time of some diuretic remedy, conjointly with the water, will aid in deciding its effect so as to augment the flow of urine; but, if these changes are unattended by any corresponding result, no benefit can be expected from persisting in their use.

The quantity of water to be drank during the day should, under ordinary circumstances, be divided into two portions, one of which may be taken before breakfast, and the other in the afternoon. The usual amount taken at one time varies from four ounces to half a pint. It may, however, be increased to double that quantity, if the smaller doses do not disagree, and the case requires it. If the quantity to be drank be large, the morning and afternoon portions should be divided, ten minutes or a quarter of an hour being allowed to intervene between the divided dose, which time will be usefully occupied in gentle exercise. The water should be drank leisurely, for nothing is more likely to cause discomfort than rapidly tossing off the quantity directed to be taken. There is no objection to drinking the waters on the same day that the bath is used.

When the waters are used as a bath, a slight shock, accompanied with chilliness, is often experienced on first entering the water, which soon passes away, and is succeeded by a grateful sensation of warmth. The frequency of the pulse and the temperature of the body are increased, and subsequently the amount of the urinary discharge augmented. After the use of the bath there is a consciousness of elasticity and vigour of the frame, and the appetite is improved. The exhausting perspiration and fainting which often follow the use of warm baths of ordinary water, rarely, if ever, occur after the employment of the mineral water; neither is its use productive, under ordinary circumstances, of the copious perspiration consequent on common hot baths. In cases where the limbs are stiffened, or contracted by rheumatism, the power of moving them is gradually restored; in many cases it returns with remarkable quickness by means of bathing. The same result also takes place, though more slowly, in certain cases of palsy, in which the employment of the bath is allowable. Pain also is relieved during the use of the bath, as in sciatica; and though it and the stiffness of the limbs often return at first, soon after leaving the bath, it will be observed that the interval between employing the bath and the recurrence of pain or stiffness increases until they are entirely removed. In some cases, where bathing does not disagree, and yet does not produce any very appreciable effect at the time, it is advisable, after a proper trial, to cease from using the bath, for oftentimes relief or recovery follows after their employment has been discontinued; or after an interval their use may be resumed with manifest advantage.

When the use of the bath is attended with marked redness of the skin, flushing of the face, and giddiness, the temperature of the water should be lowered, and the period for employing it diminished, until both are adapted to the requirements of the case; but if, after taking these precautions, similar effects be still produced, it will be evident that the use of the water, in this mode, must be relinquished.

The temperature of the bath, under ordinary circumstances, should not exceed 95° or 97° Fahr. A higher degree of heat ought never to be resorted to, except by special direction. The proper time for remaining in the bath should not exceed ten minutes, or a quarter of an hour, when used for the first time: sometimes five minutes may be sufficient at first; and it is from inattention to this point that many persons have relinquished the use of the waters after a single trial, alarm having been created by the giddiness and flushing of the face from incautiously remaining for too long a time in the water. Provided no discomfort is experienced, the period may be extended to twenty minutes or half an hour, according to the effect produced. The bather should descend gradually into the bath, and on leaving it be enveloped in a warm sheet, covered with a warm blanket. The sheet, aided by gentle friction, absorbs the moisture from the body; and when this has been done it should be allowed to slip down, and the warm blanket wrapped round the person; the bather may then return to the dressing-room, and after being well rubbed with warm towels, proceed to dress. Where it is considered necessary to promote perspiration, the bather should immediately, on being enveloped in the sheet and blanket, proceed to the dressing-room, lie down on the bed or sofa, and being wrapped in one or two warm blankets, remain there for about a quarter of an hour, then to be rubbed, and dress. The same rules should be observed on leaving the open baths. If the weather permit, it is well to walk for a short time after bathing, or else to return home and rest.

The best time for taking a bath is early in the morning during the warm months of the year, though it is usual to select an hour between two and five o'clock in the spring and autumn, and an earlier hour during the winter. But it may be employed generally at any period of the day, provided it be not soon after, or only a short time before, a meal. It may ordinarily be taken three times in the week; in some cases as often as four or five times within that period.

The above remarks may be taken as general rules, to be observed in employing the waters either for bathing or for drinking; but the special circumstances of every individual case will decide to what extent a deviation from them is allowable. It is well known that some persons can use the waters without experiencing any injurious effects, but it is equally well known that many persons suffer from their injudicious employment.

Douching, etc.—Dry pumping, as the use of the douche alone, without a bath, is termed, in contradistinction to the wet or subaqueous douche, *i.e.*, the employment of the douche when in the bath, may be used at any period of the day; the forenoon, however, is the most desirable time. The use of the dry douche is regulated by the time during which it is applied. The wet douche is used after the bather has been

for a while in the bath, the duration of its employment being regulated in the same manner as the dry douche. The bather should not remain in the bath after the douching has been completed. The *douche ascendante* may be used at whatever period of the day may be most convenient. The lavement is used with the most marked advantage before breakfast, and may be also beneficially used an hour or two after that meal. It is especially serviceable in cases of habitual constipation, and in cases where the regular action of the bowels has been interfered with by the injudicious and indiscriminate use of purgatives.

Among the disorders which derive benefit from the use of the Bath waters are those of the digestive organs. Invalids who suffer from these affections do not generally have recourse to mineral waters until their complaints have assumed a chronic form, manifested in a pale yellow, or what is called a bilious complexion, with diminished or an almost entire want of appetite, foul taste in the mouth, accompanied by weight and oppression referred to the stomach, constipation or diarrhœa, with cold hands and feet, depressed spirits, and an indisposition for occupation of any kind. In such cases the Bath waters produce very beneficial effects: where constipation is present the occasional use of the lavement contributes to their realisation. An old writer on these waters has observed that "every medical practitioner at this place has seen instances of people labouring under want of appetite, pain and spasm of stomach and bowels, together with all the other symptoms of depraved digestion, and want of power in the proper organs to perform their functions, joined to a very great degree of weakness, both of the body and of the spirits, relieved by the use of the Bath waters. The recovery in such cases is particularly remarkable for its taking place so quickly after the commencement of the trial of the remedy. A few days will frequently work such a change in the situation of the patient as would be scarcely credible were it of less common occurrence. The appetite is often restored altogether, the wandering spasm and pain cease, the natural rest returns, and the spirits are raised to their proper pitch. The strength likewise improves daily, and the natural secretions and regularity of the body, in point of evacuation, are restored."

In anæmia and amenorrhœa the waters have been found by long experience to be a most effectual remedy. The bath is generally the best form in which to use them, and the employment of the *douche ascendante* will materially contribute to promote beneficial results. In dysmenorrhœa, also, the bath, with or without the wet douche, affords great relief. In leucorrhœa, also, they are useful when employed in the same mode.

In case of gout, the waters have long been celebrated for the relief which they afford; and where anomalous affections of the head, stomach, and bowels are attributable to latent gout, the use of the warm bath will bring on a "fit," by which they are generally removed. It, however, often happens that by the repetition of acute attacks the disturbance of the digestive organs does not subside, but harasses the sufferer in the intervals between the paroxysms. In alleviating and removing this condition, the waters taken internally are peculiarly beneficial. They act as a cordial, without producing any heating effects; and their influence is soon shown in an improved appetite, a more regular action of the bowels, and in the altered character of the urine. They are also useful in cases where deposits are commencing in the joints of the hands and feet. In atonic gout a judicious employment of the waters often protects the patient for lengthened periods from a recurrence of an attack. In the acute form of gout the waters are inadmissible, but in recurring slight attacks they may be freely used. The temperature of the bath in cases of this kind should be carefully attended to.

In rheumatism, the greatest benefit is derived from the use of the waters. In acute rheumatism, after the subsidence of feverish symptoms, the employment of the tepid bath is extremely grateful, and accelerates recovery, and retards, if it does not prevent, this form of rheumatism from becoming chronic. In subacute rheumatism, also, their use is followed by beneficial results. In chronic rheumatism, after many remedies have failed, as numerous cases admitted into the Bath Mineral Water Hospital prove, the waters, when used internally and externally, seldom fail to give relief, and very frequently effect recovery. In sciatica and other forms of neuralgic rheumatism, the waters, in the form of a douche or of a bath, are extremely serviceable. In rheumatic arthritis, the use of the baths, commencing with a temperature of 95° or 96°, and increased to 100° if the patient can bear it, together with the employment of the douche in the bath, produces, in a short time, relief. Drinking the waters at the same time also conduces to accelerate recovery. The amount, however, of benefit afforded by the waters will depend on the length of the time during which the patient has suffered from disease, as well as on the period for which the waters are used. In lumbago, the use of the douche three or four times a week, or more frequently, in a short time gives relief.

In hemiplegia, where the brain has been involved, use of the water cannot seriously, on the whole, be said to afford very great relief. Instances, however, are adduced where the contrary result is reported to have taken place. If used, they ought not to be employed until some time after the seizure. In palsies arising from cold, or from the introduction of mineral substances into the system, such as lead, arsenic, mercury, copper, the use of the waters has been attended with great benefit, and particularly in that form of palsy which affects the wrists of painters, gilders, and compositors, known as "dropped hands." In such cases, the Bath waters have been for many years known as a valuable remedy. At one time the number of cases of this kind admitted into the Mineral Water Hospital was large: of late years the number has diminished, which may be attributed to the greater care taken to avoid the poison, and the successful use of other remedies. Generally speaking, the worst cases come to the Hospital.

In ischias, or hip-disease, the waters have afforded great benefit, but it is only at its early stage that advantage can be looked for from their employment. In chorea, bathing and douching down the whole back several times in the week is productive of good results; and here, again, the effects of the waters are more evident in young than in adult patients.

In cases of syphilitic and gonorrhœal rheumatism and syphilitic cutaneous eruptions, especially if, in the last-mentioned state, it happen that the patient has been under the influence of mercury, the use of the waters, both by drinking and bathing, is followed by beneficial effects.

Lepra, eczema, psoriasis, and other cutaneous diseases, many of which are traceable to or associated with a gouty or rheumatic diathesis, are effectually relieved, and in very many instances cured, by bathing. It is generally desirable, in such cases, to commence with a tepid bath, and gradually increase the temperature.

In weakness of the limbs, arising from injury; in the stiffness following the fixed position in which it is necessary to preserve fractured limbs; in sprains; and in the contractions of the lower limbs sometimes following severe attacks of fever; in slow recovery of the use from dislocation—bathing and douching are efficacious in restoring the limbs to a healthy condition.

During convalescence from protracted sickness, the Bath waters may be classed among the most desirable and grateful tonics which can be taken; and formerly it was almost an invariable custom for convalescents, especially for women recovering from their accouchements, to take a short course of the waters, which habit, of late years, seems to have been relinquished without sufficient reason.

The above-mentioned diseases may be regarded as among the principal in which relief or recovery may be expected from the use of the Bath waters. It would not have been difficult to increase their number, but my present object is simply to indicate some of the chief affections in which the waters may be beneficially employed. It may here be mentioned that patients frequently recover after they have ceased to use the waters, who, while using them, were not sensible of benefit from their employment.

The best seasons of the year for the use of the waters are spring and autumn. The months of April, May, and June in the former period, and the close of August, September, and October in the latter, are the best months to resort to their employment. It is not to be understood that the waters cannot be used in winter, inasmuch as every arrangement is provided for facilitating their use during that season. But their use during this period may be interrupted, their regular employment interfered with, and consequently the development of their curative effects may be delayed, and exercise also in the open air, which assists their action, and is used with so much advantage during the time they are employed, may be rendered uncertain. Reason and

long experience have justified the propriety of the preference given to the spring and autumn of the year.

The effects of the Bath waters in promoting recovery from or ameliorating the symptoms of those diseases in which their use is likely to be beneficial, may be best shown by the results obtained in the Bath General or Mineral Water Hospital.

During nine years, from 1870 to 1878, 2384 patients were admitted under my care in this Hospital; of whom 1699 were males, and 685 were females. Of the 1699 males, 56 were discharged as cases not suited for the use of the waters, 14 left the Hospital at their own request, 6 died, and 1 was discharged for improper conduct. Of the remaining 1622, 311 recovered, 922 were much better, 236 were better, and 153 were no better. As it will be necessary frequently to make use of the terms, "recovered," "much better." "better," and "no better," it may be well to state that in ninety-nine cases out of a hundred the condition of the patients on their discharge is described by themselves. This, in a great measure, diminishes the number of those "recovered," and augments the number of those "much better," inasmuch as many included among the latter class, at the time they are discharged, often complain of some very slight pain, risking the chance of being allowed a longer residence in the Hospital.

Of the 685 women, 15 were discharged as unfit cases for the waters, 4 left at their own desire, 1 died, none discharged for improper conduct. Of the remaining 665, 107 recovered, 365 were much better, 120 better, and 73 no better.

Taking the whole number of males and females, amounting to 2287, 418 recovered, 1287 very much better, 356 better, and 226 no better. Of the whole number, 1699 males which were admitted, 936 suffered from rheumatism in one form or another, 254 from gout, 128 from sciatica, 82 from paralysis, 40 from lead palsy (dropped hands), 32 from affections of the hip, 26 from eczema, 17 from psoriasis, 6 from lepra, 2 from pityriasis, and 1 from sycosis, leaving 175 suffering from less urgent maladies.

Of the 685 females, 455 suffered from various forms of rheumatism, 33 from gout, 32 from paralysis, 24 from psoriasis, 19 from sciatica, 18 from eczema, 16 from chorea, 12 from anæmia, 6 from dropped hands, and 2 from pityriasis, leaving 62 suffering from minor forms of illness.

The average duration of the illness of each male patient previous to admission is nearly two years and a half, and of their stay in the hospital fifty-seven days; while that of the females is nearly two years and a quarter, and of their residence in the hospital sixty-nine days.

Of the 1699 male patients, 77 were discharged as improper cases, or from other causes, leaving 1622 under treatment. Of these, 311 recovered, or 19·18 per cent.; 922 were much better, or 55·84 per cent.; and 236, or 14·55, better. There were 153 no better, or 9·43.

Of the 685 females admitted, 20 were discharged as improper cases, or from other causes, leaving 665 under treatment; of these, 107, or 16·09 per cent., recovered; 365, or 54·89 per cent., were much better; and 120, or 18·04 per cent., better; 73, or 10·98, no better.

If these results in both sexes be combined, there were 2287 patients treated; of these, 418, or 18·28 per cent., recovered; 1287, or 56·27 per cent., were much better; 356, or 15·57 per cent., were better; while 226, or 9·88, were no better.

These are the results of my own cases for eight years, and they do not represent the most favourable results. It may be added that other remedies, especially those of an anti-rheumatic kind, were, as a general rule, never employed.

If the Hospital Register be referred to, it will be seen that, during the year 1877, 475 cases of rheumatism were admitted, of which 63 recovered, 380 were relieved, 26 no better, 3 improper, and 2 discharged at their own request or for misbehaviour, and 1 died; 84 cases under the heading of sciatica, lumbago, and neuralgia were admitted—14 recovered, 63 relieved, 5 no better, 2 discharged at their own request or for misbehaviour; 108 cases of gout—10 recovered 89 relieved, 3 no better, 1 improper, 2 discharged, 3 died; 20 cases of paralysis—14 relieved, 3 no better; 33 cases of lead palsy admitted—4 recovered, 27 relieved, 2 no better; 2 cases of wasting palsy, no better; 2 cases of locomotor ataxy, no better; 38 cases of leprosy, psoriasis, eczema, and other cutaneous diseases—of which 12 recovered, 23 were relieved, 1 no better, 1 improper, 1 left at his own request; 7 cases of chorea—4 recovered, 3 relieved; 7 cases of anæmia —1 recovered, 5 relieved, 1 no better; 3 case of hysteria— 2 relieved, 1 no better; rigidity and other diseases of the joints, etc., 23—2 recovered, 7 relieved, 7 no better, 6 improper, 1 discharged at his own request. The average stay in the Hospital was fifty-nine days.

It should be remembered that, almost without exception, the cases admitted into the Hospital have undergone a great variety of treatment before their admission, some for many years; that special selection of cases is not practised, but all for whom there appears to be a probability of relief are admitted. Considered in this light, the mineral waters are a remedy of undoubted value. It may safely be said of them that they recover many, relieve more, and comfort all.

There yet remains a duty, grave, though pleasing, which I have to discharge. It is to offer to the Association my sincere, though inadequate, thanks for the honour conferred upon me by electing me President of this great Association. It will be my aim to perform the duties of that distinguished office with the best powers I possess. In the shadow, however, of an event which has saddened the hearts of so many friends and associates, one naturally shrinks from alluding to the future; but, "*favente summo Numine*," I trust that, by our united endeavours, this Association will advance in influence and usefulness—that its influence will always be for good, and its usefulness manifested in strenuous endeavours to ameliorate the sufferings of humanity; and that those who on this occasion have the pleasure of ministering to the promotion of the objects of the Association, and to your individual enjoyment, may have the happiness of knowing their efforts have not been unsuccessful, and of indulging the pleasant hope that in future years many will, with unalloyed pleasure, recall to their memories their visit to "The Baeth" of England, and the "Waters of the Sun."

ADDRESS IN MEDICINE.

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THE PATHOLOGY OF FEVER.

The etiological aspect of certain specific fevers and febrile processes has so engrossed attention of late, and such encouraging results have attended the study of the same, that inquiries into the essential nature and mechanism of fever in general—pyrexia, as it is called—seem in danger of slipping into the background. Yet assuredly the latter are of no less importance than the former. Nay, from the entrance into the organism of the pyrogenic agent, to the supervention of convalescence or of death, as the event may be, is not the process, whether longer or shorter, one and indivisible? Light thrown upon the ultimate cause of fever, of course, cannot be too highly valued, whether in reference to prophylaxis or to the part the ultimate may still play in connexion with the proximate cause of the disorder. But it is just in this latter sphere that light is as urgently needed; for how can we, as practitioners of medicine, ever expect to get control over the febrile process as a whole, or how can we be justified in affirming, except provisionally, that it is *beyond* our control, while we are so little advanced in our knowledge of it that authorities among us are divided, not alone as to what extent, or as to the particular way in which the great nervous system of the body is concerned in its pathogenesis, but as to whether it has any share in it at all? Some two or three years ago I was led to inquire a little into the existing state of this department of pathology, and I ventured to place the result before our local Branch. In endeavouring now to execute the task with which I have had the honour to be entrusted, I propose to resume the subject, and to invite attention to certain work done in connexion therewith since the period referred to; premising, however, that I have no discoveries, no laboratory researches, of my own to offer, corresponding to those with which my accomplished predecessor last year interested his auditory at Manchester.

But, before proceedings, I cannot forbear to allude to the loss to scientific medicine recently of two men, whose names must ever be associated with the history of fever pathology. In September last died Carl August Wunderlich, the father, as he has been called, of clinical thermometry; that is to say, that, although he was somewhat anticipated by De Haen,

and yet more considerably by Gavarret and Zimmermann, to Wunderlich must always be ascribed the distinguished merit of having fully established the great practical value of the thermometer and of temperature observations for clinical purposes. With the employment of this instrument for the determination of the body-heat, I need hardly say the history of modern fever-doctrine must be considered to commence; for we have with it the first application of the methods of exact inquiry to investigations concerning the essence of fever. Wunderlich sank after protracted illness; not so, however, the eminent French physiologist Claude Bernard, who, four months later, was cut off almost suddenly and in the midst of his work. My personal recollections of him, largely exceeded, no doubt, by those of many here present, are limited to the time when, as prosector to Magendie at the Collége de France, he was engaged *inter alia* in demonstrating the functions of the roots of the spinal nerves. His brilliant career had as yet hardly dawned, and experimental physiology, it is unnecessary to observe, was then in its infancy. To tell of Bernard's discoveries and researches were a task of itself: we need it not; we are all more or less familiar with them. We know, moreover, how vast an influence they have exercised upon modern pathology and medicine; but perhaps nowhere more strikingly so than in the department with which we are just now concerned. Indeed, there is not a modern theory of fever that has been set up, unless it absolutely exclude the nervous system from all place in it, in which Bernard's work is not the very key-stone of the arch. So also frequent reference to the same in anything said upon the subject, just as to physiology generally in dealing with the complicated phenomena of fever and the peculiar alteration of the heat-economy of the body which we meet with in it, becomes indispensable.

The first matter to engage us, then, is the share of the musculature in the production of the body-heat. As soon as it was known that the combustion-processes of the body upon which, as Lavoisier taught, its proper heat is dependent had not, as was imagined, their especial seat in the lungs, but took place in the tissues generally, it became manifest that the share respectively of these different tissues in the main result must be very unequal. In some, much heat would be produced; in others, little or even none; and in the same tissue a very varying amount at different times. Clearly the product in a given time would be in direct proportion, on the one hand, to the quantity of tissue relatively to the entire body-weight; and, on the other, to the energy of the oxidation processes occurring in it, or, in other words, to the amount of its nutritive and functional activity. Thus regarded, the glandular organs, the great nervous centres, and the muscular tissue might well be assumed to take a prominent part in the production of heat. The results of observation and experiment show this. The secretion flowing from the salivary glands has been found to be 1·5° C. hotter than the arterial blood supplying them. A similar augmentation of temperature in the secretion of other glands, though not hitherto proved, is highly probable. The liver we know to be a great focus of heat; indeed, Bernard maintained that it is the organ which has the highest temperature of any, but this has also been claimed for the cerebrum proper. In regard to the latter, at all events, the blood of the jugular vein has been found to have a higher temperature than that of the carotid artery. To come now to the muscles. They constitute in weight nearly half of the body, and a third of the blood outside the heart and great vessels goes to their supply. We have long had much evidence to show that the musculature is a great generator of heat; numerous observations in man and animals testify to the fact. But Professor Samuel, of Königsberg, has recently succeeded in more precisely proving its influence upon the temperature of the body, by eliminating a great portion of it from the total heat-production. He tied in a healthy rabbit the two subclavian and two femoral arteries, and then placed the animal in an atmosphere of zero C., or lower. The result was, that its temperature fell gradually within from four to eight hours to 72° Fahr. and under, and it died with all the signs of infrigidation. In another rabbit he made section of the cervical plexuses and of the sciatic and crural nerves without tying any vessels, and, placing it in the same cold medium, exactly the same result ensued. The two operations combined in one and the same animal did not exceed in effect that of either alone. The wounds necessarily inflicted were found to have no important share in the result. By immersion in ice-water, Samuel could reduce the temperature of small healthy rabbits some degrees, and they endured this abstraction of heat, even with similar wounds, a very long time; but when rabbits of whose extremities the main arteries were ligatured, or the nerve-trunks divided, were immersed in ice-water, their temperature sank rapidly, and death ensued. If the animals thus experimented on were placed in a warm atmosphere, they passed into a febrile temperature, even to 107° Fahr. and upwards, which, however, as soon as the heat-discharge, as by cool environment, was again facilitated, sank in like manner as when they were exposed to the same after the operation. Here, then, by eliminating from the total heat-production the musculature of the extremities, the warm-blooded animal is reduced to the condition of a cold-blooded one, its body-heat being now no longer stable, but labile, a "Spielball" of the external temperature, rising with the same, falling with the same; and all the heat-producing powers of the glandular organs, nervous centres, etc., do not avail to prevent this result. But, remarks Samuel, the musculature of the extremities is in mass only about a third of the entire musculature of the body. Hence he concludes that the musculature is the great source of heat, and that the heat-production of all other organs taken together is comparatively inconsiderable.

Now, as to the condition of the muscle concerned in this thermogenic process, Claude Bernard found that the consumption of oxygen in a muscle in the state of contraction approached half the quantity contained in the arterial blood supplied to it; in a muscle at rest, the consumption amounted to nearly a third of the same, and the proportion of carbonic acid in the venous blood, though less, of course, than that of the contracting muscle, was still considerable; while, in a muscle paralysed from section of its nerve, the consumption of oxygen was nearly, and the production of carbonic acid was quite, *nil*; the blood flowed through the muscle almost unaltered. The colour of the venous blood, indeed, so far allowed these differences to be recognised. That of the paralysed muscle was almost as red as the arterial; the blood issuing from the muscle at rest was moderately black, and from the contracting muscle intensely black. It is thus evident that the repose of muscle is not a state of inertia, of entire inactivity, as after section of the nerve. Bernard held that the elementary fibre is in a condition of semi-contraction, answering to the "muscular tonus" of some physiologists. Be this as it may, it is clear that there is at least a combustion-process going on in the resting muscle, which, in contrast to the intermitting character of voluntary muscular activity, is continuous and unceasing. The inference from the whole drawn by Samuel is, that the musculature at rest constitutes the silent heat-apparatus of the organism, the "local hearth" of the combustion-processes of the body, which Crawford, Priestley, and Lavoisier assigned to the lungs. In close correspondence are the results of curare-poisoning, which we know paralyses the muscular nerves. Röhrig and Zuntz found in curarised animals a marked diminution, as indicated by the quantities of oxygen consumed and carbonic acid produced; these, indeed, might fall to half the normal. At the same time the body-temperature sank considerably; and that this sinking was the effect, and not the cause, of the diminution of the oxidation was shown by the fact that the latter continued to diminish when loss of heat from the body was prevented by wrappings of cotton-wool. Similar, again, is the conclusion to which, *inter alia*, Fick and Harteneck have been led by their recent researches on the development of heat in muscular contraction: "The combustion of the nutritive materials taken up by the body," say they, "so far as the affinity of the inspired oxygen does positive chemical work therein, proceeds almost exclusively in the muscular tissue." What is to be said respecting the nervous influences concerned in this process, will appear as we proceed.

Our next topic is the mechanism of the heat-regulation, still a physiological one, but so intimately connected with the pathology of fever as to require a few moments devoted to it.

In our endeavours to explain this remarkable endowment of the warm-blooded animal, by virtue of which it maintains constant its proper heat, notwithstanding varying external

conditions of temperature, and ever tends to return to it, even after considerable alterations of the same, we have been in the habit of assuming the existence of an encephalic nervous centre, to whose mysterious operation the whole was attributed; but, if it be established that the musculature is the main seat of the production of heat, there are certain considerations which, taken together, seem much to favour the belief that this regulation, although very possibly subject to the influence, inhibitory or otherwise, of a higher centre, is in the main effected by means of ordinary reflex machinery having its central elements in the spinal cord. It will be observed that the question is, not how originally we derived our normal body-temperature—*that* we inherited from the maternal organism,—but how it is maintained constant.

First, then, the law that cold contracts the vessels and heat relaxes or dilates them is, of course, paramount here; the full extent and exact application of it, however, are apt to be overlooked. Assuming a certain degree of contraction of vessels to correspond to the mean normal temperature of the body, then, it is clear, every influence which proceeds from a lower temperature is, *pro tanto*, cold; likewise, every influence proceeding from a higher one is, *pro tanto*, heat; and, therefore, in the two cases respectively, *quoad* contraction, so much stimulus or the reverse.

Secondly, the contraction state of the vessels, we know, regulates the heat-discharge from the surface of the body; but, the quantity of blood to circulate remaining the same, the degree of contraction of the vessels will depend upon the thermal influences of the entire environment, and, therefore, as has been well pointed out, at least as much upon the temperature of the interior of the body as upon that of the external surrounding, and the amount of heat-loss connected with the latter.

Thirdly, in the contraction of vessels produced by it, we recognise that cold acts as a stimulus to the sympathetic vaso-motor nerves, and brings to pass an activity of their proper musculature. The sympathetic system, then, governs the vessels which regulate the discharge of heat; and cold restrains that discharge.

Fourthly, under the influence of cold, increased heat-production takes place, as determined calorimetrically and by the amount of carbonic acid excreted; with increase of the cold, the heat-production increases, unless it be carried to an extreme; and with decrease of the same, the heat-production decreases. The chief seat of the heat-production we assume to be in the muscles. We know the skin to be the principal sensory apparatus of the body, and further that cold is felt by the cerebro-spinal sensory nerve-endings of the skin and subcutaneous tissues, considerable operation of it amounting to pain, but that it is not therefore to be regarded as inoperative when its impressions fail to reach the sphere of consciousness. Röhrig and Zuntz found that stimulating saline solutions applied to the skin were able to increase the heat-production, and other observers got a similar result from other cutaneous stimulants. Can we avoid the inference that the skin and muscles are correlated in the heat-economy of the organism, and that cold—meaning thereby any influence by which heat is withdrawn from the body—is that stimulus, which, acting upon the terminations of the sensory (afferent) nerves of the skin and immediately subjacent structures, serves to maintain in a reflex way, possibly enough in conjunction with other influences, a permanent activity of the musculature? To assume that the reflex ganglionic centres are situated in the spinal cord, and, moreover, that they have an intimate connexion one with another, seems only according to analogy: while, as to the (efferent) nerves to the muscles, whether they be ordinary motor nerves, as Bernard's view would suggest, or nervous fibres more directly connected with the production of heat, dilator nerves, trophic nerves, etc.,—nay, further, whether peripheral autonomic centres play any part in the process—are just so many points on which, it may be hoped, physiologists ere long will be able to inform us.

If we take now these several considerations together, does it not appear that we have all the elements of a heat-regulating mechanism? The normal body-temperature given, with the restraint of the heat-discharge and the increase of the heat-production, as they are both determined by the operation of the stimulus of cold, the heat-discharge, however, being influenced by the temperature of the body, as well as by that of the surrounding medium, are not the requirements of the case potentially satisfied?

But we hasten to the subject of fever. The regulation of heat, we know, is not annulled in fever. It is performed more feebly than in health, but its great and important characteristic is that it is set at a higher degree of temperature. The view that has been taken of the share of the musculature in the production of the normal body-heat, would suggest that in the production of the abnormal heat of fever we have to do with an inordinate activity of the same tissue. The state of the *voluntary* muscular energy, as we are all aware, is one of marked depression from the first. General debility, impairment of active working power, and indisposition to move, are among the earliest symptoms; but the sensation of weariness and languor, notwithstanding complete rest of the body, and the aching and feeling of soreness in the limbs, may well be regarded as signs of over-exertion, of excessive work of the musculature during suspended volitional activity. The clinical phenomena and pathological alterations have for some time past led observers to recognise that the muscles play a very prominent part in the febrile process. Attention was especially directed to this fact by our late illustrious countryman, Parkes, who pointed out that the muscles are the chief source of the increased production of urea. But we have some additional experimental evidence. Samuel has shown that, whilst in animals in which fever had been artificially produced, location for some time in cold air caused their temperature to sink only a little; in animals similarly treated, who had the four main arteries of their extremities ligatured, or the nerve-trunks of their extremities divided, a very considerable sinking of temperature rapidly ensued. Thus the seat of the heat-production in fever does not seem to be other than in health. In both conditions upon the musculature is the heat-production incumbent. That this itself undergoes an *increase*, the researches and calculations (calorimetric and by determination of carbonic acid excreted) of Leyden, Liebermeister, and Immermann must be held to have sufficiently proved.

The experimental study of fever with antipyretics—a new field of inquiry—has recently been undertaken by Carl Emil Buss, of Basle, who, we may remark, was one of the first, if not the first, to introduce salicylic acid in the treatment of acute rheumatism. To determine the influence of the antipyretics, either heat-discharge or heat-production might serve as the starting-point of the inquiry. The determination of the heat-discharge is attended with difficulties. It was found simpler and safer to determine the heat-production within the time in which the fluctuations of temperature occur, since this indirectly permits also a judgment concerning the amount of the heat-discharge, and disturbing influences are much more easily avoided. The determination of the excretion of carbonic acid was adopted as being the best criterion of the heat-production of the body in investigations of the kind. The method employed was the same in principle as that of Liebermeister's—viz., placing the patient either recumbent or sitting, during the period of observation, in a box or small chamber especially contrived for the purpose. I described this in my former paper. Buss's apparatus differed only in its being furnished with a more complicated system of tubes, designed to give increased accuracy to the results. The antipyretics used were the sulphate of quinine, the salicylate of soda, and the creosotate of soda. The last mentioned is not much known in this country, but is, I believe, both chemically and therapeutically allied to the salicylate. The object was to ascertain what alterations the heat-production undergoes when the febrile regulation of heat passes into the normal—that is, when the heat-regulation of the fever patient is set to that of the healthy person. The result was quite unexpected—viz., whereas under the influence of quinine a considerable diminution of the carbonic acid production occurred after the administration of salicylate of soda or of the creosotate, the carbonic acid production continued unaltered and as it was before—that is to say, that while both medicaments brought down the temperature much alike, and to the extent of 2° Cent. and upwards (3° to 4° Fahr.), in two or three hours, the quinine reduced the carbonic acid production considerably, but the salicylate left it unaltered. Now, this negative but definite result of the salicylate, it will be observed, carries with it a positive conclusion of pathological importance—viz., that by

heat-discharge alone, and without diminished heat-production, the resetting of the heat-regulation to the normal temperature can be effected. With reference to the quinine, the results are indefinite, and allow the supposition, favoured by other considerations, that along with the diminished heat-production increased heat-discharge co-operated.

But further, Buss argues that during the fever itself, the heat-discharge must have been *relatively* diminished, although *absolutely* (as has been shown by Leyden) in excess; otherwise, by the law of compensation, the temperature must have returned before to the normal. The fever-patient does not give out as much heat as corresponds to his higher temperature. He has, in short, retention of heat. Hence, Buss arrives at the conclusion that the febrile elevation of temperature is determined essentially by an arrest of heat-discharge, but by no means by increased heat-production. A due consideration of the processes concerned in the normal regulation of heat, before referred to, and of their correlation and *modus operandi*, would seem to lead *à priori* to much the same conclusion. That fever does not consist in excess of heat-production alone, the case of tetanus suffices to show. Here with inordinate muscular activity, persistent tonic spasm, the heat-production is so great that the maximum heat-discharge is inadequate to meet the demand, and a marked rise of temperature ensues; but immediately we succeed, by hydrate of chloral or other means, in subduing the reflex excitability, the adjustment is made and the temperature returns to the normal standard. Nor, on the other hand, does fever consist in diminution of the heat-discharge alone, as Traube maintained; the investigations, already cited, of Leyden and Liebermeister have conclusively established the presence of increased heat-production. This, indeed, is a phenomenon which appertains to the essence of fever like the arrested heat-discharge; but, notwithstanding the co-ordination of the two reflex operations, the arrest of the heat-discharge is for the syndrome of fever, and the disturbance of the normal condition determined by it of so much greater importance that, relatively to the increase of heat-production, it must positively be placed in the foreground. By fever, then, according to Buss, we are to understand that pathological modification of the regulation of heat of the body, in which with increased heat-production there is relatively diminished heat-discharge, whereby the temperature is elevated above the normal standard.

We are brought now rather to etiological matters; and, in reference to the causes of the febrile regulation of heat, as manifestly new conditions come in to complicate those which obtain in the normal regulation, we have to consider the operation of those agencies which originally call forth the febrile process, and what part, if any, they take in maintaining the same. The ultimate causes of fever, we have come to learn, lie for the most part outside the body. A *materies morbi*, a pyrogenic virus, is taken into it—how is not sufficiently known; but in various ways we can, in the warm-blooded animal, artificially produce fever. As to the nature of this virus, we need not to be reminded that recent pathological researches have wonderfully enlightened us. We now know that the virulent matter is not in itself liquid, but particulate, composed of corpuscular particles; that it is not matter possessed of peculiar physical or chemical qualities, but that, in many cases at least, it consists of distinct organisms or their germs, capable of development and endowed with the property of self-multiplication. Only in one or two diseases in man, I believe, have specific organisms as yet been actually demonstrated, but the existence of such in others is capable of indirect proof, and in others still is an almost imperative assumption or a more or less probable supposition. Indeed, if we are prepared to go along with an eminent German pathologist, we shall bring into the category of diseases caused by parasitic organisms not only those just referred to, but nearly all febrile diseases, acute rheumatism and rheumatic endocarditis, pneumonia, nephritis, tuberculosis, syphilis, etc.; nay, this authority anticipates the time when all infective diseases—among which, of course, he includes those enumerated—will be classified according to the botanical genus and species of the organisms which have occasioned them.

But to return to the pyrogenic virus in its relation to the proximate causation, the mechanism, of fever. Where the virulent particles, the organisms or germs, are deposited until, according to the duration of the incubation in each instance, they get into the blood, is, except perhaps in the case of one or two diseases, unknown. That they *do* get into the blood before exerting their special activity, seems admitted on all hands. Their arrival in the capillary vessels was pretty conclusively shown by Chauveau's "bistournage" experiments. That these virulent particles, moreover, or, if not themselves, secondary particles developed under their influence, products of decomposition, thrown into the periphery of the vascular system, make their way through the walls of the capillaries and diffuse themselves in the tissues, may perhaps be an assumption not unwarranted by the present state of our knowledge. But here, I need not say, we reach its limits. Much prejudice has arisen in some quarters against speculative views in matters of science, but, in my individual opinion, those of original investigators are entitled to attentive consideration, as at least indicating future paths of inquiry. Buss's theory, then, briefly is as follows. According to him, these particles, escaped from the vessels and free in the tissues, exercise an irritating influence upon the terminations of the sensory or afferent nerves: they gradually again are taken up by the lymphatics, and, returned to the venous blood-stream, circulate afresh, reach the periphery, and so on. Thus there occurs a gradual saturation of the entire tissues of the body with these irritating particles, and a permanent irritation of the entire sensory nerve-terminations is kept up. This will tell upon both the sympathetic and the cerebro-spinal afferent nerves. In the former case, constriction of vessels will ensue; in the latter will develope, in a reflex way, in like manner as in the normal regulation of heat, an increased passive (this word being allowed) or even active muscular activity, and therewith a similarly increased production of carbonic acid. Accordingly, there will be persistently maintained a condition of more or less exaggerated contraction of the peripheral vessels, as also of increased production of heat. This excessive vascular contraction necessarily reduces in proportion the heat-discharge. Also the heat-production is no longer influenced alone by the stimulus of cold, but simultaneously by the irritating particles also. Thus the temperature of the body reaches a definite abnormal height, determined by the intensity of operation of the irritating particles, and will remain at the same so long as the irritating operation continues at the same amount. The regulation of heat, moreover, is set accordingly.

It will be seen, then, that by this theory the kind of influence of cold and of these pyrogenic particles upon the nervous system is exactly the same. Both effect in the same way peripheral contraction of vessels, and excite the latent muscular activity. But there is yet an essential difference. The operation of the stimulus of cold is, *eo ipso*, always connected with abstraction of heat—a peculiarity which is excluded in the operation of irritating particles. And as the regulation of heat of the healthy person is adapted to the stimulus of cold—that is, to a stimulus attended with simultaneous loss of heat,—and can regulate exactly only for this, it answers necessarily to the irritation arising from the pyrogenic particles in like manner as if it were the stimulus of cold. And as with it no abstraction of heat stands in connexion, it follows that the temperature of the body must be raised above the normal. Herein, then, according to this authority, lies the true cause of the febrile elevation of temperature, and the essential reason why, with the most heterogeneous causes, always one and the same effect ensues—viz., the febrile elevation of temperature.

Samuel's views on the pathology of fever are more readily told. While recognising generally the mechanism of the heat-regulation, before indicated, he holds that certain matters in the blood, of a chemical nature, products of tissue-change, concur with the thermal influences (stimulus of cold) in maintaining the reflex ganglionic centres, which he calls "heat-centres," and considers automatic, in their normal persistent excitement; and that the essence of fever lies in an excessive production of these matters (*Ganglienreize*), which is followed by that of similar matters, supposed by him to be the special stimuli of other automatic centres, and thus is determined an over-action, an abnormal tension of a group of centres. Changes in the blood, then, Samuel regards as the essential *point de départ* of the febrile disorder, whether these changes be called forth by the introduction of foreign substances from without or not. He enunciates his theory thus: "Fever depends upon a simultaneously exalted tension of the automatic heat, and heart-centres, and upon an intercurrent one of the automatic vaso-

motor nerve-centres, and of the ganglia of the sensorium; that this tension, however, is brought about not directly by introduction of pathological nerve-irritants, but indirectly by increased production of the physiological nerve-stimuli in the blood." Professor Wood, of Philadelphia, U.S., has recently carried out a series of experiments in the dog, on the effects of section of the spinal cord upon the evolution and production of animal heat; but, as far as I can gather from the brief report of the same, with no very novel results. He found, as others have done, that at a low external temperature, after section of the cervical cord, there was increased evolution, with diminished production of heat; while, at a high external temperature, both the production and evolution of heat were diminished. The animal died in winter of cold, and in summer lived much longer on account of the high external heat. Wood attributes the fall of temperature, as likewise others have done, to paralysis of the vaso-motor nerves of the arterioles at the surface removing the restraint upon heat-loss; and this, of course, is one factor in the result. But the main one is clearly, as Samuel's experiments show, the paralysis of the muscular nerves, and the consequent suppression of the heat-producing processes of the musculature. Here may be the proper place to observe that, neither from these experiments, nor from any other source, is a quite satisfactory explanation yet forthcoming of those rare, but still well-authenticated, cases in which, after accidental injuries of nervous centres in man, or artificial lesions of the same in animals, remarkably high temperatures have occurred, and with a cool surrounding. The possible existence, however, of an inhibitory centre, perhaps in or near the upper part of the cervical cord, has been before duly recognised.

Leaving to others more competent the task of criticism, I may yet be permitted a word or two. It appears to me, then, that Buss has conclusively shown that a *relatively* diminished heat-discharge is an essential constituent of the febrile condition. That the pyrogenic particles, or "irritaments," as he calls them, should select the sensory nerve-endings for their special operation, if ultimately proved to be correct, must, at any rate for the present, be taken as pure hypothesis, and, as far as I know, unsupported by analogy. Samuel seems to regard increased heat-production as predominant in the genesis of fever—this being, as we have just seen, the result of an excessive production of his (also hypothetical) ganglion-stimuli. He, however, *does* appeal to analogy, citing an observation of Ranke's on the frog, viz., that urea and hippuric acid exercise a direct influence upon Setschenow's reflex inhibitory centre. In the higher animals also, as is well known, the respiratory centre is affected by the condition of the blood; but the analogy hardly serves further, for it has been found that it is not the excess of carbonic acid which affects the centre, but the deficiency of oxygen.

As was intimated at the outset, there are some authorities who do not admit the dependence of fever upon alterations of the nervous system, but contend that it originates in the living tissues, and is from first to last a disorder of protoplasm. This is the view of our eminent English pathologist Burdon-Sanderson, as maintained in his elaborate article in the *Local Government Scientific Reports* of 1875. His argument seemed based very principally upon certain experiments of Murri, a Florentine physician, made upon the dog. Having first divided the cervical cord (which produced a cooling), Murri injected fetid pus under the skin; whereupon, he affirms, the temperature rose quite as much as after injection of the same in animals not operated on. But these experiments, as detailed in the original Italian publication, have been carefully examined by Handfield Jones, and he considers the results do not warrant the statement made. "Though some elevation of temperature followed the injection of pus," says the latter able physician, "yet it never reached fever-height in rectum or skin, and soon fell again considerably." And, in reference to another experiment, "it is clear that the pyrogenic effect of the pus did not avail to bring up the temperature to the normal, and consequently the result was not such as in animals with sound cords." Three years and more have elapsed, and one has heard of no repetition of these experiments or other evidence confirmatory of Murri's statement. On the contrary, Samuel's experiments prove, as we have seen, that alike the febrile heat and the normal heat are dependent upon the musculature, and that when this is paralysed, as in section of the cervical cord, the heat of the body is dependent upon that of the surrounding medium. Moreover, the fact remains that no one yet has ever succeeded in producing fever in cold-blooded animals, to whose thermal condition the warm-blooded one is reduced by section of its cervical cord.

Very interesting are the recent observations of Volkmann and Genzmer on the aseptic wound-fever. Its apparent independence of all external infection (as in the case of subcutaneous injuries), the presence of high temperature (even to 40° C.—104° Fahr.) with absence of the ordinary symptoms of disorder, and its harmless course and issue, are remarkable peculiarities. The observers themselves attribute it to absorption of matters nearly allied to the physiological products of retrograde tissue-metamorphosis, instead of to heterologous matters, as in septic fever—an explanation quite in accordance with Samuel's views, but admitted by them to be provisional only. We have yet to learn more about aseptic fever. In reference, however, to the tolerance of high temperature, I must confess myself to be one of those who hold to the doctrine of Liebermeister, that unremitting high temperature constitutes the chief element of danger of fevers generally. While he was the first to insist on this point, practical medicine is not less indebted to him for introducing the antipyretic treatment by which this danger may be in great measure controlled.

A word upon hyperpyrexia. This, as we know, mostly occurs in the course of acute rheumatism or rheumatic fever; and it has long been my conviction that, in a majority of the cases, the same is due to mismanagement. What determines the remarkable activity of the sweat-glands observed in this disease is not yet ascertained; but a very little consideration suffices to show that in any given case, except for this copious perspiration, the temperature would at once be higher; it is just so much natural heat-discharge; and the true indication would be to promote it and assist cutaneous transpiration. But how often is just an opposite course followed! The patient, from an exaggerated dread of chill and the painfulness of all movement, is allowed to remain for days together under an impervious load of blankets and counterpane, enveloped perhaps in flannel, his skin uncleansed, reeking in his own exhalations, and with, by-and-by, a copious miliary eruption testifying to the folly perpetrated. Without ignoring individual susceptibilities, I believe it is under these circumstances that rheumatic hyperpyrexia is most prone to arise. A case of my own, some years ago, in which the employment of warm baths (not cold) obviously contributed to recovery, first suggested to me this view, and further experience has only served to confirm it.

It has been said recently, by one of our leading men, that all we know of the pathology of fever can be set down on a single page of octavo; and certainly the literature of the subject in our language is, with one or two exceptions, a blank. Yet, what is fever? Is it not the most common morbid condition of the organism? And, again, though it may sometimes be only a trivial disorder, is it not very apt to be as formidable as any we have to deal with, carrying off its victims from all classes of society? We can hardly congratulate ourselves upon this state of things. But lest any should reproach on the one hand, or despair on the other, we may, in conclusion, just look for a moment at the difficulties attending investigations into the nature of the febrile process, and then at what should be encouragement to the same. Under the former head, as we are painfully aware, we have no State aid, but rather the contrary. The method of proceeding, then, being comparison—comparison of the febrile state with that of health—in order that reliable results may be obtained, it is clear that all conditions and circumstances should be similar in the two cases, fever alone excepted. The healthy person should be, like the fever patient, confined to bed, with an equal quantity of clothes, and upon the same fever diet; he should be of equal body-weight; further, he should be, in the language of physiologists, in a state of nutritive equilibrium, or brought thereto at the commencement of the period of observation; that is to say, his tissues should be neither growing nor wasting; either there must be no therapeutical treatment at all for the time being, or it must be carried out alike in both cases. Failing any one of these particulars, a normal standard of comparison is wanting. Recourse for the purpose to non-febrile invalids, hospital patients, the subjects of chronic disease, is but a poor alternative. More satisfactory, in some respects, have been observations made

upon patients suffering from intermittent fever, who could then be compared with themselves in the pyrexial and in the apyrexial periods. Observations upon patients under the influence of antipyretics—a new method—we have already had occasion to notice. As to researches carried on in certain of the lower animals in whom fever is artificially produced, of course the deductions are founded upon analogy. But I have wearied you.

Regarding the *encouragement* to these investigations, I think if we could only realise what it would be to have an effectual control over the febrile process, based, as such effectual control ever must be based, on a thorough knowledge of its pathology, we should want no more. The prospect of such a large accession to the powers of our art should suffice.

"In order that the medical treatment of the febrile process should be perfect," writes John Simon, "the process ought to be thoroughly understood in respect of all the dynamics of its constitution; so thoroughly, indeed, that the bedside practitioner shall be able to apply his counter-agents with the precision of one who conducts a merely physical experiment." This is an ideal which, far from the doctrine of despair—that fever is essentially beyond our control, and that we must be passive in its presence—is worthy to engage our highest powers and best energies in its pursuit; is worthy of those commissioned to "heal the sick," and in the service of Him by whose Divine fiat *ἀφῆκεν αὐτὴν ὁ πυρετός*.

ORIGINAL COMMUNICATIONS.

NOTES ON A CASE OF RETROFLEXION OF THE GRAVID UTERUS.(a)

By A. E. AUST-LAWRENCE, M.D.,
Physician-Accoucheur to the Bristol General Hospital.

The case of which I read notes this evening is one that comes under the heading of a class styled by Dr. Barnes, "Incomplete Retroflexion of the Gravid Uterus," for although at one time the whole of the uterus lay bent back in the pelvis, yet, as utero-gestation proceeded, a portion grew out from the pelvis into the abdominal cavity, leaving still the bulk of the uterus in the cavity of the pelvis, where it exerted all the mischievous effects of pressure on the bladder and displacement of the urethra, causing, by this, retention of urine, with all those serious results due to the over-distended condition of the bladder, with the usual accompaniment of decomposing urine and inflammation of the coats of the bladder. My case is as follows :—

M. L., aged thirty-two, married, the mother of five children, the last born five years ago, was admitted into the Bristol General Hospital on November 23 of last year. She complained of inability to pass water, and of great abdominal pain. Mr. Parker, our Assistant House-Surgeon, saw her on her admission, and recognising the true state of affairs, relieved her of a good deal of pain by passing a catheter and drawing off some pints of highly alkaline and offensive urine. A message was then sent to me about the case. When I saw her I ascertained that she had been regular until five months previous to this date, and that one month ago, after lifting some baskets into a cart, she found that when she tried to pass water she was unable to do so, except with very great straining, and then only passed a small quantity at a time. This difficulty was relieved occasionally by a catheter being passed, but I understand that this was done only about three or four times during the month, so that one might assume that the bladder was not thoroughly emptied during the whole of this period; and this accounts for the condition of urine, and also for the state the patient was in when admitted. She had such a haggard look and was evidently so pulled down that I very much feared that the result would be unfavourable. Upon inspecting the abdomen I noticed a general fulness reaching from the pubes to the umbilicus, dull on percussion, and giving indistinct fluctuation on palpation. After a catheter had been passed, and a large quantity of highly offensive alkaline urine drawn off, there still remained a swelling above the pubes reaching upwards about three inches. An examination per vaginam showed that this swelling was continuous with a larger one blocking the whole cavity of the pelvis. The os uteri was found to be very high up behind the pubes, and gave to the finger an impression of softness such as one usually meets with in the pregnant condition. The sound, of course, was not passed, as there was great suspicion of pregnancy—I say "suspicion," for there was not, until one went into the case, absolute certainty of it; and it is surprising the large number of pathological conditions that in some respects may be mistaken for pregnancy, and the reverse. For instance, this case, as far as its history was concerned, might have easily been mistaken in this way. The exertion in lifting might have caused some ovarian or other veins to give way, a hæmatocele, in fact, being formed: as a consequence of this the uterus (if there was much effusion) would be pushed forwards and upwards, compressing the bladder and causing retention of urine, etc. The supra-pubic tumour recognised after emptying the bladder would be the uterus; the pelvic tumour would be the effused blood and probably some inflammatory products. The main points that a digital examination revealed to help the differentiation between the two states were, first, the absence of any decided fixing of the mass, which appeared to occupy the pelvic cavity more fully than a hæmatocele usually does; and, secondly, the indistinct feeling of fluctuation conveyed through the mass when one finger was in the vagina and the other tapping the abdomen. There had been no acute pain with rigors and sweating, as if the case were one of pelvic inflammation and abscess. It was not sufficiently cystic in its feel to be mistaken for an ovarian cyst which had dropped into and become fixed in the pelvis. Nor was it so hard and definite in its outline as a fibroid uterus would be, although, singular to say, in the very next bed I had a case of fibroid uterus producing almost exactly the same symptoms, viz., retention of urine, abdominal tumour, and a large pelvic mass, the os uteri also being very high up and behind the pubes. The condition of retention in this case has been entirely relieved by pulling down the cervix uteri and pushing up the uterus from behind by means of a Hodge's pessary.

To return to the case. I considered it to be one of incomplete retroflexion of the gravid uterus; and I arrived at this conclusion partly by the history of the case, and partly by a process of exclusion. I was unable at this stage to detect any fœtal sounds. I considered that the most urgent danger lay in the condition of her bladder. She evidently was suffering from cystitis, and I feared the complications in the kidneys and in the general state which so often accompany this condition. She had a very nasty look about her, and gave me the idea that unless she had very soon a free passage for her urine, and relief from cystitis, she would sink from some form of blood-poisoning.

I did not consider that I was warranted in simply having the urine drawn off and leaving the case to nature, as is recommended in this the incomplete form of displacement backwards of the gravid uterus: the mode adopted by nature being that the abdominal portion of the uterus gets gradually larger and drags up the pelvic portion, and so relieves the bladder from pressure.

I decided to attempt reduction, and for this purpose I emptied the bladder and placed the woman on her knees and chest, raising the pelvis considerably. I introduced two fingers of the left hand into the rectum, and endeavoured to push the mass upwards and to the side of the sacral promontory, at the same time exerting traction on the cervix per vaginam with the index finger of the right hand, endeavouring to bring this portion of the uterus to occupy the opposite pole of the diameter of the pelvis to that occupied by the fundus uteri. After keeping up gentle pressure continuously for about ten minutes, I had the satisfaction of feeling the pelvic mass slip up, and finding air rush up the rectum by the side of my fingers, and in a very few seconds the whole mass was up in the abdomen, and I was enabled to pass my fingers up the rectum and explore the whole of the brim of the pelvis. The portion of rectum above where the pressure of the uterus had been was of an enormous size. I placed a large-sized Hodge's pessary in the vagina, and kept the woman lying on her abdomen for a few hours, and then allowed her to be made comfortable on her side. A morphia suppository of half a grain was placed in the rectum, and it was requested that the bladder should be emptied night and morning, or oftener if deemed advisable. She was

(a) Read before the Bristol Medical Chirurgical Society in April last.

allowed to drink freely of barley-water containing dilute nitric acid and infusion of pareira.

The condition of the urine improved daily, but it was some time before the constitutional disturbance diminished sufficiently for me to feel justified in allowing her to sit up or to leave the hospital. Just four weeks from her admission she was sent home, evidently then six months pregnant, the fœtal heart being easily heard. The urine also was quite normal, and all traces of cystitis had disappeared. The pessary was removed a few days prior to her leaving the hospital. I should say that for some days after the reduction of the uterus one could detect a sulcus, evidently indicating the position where the uterus had been bent on itself.

I will not detain you very long in making remarks upon this case, but there is one point to which I should like to draw your attention, and that is this: that whenever a woman complains of not being able to pass her water, or does it with difficulty, the cause will be found, in nine cases out of ten, not in the urethra, not in the bladder, but in some uterine displacement. Here, then, lies an important difference in the diagnosis of retention of urine in the two sexes—a difference, I am sure, that is not always recognised. Over and over again in my special department at the General Hospital, I have had cases where the main symptom has been difficulty in passing water, and, as a consequence, straining and just passing a little, this constantly being repeated until at last the most prominent symptom seems to be cystitis, the cure of which lies in recognising the cause; and in nine cases out of ten that cause will be found in some uterine displacement. How often we hear of inflammation of the bladder in women, how intractable it is, etc. And so it always will be until it is looked upon as a necessity to make a vaginal and uterine examination in all patients complaining of the troubles I have named. And if it is important in the non-puerperal woman, how much more so in the puerperal state, where the fact of a displaced pregnant uterus being overlooked may cause not only abortion, but most serious mischief, and even death, of the mother.

The only other point to which I wish to allude is the causation of retroflexion of the gravid uterus. Although this patient dates her trouble from a definite time, I do not consider that date to be the commencement of the uterine displacement, but rather of the first inconvenience from it. Probably she had suffered from a retroverted uterus before becoming pregnant; or this condition might have supervened upon pregnancy, and gradually become more and more aggravated, until, possibly from the straining, the fundus uteri was forced more down into the pelvis, and thus suddenly developed the acute symptoms she complained of.

I have on several occasions been obliged to advise the use of a pessary where there has been a decided backward inclination of the uterus in the early months of pregnancy, with the result of entirely preventing the fundus uteri being caught and held below the promontory of the sacrum; and I am sure I have seen cases of miscarriage where the initial step in the causation has been some form of uterine displacement.

THE HOWARD MEDAL.—We learn that the essay to which the Howard Medal of the Statistical Society will be awarded in November, 1879, is to be "On the Improvements that have taken place in the Education of Children and Young Persons during the Eighteenth and Nineteenth Centuries." The essays are to be sent in on or before June 30, 1879.

A BABY OPIUM-EATER.—Dr. Little, of this city, reports the case of an infant suffering from suppurative inflammation of the knee-joint, who, when under eight months of age, took on one occasion two ounces of Magendie's solution of morphia in twenty-four hours, one ounce and a half of the quantity being taken within twelve hours. The child had been an opium-eater from the time that it was three weeks old. The inflammation of the knee set in at that time, and the mother commenced administering small doses of paregoric to relieve the pain. The daily dose of morphia has been gradually reduced since the day when the two ounces were taken, and at the time when Dr. Little's statement of the case was written the child was getting only ten drops of the solution at bed-time.—*New York Med. Record* from *Amer. Jour. of Obstetrics*, April.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

MIDDLESEX HOSPITAL.

CASE OF CEREBRO-SPINAL MENINGITIS.

(Under the care of Dr. CAYLEY.)

[Reported by Dr. FINLAY, Medical Registrar.]

JAMES H., aged thirty-four, a dyer, was admitted into hospital under the care of Dr. Cayley on January 1, 1878. He stated that on December 28 he lost his appetite, complained of pain in the head, and vomited. He went to bed, and dozed during the day, and by the next day he had become drowsy and stupid. His friends stated that he continued in a half-conscious condition till the 30th, when he was able to recognise his medical attendant; and it was then noticed that the right side of his face twitched. Since then, up to the time of his admission, he had been increasingly restless and talking incoherently. According to his friends' account, he had not been an immoderate drinker; nor had he been subject to fits or had any similar previous attack. He had not been subject to headache, nor had any discharge from his ears.

State on Admission.—Patient is a dark-haired, fairly muscular man, very restless, and continually talking incoherently, unsteady and staggering when he stands. He complains of pain across the nape of the neck, which is aggravated by a forward movement of the head. As he lies in bed his head is slightly retracted, and he cannot flex it on to the sternum or laterally on to either shoulder. The natural lines of the face are intensely marked on the right side, with the angle of the mouth drawn upwards; the left cheek is flaccid and expressionless, with the angle of the mouth drooping. There is loss of power on the left side of the face, and the eyelids can be but barely closed. On the right side the upper eyelid droops, the pupil is dilated, and the eyeball cannot be turned inwards. Apparently there is some degree of deafness on the left side. The tongue is furred, and dry and brown in the centre; it strongly deviates to the left when protruded. The chest resonance is good, but there are slight sonoro-sibilant râles over the front. The heart's apex beats in the fifth interspace three-quarters of an inch outside the nipple line, and the first sound is rough at the apex. When questioned, patient answers in a jocular manner, and somewhat to the point, but he immediately relapses into talking incoherently of what he sees around him. There is no anæsthesia of, or loss of power in, the limbs. Pulse 100, rather sharp and compressible; temperature 100°. Specific gravity of urine 1023, very acid, and contains a trace of albumen.

January 2.—There is no tenderness on pressure over spines of cervical vertebræ, but just behind the cranial origin of the sterno-mastoid muscle on right side there is great tenderness on moderate pressure. The part, however, is not swollen, and has no abnormal appearance; complains of shortness of breath; dry râles more abundant than yesterday; kept rambling in his talk all night until six o'clock this morning, when he had a short sleep; face flushed; pulse 108; temperature 102·4°. In the evening the pulse was 112; temperature 101·8°; respirations 28. He has been very restless and noisy all the afternoon and evening, complaining of pain in the back of neck and across the loins; bowels opened once.

3rd.—Pulse 100; temperature 101·8°; did not sleep during night; resonance impaired over lower third of left back, with weak breathing and scanty crepitation; less tenderness beneath right side of occiput; head kept retracted; and the attempt to raise him in bed aggravates the pain in his neck. He cannot sit up without assistance; passes plenty of urine which is not albuminous. He has pain over the lower part of sacrum; no abrasion or bedsores. Evening: Pulse 124; temperature 103·4°; tongue dry and brown; is much more prostrate; constantly talking and moving his limbs; head retracted and moved with difficulty.

4th.—Pulse 120; temperature 101·6°. Over base of left lung resonance is impaired as yesterday, but crepitation is replaced by well-marked tubular breathing and bronchophony. There is no increase of vocal fremitus. Slept for two hours last night. Head not so much retracted; is in no pain except when he moves. Evening: Pulse 120;

temperature 102·4°. Is not quite so restless; paralysis less marked.

5th.—Pulse 100; temperature 100·6°; respirations 28. Slept fairly; is not so prostrate. Paralysis continues the same; difference in size of pupils well marked. Evening pulse 112; temperature 102·6°.

6th.—Condition in the morning apparently unchanged. Since midday he has become more restless. He is lying on his back, throwing his arms and legs about, pulling at the bedclothes, and trying to grasp imaginary objects; his face is much paler. He makes an effort to put out his tongue; but is unable to protrude it more than half an inch beyond the teeth. 3 p.m.: He is lying on his back breathing stertorously, and unconscious. 9 p.m.: In same condition, with very livid face. Abundant mucous râles with respiration. He died at 10.40 p.m.

Autopsy on January 7.—Body that of a well-developed, well-nourished, muscular man. Head: Sinuses of dura mater full of fluid blood. On reflexion of the membrane the convolutions on both sides appeared to be flattened, and he vessels in the pia mater were much injected with blood; the membrane, too, was dry. Viewed from above, a small quantity of opaque lymph was seen on each side, concealing the vessels at the superior extremity of each Sylvian fissure, and passing a short distance on to the surface of each temporal lobe. At the base of the brain this exudation was found to completely fill the Sylvian fissures, and to abound in the central parts, almost concealing the circle of Willis and the optic commissure, whilst on each side the third, fourth, and fifth nerves were embedded in it to about an equal extent. The layer of lymph covered also a great part of the pons Varolii and the upper part of the medulla oblongata. In slicing the hemispheres, numerous red points were observed in each of the centra ovalia. The lateral ventricles were filled by a quantity of turbid fluid, in which flakes of lymph-like material floated; the cornua were dilated, and the walls of each ventricle extremely softened and studded with minute spots of ecchymosis. The softening was greatest in the fornix and on the surface of the corpora striata, as well as the walls of the anterior cornua. There was no fracture of the skull and no plugging of the cerebral vessels. Spine: There was almost as much blood in the vessels of the pia mater on the anterior surface of the spinal cord as on its posterior aspect. But posteriorly in the lower dorsal and lumbar regions the vessels were concealed by a layer of lymph, which attained its maximum thickness and extent over the lumbar enlargement. Here it invested completely the posterior nerve-roots. The exudation did not extend above the lower dorsal region, nor was any found on the anterior surface of the cord. Several small osseous plates with jagged margins occurred at intervals in the arachnoid. The cord itself was firm and natural in appearance. Thorax: Heart distended with blood; muscular substance and valves natural. Lungs much congested and œdematous, especially the left lower lobe; no adhesions. Abdomen: All organs natural, the spleen only being pale and soft.

Physical Science Scholarship at Oxford.—An examination will begin at Merton College, Oxford, on Tuesday, October 15, for the purpose of electing to a Physical Science Postmastership of the annual value of £80, and tenable for five years from election. After two years of residence the College will raise, by a sum not exceeding £20 per annum, the postmasterships of such postmasters as shall be recommended by the tutors for their character, industry, and ability. Candidates, if members of the University, must not have exceeded six terms of University standing. Information may be obtained from the tutor in physical science.

The late Examination at the Royal College of Surgeons.—Out of the 195 candidates who have during the past fortnight been undergoing their examinations for the diploma of membership of the College, 115 have received diplomas, and ten who were approved in surgery can claim their diplomas when qualified in medicine; sixty-eight were referred to their studies in surgery, and twenty-nine in medicine. A large proportion of the candidates who presented themselves already possessed qualifications in medicine. In by far the greatest number of cases the medical qualification was the licence of the Society of Apothecaries of London; and the M.B. of the University of Edinburgh came next, though at a long distance, in order of frequency.

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The Medical Times and Gazette *is published on Friday morning: Advertisments must therefore be sent to the Publishing Office not later than One o'clock on Thursday.*

Medical Times and Gazette.

SATURDAY, AUGUST 10, 1878.

THE PRESIDENTIAL ADDRESS TO THE BRITISH MEDICAL ASSOCIATION.

When the British Medical Association meets in a city which it has not visited for many years, it is certainly very natural—we might, indeed, say it is almost inevitable—that the Presidential Address should commence with some reference to the growth and progress of the Association. Thirty years—the lifetime of a generation—have passed since the body then known as "The Provincial Medical and Surgical Association" held its anniversary meeting in Bath; and it was to be expected that on its now again visiting that city as the British Medical Association, and the most powerful association in the medical world, its President would point out how immensely it has increased in the interval in numbers, income, and influence. This Dr. Falconer did at the commencement of his Address; and we may congratulate the Association on two announcements made by him in his summary of its strength, power, and works. The Association has during this year struck root in the colonies, a colonial branch having been formed in Jamaica; and Mr. Middlemore, of Birmingham, has presented to the Association a sum of £500, the interest of which is to form a triennial prize, for the best essay on the scientific and practical value of the improvements made during the three previous years in ophthalmic medicine and surgery. The Association having been honoured, Dr. Falconer took for the theme of the lengthy Address we elsewhere publish, the city in which the Association had met. And this too was to be expected. It has of late years been the custom for the President for the year to devote his Address to the purpose of dwelling on the history and the merits of the place in which the Association meets, and of which he is one of the chief medical lights. And the President of the present year might be considered fortunate in having such a place as the city of Bath for his subject. But we must venture to think that Dr. Falconer made a mistake in dwelling at such length as he did, and with so much detail, on

the history, the meteorology, the climate, the sanitary conditions, and the death-rate of Bath. Bath is a singularly handsome city, with great natural gifts and advantages; but it is not—not yet, at any rate—a model city. We are glad to hear that its inhabitants have now a fairly good supply of excellent water for domestic purposes; but we can hardly think that the members of the British Medical Association can have cared much to be told in detail how and when that supply has been gradually acquired, and of the various Acts of Parliament that have been obtained for that purpose. And similarly, we doubt if they can have felt any great interest in the details given them of mortality-rates, of mean daily, monthly, and seasonal ranges of temperature and of humidity. Bath does not stand very well as to its death-rates; nor is it in respect of its sanitary arrangements an example to other towns or cities—unless, indeed, as an example of what ought not to be. It has great natural facilities for efficient drainage; and the provisions made for carrying away the sewage from the houses, and for conducting away the surface-water, appear on the whole to be good. But "the whole of the material collected by the sewerage and drainage of the city finds its way into the river, which, if it were not in a great measure cleansed by the occurrence of floods and freshets from the watersheds of the neighbourhood and from distant hills, would be greatly detrimental to those who inhabit its banks." We are told that attempts have been made from time to time to obviate as far as possible any injurious effects from this source. "Some of the drains have been continued to below the ordinary water-level of the river with a view to prevent the escape of gas; while the larger, which have not been prolonged into the bed of the river, are trapped with iron valves." These are obviously only temporary and inefficient expedients, and it is to be hoped that the municipal authorities may be induced, or driven, to take effectual measures for the purification of their river by the interception and utilisation of the sewage. As to the house-drainage, even Dr. Falconer can only say that "it is on the whole in good condition, and the sources of noxious smells are attributable more to the carelessness of the inhabitants of houses than to a positive deficiency in the mode of drainage. The Civil Engineer states that cesspools, which at one time were very numerous, have been almost wholly abolished, and the old privies which were found in the courts, allies, and small tenements, and in some of the best residences for the use of domestics, have been replaced by properly constructed closets with a good supply of water."

All this, and much more that is contained in the Address, is of great interest to the people of Bath; and it may be of good service to them to thus make public the weak points and deficiencies in the management of the city; but to the vast majority of the members of the British Medical Association the chief interest of the Address must lie in the latter part of Dr. Falconer's Address, in which he gives his experience of the action and remedial value of the mineral waters of Bath. Much, indeed, of what Dr. Falconer tells us as to the history of the baths, the speculations as to the source of the mineral springs, the analyses of the waters, the diseases in which they are found useful, and the directions and warnings he gives regarding the employment of them remedially, may be found elsewhere; but it is nevertheless interesting and instructive, and it is convenient to have the information thus gathered up and compressed. The quantity of water supplied by the springs amounts, we are told, to 181,440 gallons daily, and "appears to have been unaffected since they first became subjects of investigation up to the present time by any meteorological change. As in former days," so now, they are "perennial springs, whose water is neither increased by the greatest glut of rain, nor lessened by the greatest drought." The most abundant ingredients of the waters, taking the analyses as a whole, are:—"1. Sulphate of lime; 2. Chloride of sodium; 3. Chloride of magnesium; and 4. Sulphate of soda. The proportion of iron which has been detected is comparatively small; still its taste is quite perceptible in the water, and its effects on the system are more decided than could have been expected from the small portion which has been revealed by analysis." But, as Dr. Falconer observes, "It is not to the effect of one or more particular mineral ingredients of a spring, except where they are found in large proportions, that its efficacy is to be attributed, or on which its selection as a medicinal agent will depend. It is to the union of the several substances contained in the water, the quantity of fluid with which they are combined, and still more to the recorded experience and concurrent testimony of credible witnesses, that we must refer for instruction and guidance in the choice of employment of a mineral spring." We look, therefore, with special interest for Dr. Falconer's own experience of the effects of the Bath waters in promoting recovery from, or ameliorating the symptoms of, those diseases in which their use is likely to be beneficial; and the information we obtain is not, we think, very encouraging. During nine years, from 1870 to 1878, he had 1699 males and 685 females under his care in the Bath General or Mineral Water Hospital. Of the males (1699) admitted, "936 suffered from rheumatism in one form or another, 254 from gout, 128 from sciatica, 82 from paralysis, 40 from lead palsy (dropped hands), 32 from affections of the hip, 26 from eczema, 17 from psoriasis, 6 from lepra, 2 from pityriasis, 1 from sycosis, and 175 from less urgent maladies." Of all these, 77 were discharged as being improper cases, or for other reasons, leaving 1622 to be treated. "Of these, 311 recovered, or 19·18 per cent.; 922 were much better, or 56·84 per cent.; and 236 were better, or 14·55 per cent. There were 153 no better, or 9·43 per cent." Of the 685 females, 665 were treated; and "of these, 107, or 16·09 per cent., recovered; 365, or 54·89 per cent., were much better; 120, or 18·04 per cent., better; and 73, or 10·98 per cent., no better." Dr. Falconer adds that "other remedies, especially those of an anti-rheumatic kind, were, as a general rule, never employed." It must of course be taken into consideration that these were hospital cases; that almost all were very chronic cases, which had been already treated in a variety of ways; and that no selection was made, but that "all for whom there appeared to be a probability of relief" were admitted. "Considered in this light," Dr. Falconer says, "the mineral waters are a remedy of undoubted value. It may be safely said of them that they recover many, relieve more, and comfort all." The long stay of the patients in hospital (the average duration of residence in the hospital was fifty-seven days for the males and sixty-nine for the females) had probably not a little to do with the "relief" and the "comfort" given; and we should have been glad to hear something of Dr. Falconer's experience of the value of the mineral water treatment in private cases. But this he did not give to the Association.

THE ADDRESS IN MEDICINE.

The honourable position of Orator in Medicine, at any time a difficult one before such an assembly as the British Medical Association, must have been rendered unusually trying to the immediate successor, whoever he might be, of Dr. William Roberts of Manchester, whose famous oration of last year is still fresh in the memory of the audience. It is, therefore, the greatest praise that Dr. Goodridge could desire or receive, to be considered as having discharged his difficult duty in a manner not unworthy of the dignity of his position, or of the performances of his predecessors.

Amid the numerous topics of discussion open to the Orator in Medicine, the selection of some one particular question of pathological interest has not perhaps been so common as a general review of the recent progress in the department generally. For physicians busily engaged in practice, as the Orator in Medicine is always likely to be, the first course must in most cases prove the more difficult one, though perhaps the more interesting, especially if it is to be attended by the announcement or demonstration of recent personal researches like those detailed at the Manchester meeting of last year. The subject of this year's Address is again the discussion of a special question in pathology, but Dr. Goodridge took care to premise at the outset that he had no fresh experimental results of his own to submit to his auditory. He adopted the more modest course of reviewing the recent researches and conclusions of physiologists and pathologists on a subject to which he has devoted some attention, and on which he has previously addressed the local branch of the Association. His theme was an attempt to determine, by the aid of the latest experimental results, the essential nature and mechanism of pyrexia or fever in general, apart from the etiology of specific fevers or special febrile processes; and the merit of the address lies in the fact that Dr. Goodridge succeeded in bringing together and discussing in closer connexion, and with greater detail than they could have been known to many of his audience, the more important physiological and pathological conclusions of a recent date bearing on the interesting question at issue. None of his facts, or indeed of his inferences, are new, or pretended to be so, in the sense of a first announcement, but their full interest and connexion have not hitherto been laid before the British general practitioner in so clear and popular a form, shorn of much of the technicalities of experimental detail.

He began by referring to the recent losses that scientific medicine has to deplore since the last meeting of the Association, particularly in the department of fever pathology, by the death first of Wunderlich, the father of clinical thermometry, and soon after by that of Claude Bernard, whose researches and conclusions on this particular subject, especially in regard to the part played by the nervous system in the production of the phenomena of animal heat in general and of fever heat in particular, must, to use the apt expression of Dr. Goodridge, form "the very key-stone of the arch" of any modern theory of fever in which the nervous system has any place at all. But it is just in regard to this point, as the Orator remarks, that absolutely certain and precise information is wanted. Has the nervous system any share at all in the production of the phenomena of pyrexia, and if so, to what extent and in what particular ways is its influence exerted? What, in short, are the proximate causes and actual processes of the condition of pyrexia in general, as distinguished on the one hand from its ultimate cause in the irritating presence of pyrogenic agents and organisms, and on the other hand from its necessary results and effects in the animal economy? These are the great questions requiring scientifically conclusive answers, to the consideration of which Dr. Goodridge, on Wednesday last, directed the attention of his hearers.

It is to be feared that such answers as Dr. Goodridge was able to give to these questions cannot in every particular be held to be, as yet, firmly established conclusions requiring no further experimental proof, correction, and confirmation; but they represent very clearly the positions occupied at present by the advanced guard of pioneers and explorers in this very interesting and instructive field of inquiry. All this may appear speculative and unimportant to the practical needs of the general practitioner, but it is surely of the highest importance, both in regard to the prophylaxis and to the treatment of specific disease, to understand, if possible, the mechanism of fever in general, and the manner in which the ultimate specific pyrogenic agents set the mechanism of the proximate causes in operation. But the most direct answer to any unappreciative objection as to the degree of practical value possessed by such investigations will be found in the Address itself, where distinct reference is made to some of the results of the experimental study of fever with antipyretics—a comparatively recent line of inquiry, which promises much precise therapeutic information directly available by the practical physician. We may note, also, as another instance of the ever progressive character of scientific advance, that as we are beginning to fancy we have explored some of the secret workings of our economy in reference to the mechanism and control of heat-production in general, a vast field of inquiry opens out before our scientific vision in regard to the precise explanation of the connexion of the different specific pyrogenic agents with the proximate causes of pyrexia, varying, as that connexion does, in manner, degree, and duration, with the different agents, but apparently of a uniform character, *cæteris paribus*, in the case of each individual specific irritant. To the complete understanding of this series of phenomena another quite different and independent line of research must converge, viz., that respecting the nature and essential properties of the different organisms of specific fevers; and it will not be until this point of convergence has been reached that our intimate knowledge of fever, both in its general and specific aspects, can be said to have cleared the thickets and barriers of the ignorance and uncertainty that still surround this difficult subject.

It is not our intention to give here a detailed summary of Dr. Goodridge's Oration. The Address itself our readers will find in another column. Suffice it to say, that after a recital of the more recent but well-known results as to the share of the muscles in the production of the body-heat, and as to the mechanism of heat-regulation, he enters on the proper subject of his discourse—the explanation of the phenomena and mechanism of pyrexia; the experiments and conclusions of Professor Samuel of Königsberg, and of Buss of Basle, occupying a large share of his attention. The views of Burdon-Sanderson, based chiefly upon the experiments of Murri of Florence, which would make fever independent of alterations of the nervous system, but from first to last a disorder of the protoplasm of the living tissues, he agrees with Handfield Jones in considering as untenable, more especially as the experimental results on which they are based have not, up to the present time, been repeated in the laboratory, or received any other confirmatory evidence. But our readers will doubtless study the Address for themselves. As a lucid and detailed exposition of the present aspects of the causation of pyrexia, it will well repay their attentive perusal.

THE WEEK.

TOPICS OF THE DAY.

The occasion of the annual conference of the Association of Municipal and Sanitary Engineers and Surveyors, recently held at Liverpool, was chosen by Dr. J. Taylor, the Medical Officer of Health for that borough, to read a paper detailing the various efforts which have been made to introduce an improved state of things into the sanitary condition of the town. He showed that much had already been done to improve the lower-class habitations in Liverpool, so as to render them more healthy, but he regretted to say much yet remained to be done before the condition of the town would meet the requirements of the rudimentary principles of

health. In the course of his address Dr. Taylor called attention to the cellar-dwellings of Liverpool, which the Corporation were now taking steps to close, and which, though legal under the Acts of 1842 and 1846, are illegal by the Improvement Act of 1871, and the Public Health Act of 1875. It is proposed, with the consent of the owners, to fill up these cellars with clean soil or cinders, and flag over the areas. Even then a large number would still be left for human habitations, and the evil would never be successfully dealt with until an amended Public Health Bill should make the occupation of such dwelling illegal. Dr. Taylor gave a description of these cellar-dwellings forty years ago, when their number was upwards of 8000, accommodating an estimated population of from 35,000 to 40,000. They were from ten feet to twelve feet square, generally flagged, but frequently having only the bare earth for a floor, and sometimes less than six feet high. There was often no window, so that light and air could only obtain access by the door, the top of which was often not higher than the level of the street; and notwithstanding the exertions of the Corporation, added to a lavish expenditure of money, many of the evils thus described still continued.

At the last meeting of the City Commission of Sewers, Dr. Sedgwick Saunders, the Medical Officer of Health, in the course of his report, stated that a pig slaughter-house in Hosier-lane had been found in a dreadfully neglected state, and had been thoroughly disinfected. The place had been a standing nuisance for many years past, and loud and repeated complaints and remonstrances had been made to him during the whole time he had held office. The whole of the arrangements evinced a total disregard for common decency and cleanliness, and he recommended that criminal proceedings should be forthwith taken against the occupier. Various seizures of putrid pork had been made in cellars at the Poultry Market, and in each case he recommended legal action being instituted. Nearly fifteen tons weight of meat, poultry, etc., had been seized as unfit for food, and under his orders had been destroyed.

The complaints against the Southwark and Vauxhall Water Company have culminated in a deputation to Mr. Sclater-Booth on the subject of the inadequate supply of water rendered to the inhabitants of Bermondsey, a population of about 100,000 persons. The deputation presented a memorial, which stated that many houses were known to have been without water four, five, ten, and even fifteen days at a time: the turncock went through the performance of turning on the tap, but there was no water in the pipes; and they prayed Mr. Sclater-Booth to compel the Company to provide a constant supply. Mr. Sclater-Booth pointed out that if they required a constant supply of water their first proceeding should be to apply to the Company, as prescribed by the Act, and in the event of their refusing he had power to direct an inquiry, with a view of making it compulsory on the Company to give it. He thought that bad supplies were often due to defective fittings, but he would bring their present complaint to the Company's notice, and communicate to them any reply he might receive. If they desired, he would, on receiving the necessary complaints, order a formal inquiry, as prescribed in the Act of 1859.

Several cases of hydrophobia have recently occurred in Paris, and in consequence a feeling of alarm has been created amongst the community. Stringent orders have accordingly been issued for all dogs in the streets to be fitted with muzzles; and instructions have been sent to the prefects throughout France to see that no dog is allowed in the streets without a collar bearing the name and address of the proprietor.

An alarming outbreak of typhoid fever is reported as having occurred at Bristol, and the Medical Officer of Health has traced the disease to the use of milk contaminated with typhoid germs. The supply of milk to retailers from this dairy-farm has been stopped, and under the sanitary precautions adopted it is hoped that the disease will promptly be checked. Meanwhile between twenty and thirty families are affected, and it is feared that several of the cases will prove fatal. The Surbiton Improvement Commissioners also held a meeting last Saturday, when the Medical Officer of Health reported a severe outbreak of diphtheria. He stated that he had inquired into thirty-four cases, twenty-three of which were in the district, and eleven immediately adjoining: thirty of them received their milk-supply from the same dairyman; and, in his opinion, the milk was the source of the disease. The Commissioners at once instructed their officers to ascertain how the milk became contaminated.

Last week, at a graduation ceremonial held at Edinburgh in connexion with the Edinburgh University, the degree of LL.D. was conferred on the following gentlemen:—Dr. Risdon Bennett, President of the Royal College of Physicians, London; Sir Joseph Fayrer, K.C.S.I.; John Richard Green, Author of the "History of the English People"; Professor Lister, King's College, London; and William Macdonald, Rector-elect of Dunedin High School, Otago.

A meeting was held last week at the Mansion House in support of an appeal for an industrial home for the reformation of women who are habitual drunkards. The Committee have succeeded, through the liberality of one of its members, in obtaining a house with outbuildings, and four acres of land at Bedford, in every way suitable for a sanatorium. Though there is reason to believe that the sanatorium will, when brought into working order, prove nearly, if not quite, self-supporting, yet it is obvious that large expenses must be incurred in adapting, fitting, and finishing the home, and in maintaining the institution while in its infancy. The scheme is under distinguished ecclesiastical as well as lay patronage. Dr. Cameron, M.P., who presided, referred to the fact that in October last a meeting was held in that place in support of a similar appeal; the lower classes, he urged, especially felt the effect of drunkenness in reducing them to poverty and misery. If the present experiment succeeded, means would be provided by which many habitual drunkards might stand a chance of being reclaimed; and, as women were found to be much more susceptible to moral force than men, he rejoiced to think that the most hopeful field had been selected to be operated on. Several resolutions were then proposed and carried in support of the scheme, and after the usual votes of thanks the proceedings terminated.

The Oldbury Local Board, at a recent meeting, decided, in consequence of a representation from the Medical Officer of Health as to the prevalence of scarlet fever in the district, to close all the public schools for a period of six weeks.

As a sequel to the recent Royal visit to the London Hospital, the Prince and Princess of Wales have kindly forwarded a donation of one hundred guineas to the Maintenance Fund now being raised. The letter enclosing this gift, after alluding to the real pleasure which the visit had afforded to the Prince and Princess, expresses "the earnest wishes of their Royal Highnesses that this long-established and important Hospital may receive that support from the public it so well deserves and so urgently needs to enable it to do all the good it is capable of doing if liberally supported."

The first public park in the borough of Wigan was opened on Monday last by Mr. N. Eckersley, High Sheriff of Lancashire, in the presence of some thousands of the inhabitants, who had assembled to witness the ceremony. The greater portion of the land comprising the park was presented to

the town by Mr. Eckersley, who purchased it for the purpose from the rector and patron, and the grounds have been laid out at the expense of the Corporation. The park is centrally situated and is nearly thirty acres in extent.

We regret to have to record the death of the distinguished alienist physician Achille Foville, which has just taken place at Toulouse, in the seventy-ninth year of his age. We hope next week to give some account of his life and work.

THE BRITISH MEDICAL ASSOCIATION.

The forty-sixth annual meeting of the British Medical Association, held this year in Bath, was opened on Tuesday, the 6th inst., with, as is usual now, a special religious service. This was held in the Abbey, a building well deserving of a visit on its own account, and the sermon was preached by the Bishop of Bath and Wells. The meeting of the Association has been thus far a very quiet one—one of the quietest held for some years—and the list of papers supplied for the meetings of the sections is unusually short. There is no Address in chief on either Physiology or Obstetric Medicine this year; but the Sectional Addresses on those subjects, from Dr. J. G. McKendrick and Dr. McClintock, the Presidents of the Sections, partly make up for this, and we hope to be able to publish them next week. The length of the President's Address prevents our giving any other address save that on Medicine. We must also postpone our account of the general proceedings during the meeting, and content ourselves with saying that the report of the Council, a very lengthy and important document, has been adopted; that the new by-law making women ineligible for the membership of the Association was carried on the 8th, amid considerable disturbance; that Dr. Carpenter, of Croydon, has been elected Chairman of the Committee of Council, in place of Dr. Falconer; and that the annual meeting next year is to be held at Cork, under the Presidency of Dr. O'Connor, the Professor of Practice of Medicine in Queen's College, Cork.

LADY DOCTORS IN INDIA.

On the occasion of the recent distribution of prizes to the students of the Madras Medical College, the Principal of the College, Surgeon-Major M. C. Furnell, M.D., in the course of his address, remarked "that that day marked an epoch in the history of the College, since, for the first time since its foundation, its teachers have the satisfaction of having trained four ladies for the practice of the medical profession. Having completed a regular course of study and fulfilled all the conditions required of students of the Second Department, they pass out of College to-day with certificates entitling them to practise the various branches of the profession. It is simply their due that I should state publicly that during their collegiate career they have been remarkable for their assiduity, regularity of attendance both at lectures and hospitals, for the keen interest they have taken in their studies, and for their strongly marked desire to attain proficiency in every branch of the work they have so nobly undertaken, and brought to a successful termination—virtues which have had their reward not only in the high places they have taken both in the pass- and class-lists, but also in the noteworthy fact that their proficiency has been seldom surpassed by the *alumni* of this College." During the past three years Mrs. Scharlieb had won prizes in medicine, surgery, chemistry, ophthalmology, and hygiene, and Miss White in anatomy, medicine, and chemistry. At the final examination the four ladies, out of a possible maximum of 890, secured the following marks:—Miss White 738, Mrs. Scharlieb 728, Miss Beale 670, and Miss Mitchell 580. The President then wished them every success in their professional work, "especially in that large and unexplored field of labour, the women of India."

THE SERVICES.

The following are lists of candidates for commissions as Surgeons in her Majesty's British, Indian, and Naval Medical Services, who were successful at both the London and Netley examinations on August 5:—

British Medical Service.

	Marks.		Marks.
1. A. J. Landon(a)	4514	10. O. E. P. Lloyd	3331
2. J. Stevenson	4450	11. J. G. MacNeece	3017
3. W. L. Lane	3750	12. M. D. O'Connell	3010
4. W. P. Feltham	3598	13. H. J. Noad	3005
5. J. L. Ritchie	3595	14. A. S. W. Young	2965
6. W. Leah	3546	15. A. Harding	2957
7. P. J. Dempsey	3512	16. J. J. Falvey	2945
8. K. S. Wallis	3445	17. J. F. Dowman	2930
9. J. W. H. Flanagan.	3402	18. H. R. O. Cross	2887
19. C. Seymour	2877 marks.		

Indian Medical Service.

	Marks.		Marks.
1. J. J. Mullen(b)	5811	14. G. M. Nixon	4053
2. E. Cretin(c)	5408	15. D. P. Warliker	3971
3. A. Duncan(d)	5003	16. T. E. Worgan	3877
4. T. H. Pope	4776	17. J. J. Moran	3782
5. G. F. Nicholson	4610	18. F. C. Smith	3767
6. A. Hemsted	4576	19. C. Monks	3753
7. G. A. Cones	4545	20. P. J. Damania	3718
8. S. F. Bigger	4345	21. G. H. Bull	3700
9. D. A. Gomes	4319	22. W. A. Quayle	3695
10. R. Pemberton	4315	23. J. H. Earle	3525
11. G. S. Robertson	4315	24. F. F. MacCartie	3485
12. J. S. Biale	4273	25. C. U. Carruthers	3480
13. J. E. Walsh	4144	26. H. Armstrong	3225

Naval Medical Service.

	Marks.		Marks.
1. A. W. May	4592	6. F. M. Geoghegan	3726
2. A. J. J. Johnston	4380	7. F. A. Trevan	3617
3. A. L. Roe	4275	8. J. A. Vasey	3232
4. J. F. O'Donnell	3945	9. J. O'B. Williams	3210
5. E. R. H. Pollard	3898	10. S. Keays	2761
11. H. G. Daniel	2701 marks.		

A SANITARY AUTHORITY ON STRIKE.

Last December a borough rate of threepence in the pound was made by the Corporation of Dublin, for the purpose, among other things, of paying off certain liabilities incurred by the Public Health Committee of that body. This borough rate has lately been declared illegal, and ordered to be quashed, by the Irish Court of Queen's Bench. The Public Health Committee were naturally vexed at this, and at their meeting on Friday week, the 2nd inst., passed the following extraordinary resolution, which we give *ipsissimis verbis*:—"It appearing that the borough fund is absolutely bankrupt, resolved that a sub-committee, consisting of Dr. Long, Alderman M'Dermott, Councillor Dawson, Councillor Ralph, Councillor Mulligan, and the Chairman, do be appointed to consider how the expenditure can be best reduced forthwith. In the meantime, notice of removal and discontinuance of salary to be given to every member of the sanitary staff in formal manner, the secretary including himself. Hospital cabs to be discontinued. The Local Government Board to be notified, in the hope that they may be able to make provisions, which the Committee cannot, to obviate the inconvenience thus caused for this purpose. The ordinary hospital cab not to be discontinued for one week." In the interest of Dublin itself, we can only hope that the Local Government Board will complete the work of "dis-

(a) Gained the prize in Military Surgery.
(b) Proceeded to India, having passed through a Netley course before, and gained the Herbert Prize of his session in 1877.
(c) Gained the Herbert Prize and the Martin Memorial Medal.
(d) Gained the Parkes Memorial Bronze Medal.

establishment," thus inaugurated by the Public Health Committee, by appointing one or two Sanitary Commissioners to supersede a Sanitary Authority which goes on strike.

THE SLAUGHTER OF THE MEDICAL BILL.

It has at length been admitted by her Majesty's Government that it would be useless to attempt to pass the Medical Act Amendment Bill this session, and the order for the second reading has been discharged. The admission might just as well have been made three weeks ago as on Monday last, but no one can wonder at the reluctance of the Lord President of the Council to drop the Bill He has been thoroughly in earnest in his endeavour to produce a measure that would satisfy the profession and the public. He has seen deputations innumerable, and has taken counsel with many—too many—advisers. He has been unsparing of time and trouble, and his measure has, by himself, or with his consent, been amended and reamended many times. In some most important points it has indeed been recast some three or four times. But all this thought and labour has been in vain, and the Bill has been withdrawn. It can hardly be supposed that his Grace will care much to meddle with such a troublesome and ungrateful subject again; but of the probability of medical legislation next session, and on some other points connected with the failure of the attempt at medical legislation this year, we shall take some early opportunity of speaking.

THE CLINICAL EXAMINATION AT THE COLLEGE OF SURGEONS.

The clinical cases submitted to the candidates on this occasion were very interesting, and were selected from the following Hospitals:—St. Bartholomew's, St. Thomas's, St. George's, Guy's, University College, and Westminster. They included cases of psoas abscess, exostosis of malar bone, carpal bursa, diseased lower jaw, hydrocele, double orchitis, abscess over the hip, ununited fracture of clavicle, disease of the radius, lupus nasi, specific ulcer of the cheek, injury to the elbow-joint, strumous disease of the foot, varicocele after operation, large psoas abscess, syphilitic ulcer of the tongue, large tumour on the thigh, excision of wrist, encysted hydrocele, a curious case of knock-knee, and other good cases of practical interest.

The Contagious Diseases (Animals) Act passed the third reading in the House of Commons on Wednesday, the 7th inst.

Bryony and Drosera in Pertussis.—In a communication to the Société de Thérapeutique (published in the *Journal de Thérapeutique*, May 25), Dr. Louvet-Lamare stated that he had derived great advantage from treating the catarrhal stage of pertussis by the tincture of bryony, and the paroxysmal stage by the tincture of drosera. Of the former he gives one gramme per diem to a child seven years old, and although it may not abridge this first stage of the disease it diminishes the tracheo-bronchitis very sensibly, and therefore the violence of the cough. When the bronchial tubes are overloaded with mucosities he also administers an emetic. As soon as the paroxysmal character becomes well established he gives the tincture of drosera (one gramme daily for a child seven years old), and as long as there are any râles heard in the chest he associates the bryony with it. It soon lessens the violence of the paroxysms, but may have to be continued two or three weeks before convalescence is established. When the drosera is only given after the paroxysms have been established for two or three weeks, it may cure the disease in a few days. The drosera very much expedites the improvement produced by change of air. The drug is very harmless, and its daily dose may be increased from one to five grammes without doing mischief. M. Louvet-Lamare insists upon the desirableness of accustoming the relatives of children suffering from pertussis to use the thermometer, and thus detect the onset of inflammatory complications.

FROM ABROAD.

Tartar Emetic in Pneumonia.

In a case of pneumonia recently treated at La Charité by Prof. Hardy, he resorted to the practice of administering large doses of tartar emetic, once so common in Italy and France. The patient was nineteen years of age, and exhibited well-marked signs of pneumonia of a very serious character. Speaking, in his lecture on the case (*Gaz. des Hop.*, June 29 and 31), on the prognosis and treatment, Prof. Hardy observed that there were some reasons for regarding it as a very serious one. The face of the man (hitherto in good health) was very pallid, and his constitutional powers were much shattered, while facial herpes, which in pneumonia is always of very bad augury, manifested itself. Fever was also very intense, for while in pneumonia the pulse ordinarily oscillates between 100 and 110, here it reached 120. The respirations oscillated between 40 and 50, and there was considerable dyspnœa. The lower three-fourths of the lung were gravely affected, and the crepitant râles at the upper portions indicated that the disease continued to progress.

What treatment was most likely to save the patient? Bouillaud's repeated bleedings can only be resorted to during the first four or five days, and here the sixth had been reached, while the lad was young and very weak, and the pallor of his face, which resembled that seen in the third stage of phthisis, was sufficient to contra-indicate these. Blisters would be required, but would not suffice; and alcohol, although a very useful means, does not cure pneumonia, but only furnishes the patient with strength enough to await the end of his disease, enabling him to last longer than it, and to become cured of it. It is not a means by the aid of which we can act directly against the condition of the lung. While passing these various means in review, it occurred to Prof. Hardy to have recourse to the old practice of giving large doses of tartar emetic. But he did not adopt it in the old centro-stimulant sense of the Italian school. In his opinion the antimony does not excite any special action on an inflammatory disease, but induces merely vomiting and purging; and so far from seeking to obtain "the tolerance" of the remedy formerly sought for, even by combining it with opium, it is his object to produce the evacuant effect in the most marked manner. To this end he orders from twenty-five to thirty centigrammes in a mucilaginous mixture, of which a tablespoonful is taken every hour or two hours, following each dose by a tepid tisane or sugar-and-water, in order to produce efficient vomiting and purging. But when vomiting has been produced three times, and purging four times, he leaves off the medicine for fear of producing too much depression. In the present case but two tablespoonfuls of the mixture had to be given before sufficient vomiting and purging were produced. And on the evening of the day on which it was given the temperature sank considerably, and by twenty-four hours after the antimony was commenced it had sunk from 40° C. to 37·7°, the pulse falling to 70. The breathing was easy and the physical signs were far more favourable. A mixture consisting of twenty-five grammes of brandy was then prescribed in order to keep up his strength, and the next day the thermometer indicated 36·7°, and the pulse was only 66; and by forty-four hours after the antimony had been taken the lung had returned almost to its normal condition.

The case is very interesting in a clinical and therapeutical point of view; for when we leave pneumonia to itself, merely keeping up the strength of the patient by brandy and wine, an abatement of the fever takes place, but the amelioration is only temporary, and it returns. That was seen recently in the hospital in a case of pneumonia at its fourth day, with a temperature of 39·8°, and in which, by means of cupping and the administration of alcohol, the temperature was reduced on the sixth day to 37·5°. Next day, however, the thermometer had risen again to rather higher than 38°. This was very different from the rapid defervescence which took place in the present case. In that case also, although the patient might be considered as cured, having neither cough nor oppression of breathing, still, five or six days after the disappearance of

fever, the persistence of the physical signs attested the presence of hepatisation of the lung. So it is, in fact, in the subjects of pneumonia, who are treated in this manner—that is, when the disease is left to itself, or when attempts are confined to husbanding the strength, the general phenomena are found to cease, and the local ones are amended, but the physical signs persist. In the case which is the subject of the lecture, on the contrary, it is the anatomical condition of the lung itself which has been modified by the treatment—so that in forty-eight hours after the tartar emetic was given all physical signs had disappeared. "The fact proves in a very positive manner the real efficacy of energetic treatment, whether by bleeding or by tartar emetic, administered as I have described. You may be persuaded that, if this latter treatment had not been had recourse to, the disease would have continued; and if, by the fact even of its evolution, the fever had declined, we should still have continued to observe in the lung the physical signs which characterise pulmonary hepatisation."

GENERAL CORRESPONDENCE.

THE WEST LONDON HOSPITAL FOR PARALYSIS AND EPILEPSY.

LETTER FROM DR. H. TIBBITS.

[To the Editor of the Medical Times and Gazette.]

SIR,—Without attempting in any degree to deprecate legitimate criticism, it is impossible, without danger of misconception, to remain silent under the unfair strictures upon this Hospital which are contained in your leader of to-day; and I have therefore to request your insertion of this reply, which I will make as short as possible. You commence by saying that you "feel bound to approve of the Hospital, if possible," but that "it is not possible." And you follow this up by an admission that if "it had been established for the indoor treatment of paralysed infants only" [which, by the way, is one of its chief objects] "it might have been welcomed." But as, in addition to this admitted good, it also possesses an out-patient department for adults, you proceed forthwith, and anything but logically, to condemn it. If, sir, you desired, as you said, to "approve it," and felt doubtful upon reading the Report—which, I beg to say, was not a "published report," but one printed for private circulation, and sent to you by myself, with a courteous note of invitation to visit and inspect the Hospital,—I cannot but think it would have been not only more generous, but *more just*, for you to have personally visited the Hospital, or to have sent a reporter to do so, before pulling it to pieces; and such a procedure would have saved you from more than one misconception. I do not propose to discuss your opinion, which must be taken *quantum valeat*, as to whether the Hospital is really needed, as to the treatment of epilepsy, and the prognosis of infantile paralysis and your other comments; but your attempt to discredit the Hospital with general practitioners, very many of whom we are gratified to reckon among our supporters, by garbled extracts from our regulations as to payment by patients, and your insinuation that our Medical Staff and Committee of Management are countenancing a system which "will probably perpetuate under a very flimsy cloud the worst abuses of hospital charity," is a much more serious matter, and demands the most emphatic contradiction. No patients are admitted to treatment without due inquiry as to their circumstances, and it is the earnest endeavour of the Hospital authorities to prevent any abuse of the charity. There is nothing in the report to support your statements that "tradesmen and well-to-do artisans are likely to obtain from the charity the medical aid for which they can well afford to pay a general practitioner," and if you had visited the Hospital you would have ascertained this; but your extracts, read without the context and with your annotations, are so misleading that I must ask your readers interested in the matter to send their addresses to the Hospital, when the same report that I sent to you shall be forwarded to them. You have had the questionable taste to refer to one of my colleagues as an "unknown quantity." There are, sir, as you are aware, two types of the physician. The first, who may be called the "irrepressible" or "pushing" type, is seen and heard *usque ad nauseam*, speaks at every medical society, contributes to every medical journal, and finds a congenial sphere rather upon the staff of a medical paper than at the bedside. The second travels much, and strives to add to his power of healing the sick by a comprehensive study of medicine as well abroad as at home. Should you need "a wise physician skilled your wounds to heal" I cannot doubt to which man you would appeal. My colleague belongs to the second type.

I am, &c., HERBERT TIBBITS,
Senior Physician and Honorary Medical
August 3. Superintendent to the Hospital.

[If Dr. Tibbits wished the Report spoken of to be considered as private, he should have said so. But there is not any where in or on the Report any statement that it was printed for private circulation only. It gives the hours of attendance of patients, a list of the "objects" of the Hospital, and an appeal by the Committee to the public. And it is not even mentioned in Dr. Tibbits' note of invitation to visit the Hospital. As Dr. Tibbits is pleased to accuse us of making "garbled extracts" from the regulations as to payments by patients, we will give in full what is said in the Report on this subject. No. 6 of the "objects" of the charity runs thus:—"To avoid the pauperising tendency of entirely gratuitous relief by permitting THOSE PATIENTS WHO ARE ABLE to contribute a small weekly or monthly sum towards the expenses of their treatment"; and the comment on, or explanation of, this, given in the Report, is as follows:—"6. The ordinary hospital draws no distinction between absolute pauperism and comparative poverty, and in administering relief to a class such as small tradesmen and artisans, who, while unable to pay for prolonged medical treatment in their own homes, can yet afford to contribute *something*, it 'perpetuates indiscriminate almsgiving in its worst form and on a gigantic scale.' In the new Hospital, patients who are able are therefore expected to contribute a small sum, *the applicants themselves assessing the amount of their contribution*. This payment varies with the ascertained ability of the patient to make a contribution, and very rarely exceeds a shilling a week. On the other hand, the *really indigent* are immediately and gratuitously treated, and two free letters are granted annually to EVERY MINISTER OF RELIGION, IRRESPECTIVE OF CREED, in the Metropolitan District, and to other Ministers who, residing in the Provinces, may apply for them. These letters are accompanied by a request that they shall be distributed only to such persons as are known by the donor to be deserving of free hospital relief." We again repeat our opinion—it is not an "insinuation"—that this system, instead of preventing, "will much more probably perpetuate, under a very flimsy cloak" ("cloud" was a misprint) "the worst abuses of hospital charity."

With regard to the Junior Physician we stated a fact—viz., that "we know nothing whatever about him'; we had never heard of him, and we could not find his name anywhere in the "Medical Directory." Dr. Tibbits supplies the reason for this, we suppose, by the statement that he "travels much," etc. We are glad to hear it. For the rest, we leave Dr. Tibbits' letter to the judgment of our readers. It does not alter our opinion of "The West London Hospital for Paralysis and Epilepsy."—ED. *Med. Times and Gaz.*]

ACADÉMIE DE MÉDECINE.—At the last meeting of this body, Prof. Parrot was elected into the section of Pathological Anatomy by the votes of fifty-one of the seventy-two academicians who were present.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The new buildings recently constructed, and consisting of a library, museum, etc., are to be opened this day (Saturday, August 10), by his Grace the Lord Lieutenant. The Duchess of Marlborough is also expected to be present.

MEDICAL NEWS.

UNIVERSITY OF GLASGOW.—The following is a list of degrees conferred by the University on the 30th ult. :—

Doctors of Medicine.—John T. Graham, M.B., Scotland; Thomas Beath Henderson, M.B., Scotland; John M'Donald, M.B., Scotland; William Macfarlane, M.B., Scotland; John Reid, M.B., Scotland; James Wilson, M.B., Scotland.

Bachelors of Medicine and Masters in Surgery.—James A. Adams, Scotland; John Aitken, Scotland; William E. Bailey, England; James T. Ballantyne, Scotland; James B. Barr, Scotland; Archibald Grant Black, Australia; George Black, Scotland; William Broadfoot, Scotland; James Bryce, Scotland; David Cairns, Scotland; Angus Campbell, Scotland; James Drummond, Scotland; James Dunlop, Scotland; Ebenezer Evans, Wales; Robert H. Forman, Scotland; Alexander Fraser, Scotland; James Gordon, Scotland; Alexander Gray, England; Griffith Griffiths, Wales; John Harrison, Scotland; James Herron, Scotland; Alexander Hogg, Scotland; Thomas Hunt, Scotland; James Hutchison, Scotland; Thomas Kirkwood, Scotland; Thomas Lennard Laen, Wales; John S. Main, Scotland; Robert W. Middleton, Scotland; Thomas H. Morris, Wales; James Morton, Scotland; William C. C. Macdonald, Scotland; Charles M'Kerrow, Scotland; Duncan M'Millan, Scotland; Malcolm M'Murrich, M.A., Scotland; Robert Macpherson, Scotland; David Newman, Scotland; William Alexander Orr, Scotland; William Partington, Scotland; Robert H. Paterson, Scotland; Alfred Peterkin, M.A., Scotland; Henry Ray, Australia; Donald Ross, Scotland; George Russell, Scotland; James R. Semple, Scotland; Henry C. Sloggett, England; Alexander Turnbull Smith, Scotland; William G. C. Smith, Scotland; Alexander Stewart, Scotland; James Stevenson, Scotland; George T. Swail, Scotland; James Thomson, Scotland; Laurence A. Waddell, Scotland; James J. Weir, Scotland.

Bachelors of Medicine.—Gilbert Campbell, Scotland; William W. Fullarton, Scotland; Alexander Jamieson, Scotland.

The following gentlemen were named as entitled to honours, to high commendation, and to commendation, on account of distinguished merit at the various examinations for the degrees of M.B. and C.M. :—

Honours.—Alexander Fraser, James Morton, William Partington, and Laurence A. Waddell.

High Commendation.—Angus Campbell, John Harrison, and George Russell.

Commendation.—James A. Adams, Alexander Hogg, Alexander Turnbull Smith, Alexander Stewart, George T. Swail, and James Thompson.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 1st inst., viz. :—

Blott, Herbert, L.S.A., Bassingbourne, Cambs., student of St. Bartholomew's Hospital.
Charnley, William, M.D. Cantab., Lancaster, of the University College Hospital.
Cocksedge, Charles E., L.S.A., Clapton-park, of the London Hospital.
Hepburn, Alfred, L.S.A., Upper Bedford-place, W.C., of St. Bartholomew's Hospital.
Hutton, Castle, L.S.A., Newport, Isle of Wight, of St. Thomas's Hospital.
Marsh, Joseph H., L.S.A., Greenhithe, Kent, of St. Thomas's Hospital.
Michael, Henry J., L.S.A., Colchester, of St. Thomas's Hospital.
Protheroe, John, Adelaide-road, Surbiton, of St. Bartholomew's Hospital.
Schön, Charles Henry, Chatham, of the University College Hospital.
Wood, Charles, L.S.A., Trinity-square, S.E., of Guy's Hospital.
Young, Arthur, L.S.A., Hawkhurst, Kent, of King's College Hospital.

The preliminary examinations in Arts, etc., for the diplomas of fellowship and membership of the College will take place early in September, at Burlington House, under the direction of the College of Preceptors, and already a very large number of candidates have entered their names for both qualifications.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At the examination held on July 22 and following days, the undermentioned gentlemen having passed their final examinations for the letters testimonial of the College, and having made and subscribed the declaration, were admitted Licentiates, viz. :—

Frederick A. Barrington, Robert J. Brown, John J. Burges, Julio P. Bourke, Edward Butt, George M. Dartnell, Yelverton Dawson, Constine R. Egan, James Fennell, William Fennelly, William E. Fitzgerald, Wm. H. Fitzmaurice, Henry S. Gabbett, Hugh Harris, Allsopp Harty, Wm. F. Heffernan, Harry L. Hoops, Edward C. Hynes, James B. Jacobs, Edmond Henry Lindsay, Murray Mackenzie, Joseph E. M'Cracken, John E. J. Moffitt, John P. Moran, Edward Morrisey, Jas. O'Dwyer, Wm. H. Ogden, Francis C. Reeves, Richard H. Symes, Geo. E. Twiss, and Vincent S. White.

The Fellowship of the College was granted after the usual examination on August 3, to—

Kendal M. Franks, M.D., Univ. Dub., L.R.C.S. Ire. ; and Francis Pierce, M.B. Univ. Dub., L.R.C.S. Ire.

APOTHECARIES' HALL, LONDON.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, August 1 :—

Davies, David Samuel, Bristol.
Graves, Thomas William, Leominster.
Hammond, Thomas, Whitehaven.
Ward, George Smith, Stevenage, Herts.

The following gentlemen also on the same day passed their Primary Professional Examination : —

Higson, James, St. Bartholomew's Hospital.
Jackman, William Thomas, St. Bartholomew's Hospital.
Whiting, John, St. Bartholomew's Hospital.
Marlow, Frank William, St. Thomas's Hospital.

NAVAL, MILITARY, &c., APPOINTMENTS.

WHITEHALL.—The Queen has been pleased to appoint John Sibbald, M.D., to be one of the Paid Commissioners in Lunacy for Scotland, in the room of Sir James Coxe, deceased.

BIRTHS.

EWART.—On August 3, at Limefield House, Cheetham-hill, Manchester, the wife of John Henry Ewart, L.R.C.P. Lond., of a daughter.

HARLEY.—On August 3, at Saffron Walden, Essex, the wife of Edward Harley, L.R.C.P. Lond., of a son, stillborn.

SHELDON.—On August 3, at 123, Cornwall-road, Notting-hill, W., the wife of Thomas Sheldon, M.D., of a daughter.

SIMS.—On August 1, the wife of F. Manley Sims, F.R.C.S., of a son.

MARRIAGES.

AIR—COWDY.—On August 6, at Arthur-street Chapel, S.E., A. Cummings Air, L.R.C.P. Lond., of Kennington, to Mary Susanna Cowdy, of Lorrimore-square, S.E.

BATE—WHITEHILL.—On July 27, at St. Mary's Episcopal Church, Glasgow, Thomas Ellwood Lindesay Bate, Surgeon Bengal Medical Staff, to Mary Arthur, youngest daughter of the late Matthew Whitehill, Esq.

FINCH—STOW.—On August 1, at St. Barnabas, Pimlico, Robert Hales Finch, B.A. Lond., eldest son of Robert Finch, M.D., of Blackheath, to Edith, second daughter of the late William Crawford Stow, Esq., of Camberwell.

FINLAY—THOMPSON.—On August 1, at St. John's-wood Presbyterian Church, David W. Finlay, B.A., M.D., to Catherine Mary, eldest daughter of the late Stephen Thompson, Esq., of 30, Hamilton-terrace, N.W.

GOULD—HEELAS.—On August 1, at Wokingham, Alfred Pearce Gould, M.S., F.R.C.S., of 93, Gower-street, London, to Katherine, second daughter of John Heelas, of Woodlands, Wokingham.

SEALE—HANCOCK.—On August 6, at Clerkenwell, J. Lockyer Seale, M.D., of Ashton House, Steeple Ashton, Wilts, to Marianne, widow of the late Mr. G. Hancock.

WHITELEY—FORREST.—On August 1, at Nether-Poppleton, near York, John Whiteley, M.R.C.S.E., of Wakefield, to Katherine, second daughter of the late Thomas Forrest, of York.

WOLLASTON—HANNAM.—On August 1, at Dorchester, Thomas G. Wollaston, M.D., of Liverpool, to Eleonora Maria, fourth daughter of Henry J. Hannam, Esq., of Burcote House, Oxon.

DEATHS.

DOWNING, ELLEN GRAHAM, youngest daughter of Edward Downing, M.D., at Wellington House, Amersham-road, New Cross, on August 5, aged 15.

PARRATT, JAMES EDWARD THOMAS, M.R.C.S., Inspector-General of Army Hospitals, at 4, Victoria-road, Old Charlton, Kent, on July 31, aged 17.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BRAINTREE UNION RURAL SANITARY AUTHORITY.—Medical Officer of Health. Candidates must possess the necessary qualifications. Salary £25 per annum. Applications, with testimonials, to Fred. Smoothy, Clerk, on or before August 10.

KENT AND CANTERBURY HOSPITAL.—Assistant House-Surgeon and Dispenser (one office). Candidates, who must produce proof of being registered under the Medical Act as legally qualified to practise, and of being accustomed to dispense medicines; must be unmarried and not more than fifty years of age. Qualifications and testimonials to the Secretary, on or before August 23.

MONTGOMERYSHIRE INFIRMARY, NEWTOWN.—Dispenser, who will be required to act as Assistant-Secretary. Salary £30 per annum, or £60 without board and lodging. Applications, with testimonials, to the House Committee, Infirmary, Newtown, before August 22.

STAFFORDSHIRE GENERAL INFIRMARY, STAFFORD.—House-Surgeon and Secretary. Candidates must bring unexceptionable testimonials of moral conduct, and possess a diploma or degree in surgery from the College of Surgeons in London, Edinburgh, or Dublin, or from one of the Universities; and a diploma, degree, or licence in medicine from a university or duly recognised licensing body of Great Britain or Ireland. Applications and testimonials to the Secretary, on or before August 22.

ST. PANCRAS, MIDDLESEX.—District Medical Officer. Candidates must possess the qualifications prescribed by the Local Government Board. Applications—which must be made on forms to be obtained at the Guardians' Offices,—accompanied by diplomas and other evidences of qualifications, to Daniel Fildew, Guardians' Offices, Vestry Hall, Pancras-road, N.W., not later than 10 a.m., August 26.

WEST HERTS INFIRMARY.—House-Surgeon and Dispenser. Candidates must be Members of the Royal College of Surgeons of London, Edinburgh, or Dublin, and Licentiates of the Royal College of Physicians of London, or Licentiates of the Apothecaries' Company, duly registered, and unmarried. Applications, with testimonials and certificate of registration, to the Secretary, on or before September 5.

Royal Albert Edward Infirmary and Dispensary, Wigan.—Junior House-Surgeon. Applications, with recent testimonials, to the Hon. Secretary, William Heaton, on or before August 20.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population in computed according to the census of 1871.

RESIGNATIONS.

Ticehurst Union.—Mr. D. J. Sherrard has resigned the Hurstgreen District; salary £40 per annum.

West Derby Union.—Mr. J. Johnson has resigned the Kirkdale District; area 740; population 32,550; salary £150 per annum.

APPOINTMENTS.

Carmarthen Union.—Valentine Rees, M.R.C.S., L.R.C.P., to the Workhouse and the Carmarthen District.

Staines Union.—Albert Curtis, M.R.C.S. Eng., L.S.A., to the Staines District and the Workhouse.

Swiss Medical Students.—During the summer session of 1878 there have been 70 at the Medical Faculty of Basel, 137 at that of Bern, 59 at Geneva, and 184 at Zurich.—*Deutsche Med. Woch.*, July 27.

The Apothecaries' Hall of Ireland.—At the annual meeting of the General Council of the Apothecaries' Hall of Ireland, convened in pursuance of the Statute of Incorporation, on August 1, the following were elected as office-bearers for the ensuing year:—*Court of Directors and Examiners:* Governor—Henry Palmer Nolan, M.D.; Deputy-Governor—John Evans, Esq. *Directors and Examiners:* Edward Howard Bolland, M.D., M.R.C.S.E.; Thomas Collins, M.R.C.S.E.; Arthur Harvey, Esq.; Charles Holmes, M.D.; Charles H. Leet, M.D., M.C.; Charles F. Moore, M.D., F.R.C.S.I.; R. Montgomery, M.R.C.S.E.; J. O'Flaherty, L.R.C.S.I.; Edward J. O'Neill, M.D., L.R.C.S.I.; Sir George B. Owens, M.D.; John Ryan, M.D., M.R.C.S.E.; James Shaw, L.R.C.S.I.; George Wyse, M.D. *Examiners in Arts:* John W. Moore, M.D., Ex-Sch. T.C.D.; Edward W. Collins, M.D. Univ. Dub. *Representative on the General Medical Council:* Dr. Charles Henry Leet.

Treatment of Chorea.—Prof. Germain Sée (*Union Med.*, August 1) has but a very low opinion of the efficacy of drugs in the treatment of chorea. In the slight forms, he observes that treatment is well-nigh useless, and we ought to content ourselves with prescribing sulphurous baths. When the disease has lasted a considerable time, and its subjects have become anæmic, the administration of the various tonics, and especially iron, is indicated. Finally, in very bad cases we may have recourse to inhalations of chloroform for the purpose of curbing the movements when these are very violent. Arsenical preparations also possess a certain amount of efficacy; but it is right to say, in a general manner, that chorea cures itself, and that the various modes of treatment which are resorted to exert little effect on its duration.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Appeal in favour of Mr. Sydney Hunt.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—In reply to the "appeal" you so kindly inserted on the 6th ult. in favour of Mr. Sydney Hunt, the son of the late editor of the *Daily News*, and originator, and sometime editor, of the *Medical Times*, who is now almost totally blind, will you allow me to trespass on your valuable space by stating that amongst many subscriptions promised the following have been received by the treasurer, and I shall only be too glad to receive and acknowledge others.

I am, &c.,
T. M. Stone.

List of Subscriptions.

	£	s.	d.
Beale, Dr. L., F.R.S.	1	1	0
Carter, Felix, Esq.	5	5	0
Clapton, Dr. E.	1	1	0
Clark, F. le G. Esq., F.R.S.	2	2	0
Flower, Professor, F.R.S.	1	1	0
Greenhill, C., Esq.	5	0	0
Hall, E., Esq.	2	0	0
Hall, Miss	2	0	0
A Friend per ditto	0	5	0
London Docks Company	10	0	0
Niesigh, George, Esq.	5	0	0
Paget, Sir James, Bart., F.R.S.	2	2	0
Stewardson, Henry, Esq.	2	2	0
Stewardson, William, Esq.	2	2	0
Stone, T. M., Esq.	2	2	0
Walker, J., Esq.	2	2	0
Wells, Professor T. Spencer	2	2	0

An Old Assistant will know by this time that the Medical Bill has been withdrawn.

A Provincial Teacher.—A change always takes place at the Examining Board in July. It is now constituted as follows:—Messrs. Savory and Forster at table A; Messrs. Curling and Holmes at B; Mr. Erichsen and Dr. Humphry at C; Messrs. Birkett and Marshall at D; and when an extra table is required (that of E), the Senior Vice-President and Chairman of the Court, Mr. Holden, is associated with Mr. Le Gros Clark.

Services Appreciated.—The Hackney Board of Guardians, with the approval of the Local Government Board, have increased Dr. White's salary from £200 to £250 per annum.

The Whitley Convalescent Home.—The demands for admission having been beyond the capacity of the "Home," additions, recently completed, have been made to the building, by which accommodation for fifty patients is provided, and now about 120 patients can be admitted. The "Home" was originally planned to accommodate about seventy patients, but provision was made in the administrative department for the effective working of the institution should an enlargement become necessary. The "Home" was erected as a memorial to a German Duke of Northumberland, and nine years ago it was formally opened by the Duchess Eleanor of Northumberland for the reception of patients. The new buildings consist principally in extensions to the men's side of the institution.

The London Hospital.—The Mercers' Company have just presented a donation of £525 to this institution; and the Saddlers' Company £26 5s., being the second grant of that amount during the present year.

Aqua.—Godalming will soon possess a good supply of water. Some local gentlemen of influence have formed themselves into a public company, and obtained a Board of Trade order. Borings in the greensand have assured an unlimited supply of water, and of a quality highly reported upon by Dr. Frankland and other eminent chemists. The works have already been commenced. Since the removal thither of the Charterhouse School, Godalming has been gaining in local importance.

Prehistoric Chronology.—The French engineers are busily excavating a new dry dock at Penhouët, close to St. Nazaire, at the mouth of the Loire, and Mons. Kervilher, the chief engineer, soon recognised in the soil excavated very precise and regular marks left by annual deposits of the Loire. Many interesting objects have been brought to light, such as human skulls of the dolichocephalous form, coins and medals, implements of bronze and of flint, coarse pottery, and bones of the ox and deer, bearing marks of human workmanship. M. Kervilher estimates that the number of years which have passed between our epoch and the first deposits of the Loire do not exceed 9000; and he believes that they can be counted with as much ease and certainty as the yearly rings of new wood can be counted on cutting across a tree. The annual deposits of the Loire are of a mean thickness of three millimetres. Each layer is composed of a sheet of vegetable detritus, one of clay, and one of sand. The vegetable detritus was brought down in each autumn, the clay in the summer, and the sand during the winter. When a section of this alluvial soil is exposed to the air, the edges of the sandy layers crumble, leaving a number of grooves, which render it easy to count the number of layers. It follows from what has been said that thirty centimetres of deposit correspond to a century. Now, it so happens that a coin of Tetricus, of about the year 274 of our era, was found in one of the layers of sand. A dagger of bronze was found in a layer which was two metres forty centimetres below the preceding; so that the date of the latter is supposed to be eight centuries before the time of Tetricus; in other words, to belong to the fifth century before the Christian era. This discovery seems to prove that in the fifth century before the Christian era that part of Gaul which is watered by the Loire had not passed out of the "Bronze Period." At the same time the "Period of Polished Stone" had not entirely passed away, for on the same level as the bronze weapons were found an axe in polished flint with a handle of stag's horn, stags' horns sharpened, and enormous stones pierced or grooved so that they might serve as anchors. M. Kervilher's researches have hitherto been confined to the depth of eight metres, corresponding to twenty-four centuries. It is proposed to continue them to thirty metres, the entire depth of the alluvial soil on the granite, corresponding, it is believed, to a duration of 9000 years. We take these particulars from an interesting paper by M. Simonin in the *Revue des Deux Mondes* of last November.

"*Quarantine*": *a Medical View of it.*—"Quarantine Regulations" was the subject of a medical discussion lately at Galveston, a city of Texas. Dr. Large said the quarantine system was first introduced into what are now the United States, at New York, in 1751 when the accepted time for the detention of a vessel was forty days. The length of time was lessened as science progressed and improvements were effected in methods of disinfection. He maintained that clothing and articles of a like description conveyed the poison of yellow fever more readily than human beings, and he inclined to the belief that climatic influence had little to do with the inception or propagation of the disease. He recommended that vessels should begin the process of fumigation at the infected port, and fumigate several times on the voyage.

Caritas.—Hospital Sunday was originated at Birmingham many years ago. It was established in the metropolis in 1873. There are of one kind or another in London upwards of 150 medical institutions.

Vital Statistics.—According to the Registrar-General's return for Ireland for the past year, the death-rate was equal to a ratio of one in every 57·1, or 17·5 per 1000 of the population. Although 38,503 persons emigrated during the year, an increase of 7486 seems to have taken place in the population, beyond the addition by emigration. But in reference to the latter, it appears that England and Scotland were the destination of 20,000 of the emigrants.

The Thames Purification.—A recommendation from the Works Committee of the Metropolitan Board of Works was last week passed in reference to the system of preventing the pollution of rivers successfully carried out at Burnley, Lancashire, by the Scott's Sewage Company, that the Board is not itself disposed to undertake the experiment of adopting the system for the Thames, but that if the Company is prepared to guarantee the purification of the London sewage at a moderate cost, the Board will be ready to consider such proposal.

COMMUNICATIONS have been received from—

Dr. A. E. Aust Lawrence, Bristol; Mr. C. J. Cullingworth, Manchester; Dr. J. C. Ogilvie Will, Aberdeen; Dr. Thomas Barlow, London; Mr. John Chatto, London; Dr. E. Sparks, Dorchester; Mr. T. M. Stone, London; Dr. Robert Druitt, London; Dr. J. M. Bruce, London; The Secretary of the Glasgow University; The Secretary of the Army Medical School, Netley; Dr. Herbert Tibbits, London; Mr. J. H. Pepper, London; Dr. P. T. Hayes, Dublin; "An Old Assistant"; Surgeon Hunt, Bombay Presidency; Dr. McCraith, Smyrna; Dr. John Day, Geelong; The Registrar of Apothecaries' Hall, London; The Medical Officer of Health, Torquay; The Registrar-General of Edinburgh; Dr. J. W. Moore, Dublin; Mr. M. Becher, London.

BOOKS AND PAMPHLETS RECEIVED—

Francis H. Champneys, M.B., M.R.C.P., Statistical Tables of the Patients under Treatment in the Wards of St. Bartholomew's Hospital during 1877—John Charles Bucknill, M.D. Lond., Habitual Drunkenness and Insane Drunkards—Cyclopædia of the Practice of Medicine, edited by Dr. H. von Ziemssen, vol. xiii., Diseases of the Spinal Cord and Medulla Oblongata—Health Lectures, delivered in Manchester, 1875-78—Richard Metcalfe, Testimonies to the Efficacy of Hydropathy in the Cure of Disease.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médicale—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Nature—Medical Examiner—Centralblatt für die Medicinischen Wissenschaften—Cincinnati Clinic—Boston Medical and Surgical Journal—Gazette Hebdomadaire—Obstetrical Journal—Edinburgh Medical Journal—Bombay Gazette—Analyst—Sanitarian (five numbers)—Athenæum Daily News—Gazeta Medica da Bahia—Monthly Homœopathic Review—Giornale Internazionale delle Scienze Mediche—Nordiskt Medicinskt Arkiv—Night and Day—North Carolina Medical Journal—Burlington House—American Journal of the Medical Sciences—Practitioner.

APPOINTMENTS FOR THE WEEK.

August 10. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

12. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

13. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

14. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 1½ p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

15. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

16. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 3, 1878.

BIRTHS.

Births of Boys, 1370; Girls, 1267; Total, 2637.
Average of 10 corresponding years 1868-77, 2213·2.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	966	911	1877
Average of the ten years 1868-77	804·8	744·3	1549·1
Average corrected to increased population ...	...	...	1658
Deaths of people aged 80 and upwards ...	...	...	34

Note.—The births and deaths registered last week may be compared with the average numbers in the corresponding weeks of the ten years 1868-77 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	..	5	3	...	12	...	4	...	79
North ...	751729	3	3	9	1	24	...	3	...	103
Central ...	334369	...	...	2	..	4	...	2	...	29
East	639111	...	3	7	1	11	...	1	1	88
South	967692	15	8	5	4	38	...	7	3	171
Total	3254260	18	19	26	6	89	...	17	4	470

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·891 in.
Mean temperature	60·5°
Highest point of thermometer	74·8°
Lowest point of thermometer	47·6°
Mean dew-point temperature	53·2°
General direction of wind	N.E.
Whole amount of rain in the week	0·25 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, August 3, 1878, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1878.*	Persons to an Acre. (1878.)	Births Registered during the week ending Aug. 3.	Deaths Registered during the week ending Aug. 3.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3577304	47·5	2637	1877	74·8	47·6	60·5	15·84	0·25	0·63
Brighton	103923	44·1	53	47	72·1	51·0	60·6	15·90	0·27	0·69
Portsmouth ...	129461	28·8	73	55	71·0	53·0	62·1	16·73	0·00	0·00
Norwich	84620	11·3	51	35	73·2	54·0	59·8	15·45	0·43	1·09
Plymouth	73599	52·8	50	32	73·5	54·0	61·2	16·22	0·02	0·05
Bristol	206419	46·4	131	69	78·0	43·1	59·6	15·34	0·21	0·53
Wolverhampton ...	74240	21·9	52	35	74·1	46·6	57·6	14·24	1·22	3·11
Birmingham ...	383117	45·6	345	199	...	...	...	...	...	...
Leicester	121473	38·0	106	85	...	...	...	...	...	...
Nottingham ...	165267	16·6	129	85	74·1	42·2	58·6	14·78	0·59	1·50
Liverpool	532681	102·2	391	376	73·9	52·3	60·3	15·73	0·17	0·43
Manchester ...	360514	84·0	283	212	...	...	...	...	...	...
Salford	170251	32·9	143	107	76·5	45·0	59·6	15·34	0·50	1·27
Oldham	107366	23·0	81	42	...	...	...	...	...	...
Bradford	185088	25·6	121	88	73·4	51·1	59·0	15·00	0·14	0·36
Leeds	304948	14·1	254	229	74·0	48·0	59·3	15·17	0·50	1·27
Sheffield	289537	14·7	211	178	72·0	44·5	57·9	14·39	0·87	2·21
Hull	143139	39·4	137	103	73·0	47·0	57·6	14·23	0·79	2·01
Sunderland ...	112459	40·6	86	76	73·0	51·0	59·7	15·39	0·08	0·20
Newcastle-on-Tyne	144570	26·9	104	95	...	...	...	...	...	...
Edinburgh	222371	53·1	130	64	73·8	44·3	58·8	14·89	0·12	0·30
Glasgow	566940	94·0	408	278	77·0	49·0	56·4	13·55	0·00	0·00
Dublin	314666	31·3	173	161	74·3	41·6	59·2	15·11	0·03	0·08
Total of 23 Towns in United Kingdom	8373953	38·0	6149	4528	78·0	41·6	59·3	15·17	0·34	0·86

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·89 in. The highest reading was 30·20 in. on Wednesday evening, and the lowest 29·53 in. on Saturday afternoon.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1878 by the addition of seven years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. Nottingham, Salford, and Oldham, however, form exceptions to this rule, as the estimates for these three towns have been revised with the aid of local information as to the rate of increase of inhabited houses. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

NATURAL MINERAL WATERS OF

VICHY

Property of the French Government.

CELESTINS — The water of this spring is very agreeable, sparkling, and slightly acidulated. Remedy for complaints of the Kidneys, Gravel, Gout, Diabetes, Rheumatism, &c.

HAUTERIVE — This spring contains a greater quantity of carbonic acid, and is especially recommended as a table water.

GRANDE-GRILLE — For complaints of the Liver and Biliary Organs, Indigestion, &c.

HOPITAL — For Stomach Complaints, &c.

VICHY WATERS are pleasant to the taste, and may be drunk pure or mixed with Wine or Spirits.

CAUTION — See that the name of the particular Water required is on the capsule.

VICHY DIGESTIVE LOZENGES.

MANUFACTURED FROM THE SALTS EXTRACTED FROM THE MINERAL WATERS OF VICHY.

The Vichy Lozenges should be taken by those persons whose digestion is difficult, painful, or laborious.

In cases of slow or difficult digestion a few of the Lozenges should be taken before each repast.

The Lozenges are flavoured with peppermint, lemon, vanilla, rose, orange flowers, or anisette.

Vichy Salts for Baths—In Packets sufficient for one Bath.

Vichy Barley Sugar—An excellent digestive bonbon.

LONDON DEPOTS.—INGRAM and ROYLE, 119, QUEEN VICTORIA STREET; Gallais and Co., 27, Margaret-street, Regent-street; Burgoyne, Burbidges, and Co., 16, Coleman-street; Hooper and Co., 7, Pall-mall East; Best and Sons, 22, Henrietta-street, Cavendish-square; Evans, Lescher, and Evans, 60, Bartholomew-close; Schweppe and Co., 51, Berners-street, W. DUBLIN.—A. and R. Thwaites and Co.
SOLE AGENTS FOR SCOTLAND.—Alexander Brown and Co., 10, Princess-square, Buchanan-street, Glasgow.

NEPENTHE.

Prepared exclusively from Opium. (Dose the same as Tinctura Opii.) **Price 8s. per lb.**

From the "Lancet," Dec. 18, 1869.

Nepenthe, or Anodyne Tincture (prepared by Messrs. Ferris and Co., Bristol).

This preparation really consists, as stated, solely of opium, resembling somewhat the liquid extract of the British Pharmacopœia. It is claimed for it that it does not produce headache, stupor, giddiness, depression of spirits, diminution of nervous energy, prostration of strength, nor constipation; it is doubtless less stimulating than those preparations of opium made with the solid and crude drug; and a further commendation of Nepenthe is its uniformity of strength. The Nepenthe intended for subcutaneous injection is of double the ordinary strength; and that it is really so we have verified by analysis.

May be procured direct from the Sole Manufacturers,

FERRIS, BOORNE, TOWNSEND, and BOUCHER,
Wholesale Druggists, Bristol,

And through all leading Wholesale and Retail Chemists in Great Britain and the Colonise.

NOTICE.—Nowithstanding the enormous and increasing advance in Opium, the price of Nepenthe remains the same, and it is now the cheapest as well as the best preparation of this important drug.

N.B. Two Pounds NEPENTHE, or One Pound NEPENTHE and Three Pounds Ferris and Co.'s SYRUP of CHLORAL, will be sent, Carriage Paid, to any Railway-station on receipt of P.O.O. for 16s.

HEALTHY SKIN AND GOOD COMPLEXION.

PEARS'S TRANSPARENT SOAP

IS THE BEST FOR THE

TOILET, NURSERY, AND SHAVING.

Recommended in the *Journal of Cutaneous Medicine*, by the Editor,

MR. ERASMUS WILSON, F.R.S.

USED BY THE ROYAL FAMILY.
AND SOLD BY CHEMISTS AND PERFUMERS EVERYWHERE.

FORTY-SIXTH MEETING
OF THE
BRITISH MEDICAL ASSOCIATION.

HELD IN BATH, AUGUST, 1878.

ADDRESS IN FORENSIC MEDICINE.

By DOUGLAS MACLAGAN, M.D., F.R.C.P.,
Professor of Forensic Medicine in the University of Edinburgh, etc.

FORENSIC MEDICINE FROM A SCOTCH POINT OF VIEW.

My first duty is to thank you for having done me the honour of asking me to address you on the subject of Forensic Medicine. I should have been unwilling to accept this compliment if I had fancied that was paid to me as an individual; but I recognise in it an expression of your good-will to the University in which I have the honour to be a professor, and in the name of my *Alma Mater* I thank you cordially and sincerely. I only wish that she herself, and that department of our profession of which I have to speak to you, had not deprived me of a good deal of the time which I required for the due discharge of their duties; but an unusual number of candidates for degrees necessitated the bestowal of much of my time on examinations, and a succession of important medico-legal investigations occupying the hours I could spare from other work, concurred in engrossing my attention for some weeks. I am constrained to put in this special defence in extenuation of my poverty of performance—not for my own protection, but lest the University of Edinburgh should suffer in character from the shortcomings of him who is her representative on the present occasion.

I do not profess to have been troubled with much doubt as to the line which I should follow in addressing you. I have not thought of recounting to you the history of Forensic Medicine during the last year or two, because I am not aware of any startling discovery or revolution in opinion which marks an era in its progress. I never thought of occupying the time of busy practitioners of medicine with details as to processes of medico-legal investigation in which the great majority of you would never think of engaging. It never occurred to me to occupy your attention with a narrative of actual cases in which I have been engaged, however curious may be the points which they present to us; for I feel that we are met here for better purposes than listening to histories—albeit I believe that, flavoured as they are with a slice of romance, they might at any rate be more captivating to your attention than anything I am about to say.

My idea is, that I can best fulfil the duty of addressing you on Forensic Medicine by ignoring individual instances, and taking a look at the subject generally, especially in relation to the matter of preliminary inquiry into cases of a suspicious character which involve medical considerations. It is quite true that this means looking rather at the legal than the medical aspect of the subject; but the numerous letters which appeared last year in the Association's *Journal*, and the fact of a conference, mainly composed of medical men, having been held on the subject of coroners' inquests in November last, justify me, I think, in following this line on the present occasion. It will, I suspect prove that much of what I say will appear to you, gentlemen of England, to be heretical; but I believe you will not absolutely object to hear the views of one who has had some medico-legal experience in a country where there is no such person as a coroner, and no such body as a grand jury, but where there does exist in full activity a public prosecutor, who is almost an unknown functionary south of the Tweed.

Before saying anything further on the special subject of preliminary, or rather primary, investigations in a case of suspicion, let me shortly inquire in what estimation this department of State medicine is held by the public and by the professions of medicine and law. As regards the appreciation of forensic medicine by the general public (I mean the laity outside the professions of law and medicine), I think, on the whole, it tends to exaggeration. Ignorant of the modern progress of science, they, on the *omne ignotum pro magnifico* principle, are rather astounded by the evidence given in the courts by experts. They of course know nothing of the progress which chemistry, physiology, and pathology have made in recent times, and they regard as something marvellous what we, as well-educated men, know to be only ordinary scientific knowledge—the delicate chemical results, the logically connected physiological phenomena, and the accurately noted pathological appearances, which are brought forth, say in a trial for murder by poison, by well-qualified experts. Be it so. It is an error on the safe side, if it could only reach the minds of those who have criminal proclivities. Unhappily, most of them are of the rude, utterly ignorant class. But we have had our scientific murderers—our Palmers, Pritchards, Chantrelles,—whose crimes have been satisfactorily brought home to them; and every conviction obtained under difficult circumstances is a fresh weapon in the hands of retributive justice, which she can wield as a terror to evil-doers. We must not in a quackish spirit exaggerate, but we need not in any spirit of mock humility decry the power of good medical evidence for the detection of crime, and we may with honest pride point to what it can do, and in numerous instances has done, in the way of vindicating the offended majesty of the laws of God and man.

I am not quite sure what answer I should give to the question, How does the profession of the law regard forensic medicine? I think that on the whole your practising lawyer looks upon it as a rather sharp weapon, but he has some dread of it as a double-edged one; or rather he often regards it as a kind of boomerang, which may make a deadly hit if skilfully thrown, but which may occasionally turn back in an unexpected way and smite the arm which projected it. Do not accuse me of Scotch pride if I say that I believe forensic medicine is more properly appreciated among Scotch than among English lawyers. I think I have grounds for this; it is, at all events, more studied by them. No man is called to the Scotch bar who has not attended a course of lectures on medical jurisprudence. I am not aware that any similar provision exists in your Inns of Court. This is not what should be. Forensic medicine is a weapon which every lawyer has occasion to employ, and, in order to his successfully scoring a hit, he ought to know its mechanism, the elevation he ought to give to it, and the allowance he ought to make for the wind of difficulty and uncertainty which more or less always blows across his range.

I have often seen in the records of both English and Scotch courts how the want of some knowledge of this nature has crippled the hands of a barrister. Nay, with all reverence be it said, how it has led to manifest nonsense being uttered from the Bench by the mouths of those from whom better things might have been expected; and I would rather wish that English as well as Scotch lawyers (if there be no recent regulation to the effect, of which I am unaware) were obliged to make forensic medicine part of their professional study. I should be doing violence to my own sense of justice if I did not take this opportunity of saying that the law students who attend my lectures are, as a class, distinguished by their earnestness and zeal in acquiring knowlege; and if I did not record the satisfaction which I have so often felt in our criminal courts in finding a young barrister employing, in cross-examination of myself, medico-legal knowledge which I had had the privilege of imparting to him.

What shall I say as to the appreciation of forensic medicine by our own profession? I fear, if I am to be candid, I must say it sometimes has rather the cold shoulder turned to it. I fear that many of our students think it a matter of little or no importance, and many teachers do nothing to disabuse them on this point. You will, of course, absolve me, who am a teacher of forensic medicine, from the preposterous idea of holding that it need be placed upon the same platform, in regard to importance, as medicine, surgery, and obstetrics. I have seen and heard too much of forensic work not to know how thoroughly an advocate may ruin his case by pleading it too high. I desire to avoid this. I do not ask that it should be a leading study; I only desire that it should not be neglected. I am, of course, aware of the argument that is often used, that forensic medicine is not a special science, but only that which is known to every man who is a well-informed and duly educated medical practitioner. I demur to this as a doctrine which ought to influence medical education; it is unsafe. Medical questions assume a very different aspect, and reflect very different

hues, when viewed in the glare of a court of justice, from what they do in the mild light of the hospital or the sick-room. The function of the teacher of forensic medicine is to accustom the student's eye to adapt itself to this peculiar optical medium; it is to teach him to regard medical matters, with which as a practitioner he may be familiar, in the peculiar light under which they may be viewed in a court of justice. It is quite true he cannot be a good witness unless he is a well-educated practitioner; but he may be a successful practitioner, and yet find himself a very poor witness at a trial. I have no sympathy with, and still less would I have confidence in, a man who, not having given due attention to forensic medicine as a study, can glibly talk of his being able, on the score of his success in practice, to step jauntily into the box and show bench, bar, and jury that he knows all about it, and can set them right. He is exactly the man who, riding on the bicycle of professional self-esteem, is apt to get an ugly fall—all the more disastrous that it occurs *coram publico*. Let me advise any young member of the profession who thinks he will make a good witness because he promises to be a good practitioner, to take warning from an old hand. I will cite no very recent, still less living, instances; but let such an one, if he have time and opportunity, look up the record (he will find it in Sir Fitzjames Stephen's "General View of the Criminal Law of England") of the well-known trial of Donnellan for poisoning Sir Theodosius Boughton, and let him see how poor an appearance, to use no stronger phrase, was made in the witness-box by him who bore the *clarum et venerabile nomen* of John Hunter.

I make these remarks, not to magnify mine office as a teacher of forensic medicine, but to warn entrants to our profession of a possible danger lying ahead of them. I am afraid that I must say that the want of due appreciation of forensic medicine is not confined to students, but that there are loose ideas afloat on the subject among those who regulate their studies. I cite, as an example of this, the amended scheme for the Examining Board for England, as accepted by the conference of the representatives of all the authorities of England, which bears the date of May 18, 1877, and the signature of so distinguished a man as Sir James Paget. I find there, under Regulation III., "That examiners be appointed to conduct examinations in the following subjects:—1. Anatomy; 2. Physiology; 3. Chemistry; 4. Materia Medica; 5. Medical Botany; 6. Pharmacy; 7. Medicine; 8. Surgery; 9. Midwifery; 10. Forensic Medicine," but with this note in italics: "Questions in Forensic Medicine are to be included among those asked by the examiners on Chemistry, Medicine, Surgery, Midwifery." About the necessity of there being specific examiners on most of these subjects there can be no dispute; but it strikes me as curious that, whilst it is proposed to have a specific examination on Medical Botany (whatever that may be, as distinct from the knowledge of the vegetable materia medica and scientific botany), Forensic Medicine is left to be distributed among the examiners in Chemistry, Medicine, Surgery, and Midwifery. I should have thought that two old proverbs, both of them musty but practical, might have suggested themselves to the framers of this clause. One is, that what is everybody's business is nobody's business; and that these various examiners, having their own subjects to attend to, are not likely to give much attention to forensic medicine. The other proverb relates to the danger of falling between two stools; but here we have no less than four of these articles of furniture on which forensic medicine is expected to poise itself, and I need hardly say that here there is a double chance of a tumble, with increased probabilities of permanent fundamental injury. Depend upon it, candidates for medical honours will not think much of a department of knowledge on which they are not to be asked questions except in a vaguely incidental manner by those who are engaged examining them on other and, as I proclaim them to be, more directly important subjects. Now, it is true that what I have quoted is not part of the regulations for candidates for a university degree, but is only part of the proposed scheme for examining those who are to obtain the minimum qualifications entitling them to enter the profession—in short, of those who may be expected to be the general practitioners of the land; and it may be said that it is sufficient for its purpose. I cannot assent to any such doctrine. It presents an educational phenomenon for which I have been somewhat puzzled to account; but I think I have found a solution thereof. It appears to me that the framers of this regulation, in considering the subject of forensic medicine, had suddenly found themselves in close proximity to the law; that, fired with a spirit of surgical enthusiasm, they had made an exploratory incision into the *corpus juris*, and from its "awful belly," to use an expression of Thomas Carlyle, had extracted that well-known nodule of the wisdom of the civil law, *De minimis non curat prætor*, and had translated this maxim thus: "The courts will not care much for the evidence of our minimists." And the courts would be right, if this be the way in which forensic medicine is to be set before the eyes of those who are working their way into the profession, provided the courts could dispense with the evidence of all but those holding the highest qualifications; but, unfortunately, in the majority of instances, it is upon the evidence of the general practitioner, not on that of the special expert, that the tribunals must depend for the primary information which is essential for their guidance; and, if the ordinary practitioner have not had due inducement to regard medical questions in a forensic light, he will be apt to miss important points of observation, or to make mistakes which may lead to an actual miscarriage of justice. Everyone who has, as an expert, been consulted in important medical-legal cases, must know how often he is in doubt what opinion to give, because the facts on which he has to found his conclusions have been stated in a loose and unintelligible style. I know it is said that only a limited number of persons engage in medico-legal practice, and that it is unnecessary to demand, by the test of examination, a special knowledge of it from everyone who enters the profession. I deny this altogether.

What is forensic medicine? I take the definition from Mr. Chitty, who says it is "the evidence and opinions necessary to be delivered in courts of justice, relative to criminal and other matters to be there determined." Is there any practising member of the profession who may not be any day called upon to narrate facts, and state opinions, in reference to a case with which he may one way or other have been connected? Is it not well for him to have had his attention directed to the aspect which any given case may present, when viewed in relation to the proceedings in a court? The fact is, that forensic medicine is the only branch of his profession which a man may be obliged to practise *nolens volens*. It is essential, if I am a candidate for a diploma, that I should be tested as to my knowledge of medicine, surgery, and midwifery, before I am let loose on a confiding public as a practitioner; but, once my diploma in my hand, I may now choose to abjure any one of these departments of medicine. You cannot compel me to amputate limbs, if I choose to restrict myself to medicine. You cannot make me take charge of a case of pneumonia or typhoid fever, if my tastes are in the way of surgery. You quite properly examine me in midwifery, but you cannot compel me to sit down at the bedside of a groaning woman and support her perineum. But if I have, as a physician, a surgeon, or obstetrician, become connected with a case presenting some element of suspicion, a magistrate, or coroner, or procurator-fiscal may summon me, under penalties, to give evidence in a court; and in these circumstances I am practising forensic medicine. Is it not better, therefore, that I should be encouraged to study it in the knowledge that I shall be specially examined on it—not induced to pay but little attention to it by being told that I may be incidentally tested by those who are examining me on the more important subjects which are to be the constant objects of my professional attention? Will it not, in such circumstances, occur to me, as a candidate, that the examiner in medicine is little likely to put aside scarlatina and small-pox, in order to have time to ask me the diagnosis between idiopathic tetanus and strychnia-poisoning; the surgical examiner not likely to turn aside from inquiring as to my knowledge of fractures, in order to see whether I know how the direction of a wound may be indicative of suicide, homicide, or accident; or the obstetric examiner to stop in his inquiry as to my acquaintance with placenta prævia and breech presentations, to see if I have any idea as to the medical evidence of rape, which in truth lies far away from the dark and mysterious regions which are his special province? I sincerely hope that the English authorities will so far re-amend this scheme for the Examining Board as to place forensic medicine in, at least, as good a position as medical botany; and, should a Joint Board be established in Scotland, I shall be somewhat

astonished if the department of knowledge on whose behalf I argue does not find itself in the position of an independent subject of examination, instead of being left to the attention, or it may be the neglect, of those examiners who have other and, as I acknowledge, more important matters in their hands.

It behoves me, however, to remember that my ostensible object in addressing you at this time is to look at the preliminary proceedings in the investigation of cases of suspicion, and to set before you briefly the impression made on my mind by the consideration of the methods followed in England and Scotland respectively. I need not say that the first and most characteristic difference between the practice of the two countries is the existence in Scotland of a public prosecutor, and the absence of this in England. This is not merely a difference in the method of setting the criminal law in motion, still less is it a mere distinction in name; it is a radical difference in following the great fundamental principle which, so far as I know (except in England), guides the criminal procedure of every European country, as it also does that of the United States of America—viz., that it is the duty of the State to undertake the prosecution of offences. The object of prosecuting crime is not to avenge or indemnify the party injured, but to maintain public order, or, as our indictments say, "to deter others from committing the like crimes in all time coming." And surely the maintenance of public order is emphatically the State's duty. The discussion of abstract principles, however, we may leave to philosophers, and look for a moment at the more practical question: Does the existence of a public prosecutor act beneficially, or not, as regards the investigation and the detection of crime? I dare say few of you have taken the trouble to wade through the evidence which was given by a Select Committee of the House of Commons on this subject, in 1855, and reported to the House in the following year. It certainly presented some strong statements in condemnation of the then existing practice of the English criminal courts. A few examples may be cited. Lord Brougham stated to the Committee, that "nothing could be more ineffectual than the provision which the law and practice under it now made for the prosecution of offences"; and he concurs in the recorded opinion of Lord Denman, that "the procedure for the purpose of preliminary inquiry is open to great objection." Lord Campbell stated that "the criminal law is often most shamefully perverted to serve private purposes, and often perverted to very guilty purposes." The then Attorney-General, now Lord Chief Justice Cockburn, stated that "cases are often brought to trial which, from being imperfectly got up, break down, and thus cause the acquittal of guilty parties. Many cases are likewise brought into court where, on account of the trivial nature of the offences imputed, or the deficiency of the proof adduced, prosecutions are undesirable." I could cite many other pieces of evidence of like import, but the authority of those I have quoted makes them sufficient for the present purpose. I dare say, to the public generally, and perhaps to many of our legislators, this Blue-book is an unknown or forgotten document, and that it is chiefly inspected by curious spiders, which spin their webs about it in the dark corners of public libraries.

The Committee's labours did not, as you know, lead to the legislative recognition of the principle that prosecution of crimes should be undertaken by the State. They were unanimous in thinking that "the state of things referred to in the foregoing evidence is greatly defective, and urgently requires amendment"; and they propounded a scheme, into the details of which I need not go, by which they said they were of opinion that an efficient system of public prosecution may be established; and they added: "We recommend it to the consideration of the House as a means for placing the administration of criminal justice on a footing more consistent than the present with the necessities of the existing state of society and the requirements of an enlightened jurisprudence." It would be wrong in anyone who is not a lawyer to say that the large labours of this Committee have produced no fruit directly or indirectly. In the Bill brought into the House of Commons this year by the Attorney-General, which embodies Sir Fitzjames Stephen's codification of the criminal law, there are improved provisions for dealing with some of the evils which attach themselves to the system of criminal prosecution by private parties, such as agreements not to prosecute and the compounding of offences; but there is no attempt to go to the root of the matter by the creation of a public prosecutor, although no further back than 1875 the Queen's Speech distinctly promised the introduction of a Bill into Parliament for this purpose. It appears, from what I can make out, that the chief objections to doing this are—1. That the attorneys of England are opposed to it, as militating against their interests. No doubt this is a serious practical difficulty, for I fancy that, as an "interest," as the phrase goes, the attorneys of England constitute a body of great influential power, exceeded, perhaps, by none, unless it be the publicans. It is not, of course, for me to offer any advice to attorneys, who are certainly quite capable of looking after themselves as well as their clients; but I see no reason why it should not be as good an object of ambition to an English attorney to be selected as local agent for the public interest in criminal matters as it is to a provincial legal practitioner in Scotland to be made a procurator-fiscal. Of course the rest must be disappointed, but they may usefully exercise their talents in conducting defences; and, though this may not be the most lucrative of occupations, I should doubt if it be greatly inferior in this respect to the work of conducting average prosecutions at the instance of private parties, even with the advantage of having security that at least some of the expenses will be repaid from the public funds.

The second objection which I have seen urged, which was prominently brought before the Select Committee by Lord Campbell, is that the existence of a public prosecutor might be an interference with the independence of the Bar, "because, if this patronage were vested in the Crown, no one could hold a brief in a criminal court, except by favour of the Attorney-General, or any person who had this patronage in his possession." This is also insisted on by Sir Fitzjames Stephen upon somewhat different objections which are not experienced in Scotland. Surely a young barrister may, with perfect conservation of his independence, aspire to being selected as Crown counsel from his showing, say, by an ably pleaded defence, that he is well versed in criminal law. I should not dare to insult the English Bar by supposing it would lose its independence under any system; and he would be a bold man who would step into the Parliament House, the Palais de Justice, or the Four Courts, and tell the Bars of Scotland, France, and Ireland that they have not had independence during the period (in the case of the two former extending to centuries) in which the office of public prosecutor has existed among them.

The other objection which has been urged against the establishment of a public prosecutor in England is the expense. Everyone must be ready to admit that what may be worked without undue outlay in a small country like Scotland may involve financial considerations in England which render it unadvisable. When, however, I consider that prosecutions by individuals "bound over" are, to a certain extent, paid for by the State; when I consider that, in a regularly organised system, economy can always be more or less rigidly enforced, I fancy this question of expense may possibly be found to be much more serious in the apprehension than in the reality.

But, even if this idea were utterly wrong, if the expense of criminal prosecutions were to be greater than the broadest estimates calculate, let us have speedy and effectual action for the repression of crime, whatever we pay for it. The fact is, that this grumbling as to expense is at the bottom of most of the difficulties we have in the matter. The prompt and secure administration of justice is an expensive article, and, if we will have it, it must be paid for. Let us, as a professedly Christian nation, economise in some of our other departments of expenditure, to do what is right in this. I wish that those laborious, noble, and right hon. gentlemen who superintend our military expenditure, for instance, could see their way to lessening the expense without impairing the efficiency of our armaments, and enable us to save something from the apparatus of war to expend upon the apparatus of justice. I am told that every shot fired from a thirty-eight-ton gun costs at least £12. I do not ask for twelve guineas for a post-mortem examination; but a shot saved now and then would, at the rate of two guineas each for two medical examiners, pay for three post-mortems, and, to my mind, the money would be well expended. Do not mistake me, and think that I am here indulging in a sneer at "bloated armaments." I annex most sternly the condition "without impairing their efficiency" to any economies

to be practised regarding our navy and army; but let us beware of being proud of the money we spend in making Britain, as she is, the foremost power in the world, whilst we are unwilling to spend money in making her an example to other nations of a prompt and sure administratrix of justice.

Of many of the evils mentioned as adhering to the system of prosecution by private parties it does not become me to speak, because they are purely legal evils; but there is one which was very broadly stated by Lord Chief Justice Cockburn, then Attorney-General, which more strictly concerns us. I beg to remind you of his lordship's words formerly quoted: "Cases are often brought to trial which, from being imperfectly got up, break down, and thus cause the acquittal of guilty parties." No one need be surprised at this. The attorney acting for a private party, with only a limited guarantee for the repayment of his costs, will, according to the prudential proverb, not put his hand further out than that he can draw it back with safety, and will not lead evidence that will be expensive, and which may entail a loss upon him. Medical evidence is exactly of the expensive kind, if fairly paid for (which it generally is not), and this outlay he will naturally shirk incurring, if he possibly can. The public prosecutor, who certainly ought always to be under strict and searching audit, is not under any such considerations, and will take pains to have good scientific evidence, although it may entail some expense on the nation. His official character, nay, his retention of his appointment, may be at stake if he do not get up his case thoroughly, and the auditing authorities at headquarters (at least such is our experience in Scotland) will be ready to pass his accounts when they see that he did what was needful to make good his case, and when they know that he, paid as he is with us by fixed salary, can have no object to serve in leading expensive evidence, excepting a desire to do his duty in vindicating the offended majesty of the law. Does this which I now complain of—the imperfect getting up of cases involving scientific evidence—exist now or not? You who, either from your personal observation or from local newspaper reports, are conversant with the details of criminal cases occurring in your neighbourhoods, can answer this question better than I can; but this I can say: that, as far as I am from the seats of English assizes, I every now and then see cases which prove to me that, in respect of calling medical evidence, criminal cases are most imperfectly conducted. I will not attempt to cite a number of instances; I allude only to one, and into the particulars of it I shall not go, because I have already inflicted on the members of the Association my ideas thereanent in the shape of two columns of the *Journal* regarding it. Some of you may remember it; it was a case where a man was accused at the Cornwall Assizes of attempting to administer—for what immoral purpose you can imagine—cantharides to a young girl. What was the medical testimony led in this case, which involved the physiological action of a notoriously noxious drug? It was that of a druggist, and his scientific evidence consisted in quoting, disjoined from its context, a passage from Taylor "On Poisons." The result was an acquittal, and a grievous miscarriage of justice; and all because the attorney who got up the case did not call any one average practitioner—for it required no learned expert to prove that a grain and a half of cantharides might "injure, grieve, or annoy" the person who swallowed it. In last week's *British Medical Journal* I see a case where an indictment for an attempt to procure abortion failed under a ruling of Lord Justice Thesiger, against which I take no exception—that, as the pregnant woman who took the drug was herself a *particeps criminis*, and her testimony being unsupported by other evidence, he could do nothing else than order an acquittal. It is entirely unintelligible to me that, under proper investigation, some idea should not have been got as to what was the drug administered (perhaps this is known; it is not stated in the *Journal*); and that a medical witness should not have been got to speak to what is known as to the said drug being one likely to be employed under the idea that it would procure abortion. As it was, there was forthcoming no such corroboration, which was all that was wanted, and thus the midwife—who is apparently one of those wretches who live by this abominable traffic in fœticide—escaped conviction It may be, for aught I know, there was no possibility of knowing what the drug was, and of getting its supposed action spoken to by a medical man; but, if this be true, the case ought never to have been brought to trial at all. A public prosecutor, in such a state of matters, if truly conscious of what is best for the ends of justice, would have entered a *nolle prosequi*, knowing that a form of trial without a shadow of good evidence to support the prosecution is only an encouragement, instead of a deterrent, to evil-doers. Gentlemen, let me urge upon you, as members of the profession most frequently called upon to give scientific evidence, to do what you can in your several spheres in urging upon our legislators to give to you in England what every other European country and America have the advantage of possessing—a functionary to carry out the principle that was announced by the Right Hon. Joseph Napier before the Committee in 1855: that "the executive government is properly, I would say primarily, charged with the security of society; that the security of life and property belongs peculiarly to the executive government; and that all prosecutions ought to be conducted by responsible officers."

The other great distinction between the initial proceedings for the detection of crime in England and Scotland consists in the existence in England of the Coroner's Court, which among us is utterly unknown. It is upon the coroner that have been concentrated most of the discussions among medical men as to criminal proceedings, and all of you who read the medical journals are painfully aware of how many editorial articles, letters with and without the writers' names, and conferences in social science congresses, have been showered upon the head of this functionary, I have read a good number of these, including the discussion at the Conference held under the auspices of this Association in November last, and I must honestly confess I have not been able to shake out of myself the feeling that, as it now exists, the coroner's court is an anachronism and an anomaly. It is an anachronism, because, though it may have been well suited for the time of the Plantagenets, in which it first took shape, it is unsuited to the requirements of the present day. As originally constituted, its main dependence was upon the fact that the jury was, not merely theoretically, but practically, composed of the neighbours of the dead man, whose personal knowledge of him was expected to supply some of that information regarding the probable cause of his death, which medico-legal science, then not in existence, can now supply with some degree of certainty. It is an anomaly, both as regards the mode of election of him who presides over it, the want of security for his possessing the kind of knowledge which is often required, and the limited and circumscribed area over which his jurisdiction extends. I shall not discuss at length the mode of election. The idea of appointing a man to an office essentially judicial by the votes of independent freeholders of the county, or any such kind of constituency, appears to me to be indefensible. I can easily understand that gentlemen who have received such appointments will not readily adopt this opinion, and give a slap on the face to those to whom they have owed their elevation; but I cannot conceive anyone patting the freeholders on the back and saying, "You are the people to elect a man to preside over a court of any kind." The election, like that of other judges, should rest with a responsible Minister of the Crown. The coronership as it now exists is an anomaly, because there is no security for the person appointed possessing the necessary qualifications for the office. Say what you like, it is essentially judicial. It has to deal with questions pertaining to one of the most difficult branches of the law—the law of evidence; and I am not persuaded by statements I have seen confidently made, that anyone—for instance, a medical man—may very easily and speedily acquire all the knowledge of the law of evidence which a coroner requires. I can as easily believe that a clever barrister may easily and speedily acquire an adequate knowledge of the laws and pathology of sudden and violent deaths. A medical man who may have to give evidence in a court of law will, if he be properly instructed, gather from his teacher of forensic medicine some hints as to the law of evidence which shall keep him from the mistake that has been committed, of putting into his reports, or attempting to bring out in his *parole* testimony, what might be held by the judge to be inadmissible as evidence. A lawyer—if, as I hold should be the case, he be properly educated—ought to learn enough of medical jurisprudence to prevent him from misunderstanding what is the object or meaning of a medical man's testimony; but neither of them should suppose that, thereby, he should take upon

himself the function of the other. The lawyer on the bench and the doctor in the witness-box—there you have, in my view, the right men in the right places.

You will see, from these remarks, that I am no supporter of the view that coroners should be selected from the medical profession. You will not, of course, suppose from this that I mean to hint that a medical man must necessarily make a bad coroner. There are many estimable and most efficient members of our profession who have held or do hold the office of coroner. To my mind, if they have been successful it has not been because of, but in spite of, their being medical men. Nor will you, I trust, accuse me of being disloyal to our noble profession; it is out of loyalty to her I make these remarks. In every instance of those inquiries which the coroner makes, there ought to be, at the earliest of such proceedings, a medical man in the case; but I do not want to see the medical man climbing into the coroner's seat, because I wish him to take his place on a higher platform. I wish him to be, not the coroner, but the coroner's instructor, his "guide, philosopher, and friend"; and this, to my mind, is the truest loyalty to our profession.

I say nothing as to the strange anomalies which adhere to the power and to the effect of the proceedings in the coroner's court, but content myself on this point with citing what has been said by Mr. Herschell, Q.C., M.P.:—

"But notwithstanding that proceedings are pending in the coroner's court, or even that an incriminating verdict had been found there, the accused person is none the less taken before the magistrate that the facts may be inquired into, and the case dealt with in the ordinary way. There an entirely independent investigation takes place, resulting either in a remand for trial or the discharge of the accused person. If he be discharged as being entirely free from blame—which not unfrequently happens where a coroner's jury have found a verdict of manslaughter—he must all the same retain the prisoner until the next assizes, or put him under bail to appear then and take his trial, although it is, practically speaking, a certainty that in such circumstances he never will be tried. If the magistrate commit and the grand jury find a true bill, it is on this indictment he is tried, and if acquitted, no evidence is offered on the coroner's inquisition. If, though the magistrate commit, the grand jury should find no bill, it has become the regular routine for the prosecution to offer no evidence on the coroner's inquisition, and in effect to accept the counter-determination of the grand jury as overruling it. It will thus be seen that though in theory, and no doubt in ancient times in practice, a trial of the accused resulted, as a matter of course, from the verdict of the coroner's jury, this is no longer the case. It follows now upon quite independent proceedings, pursuing entirely the same course as criminal proceedings do in cases not coming within the cognisance of the coroner's court. Surely you have here both anomaly and practical mischief. You have two separate tribunals for the purpose of determining whether a man is to be put on his trial, fulfilling their functions at the same time, but quite independently of one another, and arriving, it may be, at conflicting conclusions."

But I have said also that, as it at present stands, the coroner's court is an anomaly as regards the limited and circumscribed area over which his jurisdiction extends. I mean, of course, medico-legal, not territorial, area. Why should there be a tribunal whose function is limited to the investigation of cases where there has been a death, and which can take no cognisance of cases where carelessness as culpable, or violence as brutal, may be brought to light, as in any which involves the question of manslaughter or murder? No doubt cases involving a death are of the gravest character, because they may end in a capital punishment; and on the theory that the coroner's is a higher and more scientific court, the referring of the gravest cases to it is intelligible. But in this view of it, why is the magistrate to deal with the same case, nay, in certain instances to override the decision of the coroner and his jury? One or other of these proceedings is superfluous, as Mr. Herschell and others have told us. If it be the theory that cases involving a death are more difficult of accurate solution than those that do not, and that they therefore require the intervention of the coroner in addition to the magistrate, I venture to dispute the proposition. We need the same kind of evidence and the same correctness of observation to determine whether the injuries on a living person were due to an accident on his part, or an assault by another, as we require to determine whether or not a certain wound caused death. We need the same logical analysis of symptoms, and, it may be, the same delicate chemical research, to determine that there has been an unsuccessful attempt to poison, that we require to put in force where the result has been fatal. Nay, in many instances where the injured party is alive, you have an element of difficulty added which does not exist where the injury refers to death. A dead body tells no tales, except those which it whispers to the quick ear of the scientific expert, by him to be reported in the proper quarter. A living body has a living tongue in its mouth, and that tongue may be a lying one, ready either from vindictive feeling to have recourse to the *suggestio falsi*, or from fear of consequences to adopt the *suppressio veri*; and it requires certainly no less, rather it calls for more, acuteness and discernment on the part of the authority who investigates, or the medical witness who testifies, to follow the scent of the truth when there may have been a string of mendacious red-herrings drawn across it.

You see, therefore, I am for extending the jurisdiction of the coroner, not limiting it. But if you extend it to all sorts of personal injury, fatal or non-fatal, and thus give him the office and power of the stipendiary magistrate, why not stop there, or why not extend it to other offences which involve no medical considerations? And what is this but bringing us back to where we were some time ago? Why not make what you now call the "coroner" local public prosecutor? You may retain the time-honoured name of coroner or not. It has, at all events, an intelligible etymology, and is at least as appropriate a title as that of procurator-fiscal, who is the analogous functionary in Scotland. I need hardly repeat that such functions are, of course, work for the lawyer, not the doctor. Do I mean to set aside my professional brother as of no use? Quite the contrary; I reserve for him his proper professional work, and point him out as the indispensable adviser and guide of the public prosecutor in every case where medical considerations are at all involved. I am persuaded that if this principle of the proper division of labour were adopted in England as it is in Scotland—the lawyer to conduct the investigations, the doctor to be the interpreter of the medical questions which arise—there would be a solution of many, if not of most, of these difficulties, of which so much is said as to the office of coroner.

The chief of these—for I have not time to look at the half of those which have been propounded—relates to the difficulty of getting properly qualified men to furnish the necessary evidence. This difficulty has two roots; one educational, the other financial. If you find that the medical profession cannot furnish, readily and easily, men qualified to make and report a post-mortem examination, let the various graduating and licensing bodies lay it to heart and see that the rising generation of doctors are ascertained to have attended to the subject of pathological anatomy, and I am much mistaken if this is not already being done by all licensing bodies worthy of the name. But even supposing that the bulk of the profession were as ill furnished with pathological information as any man can fancy, I maintain that you can easily command the services of competent men if it were not for the financial difficulty. I do not believe there is any place so out of the way in England that you could not, in a few hours, bring to the spot a man well qualified to make a post-mortem examination. The telegraph and railway will do it for you, but you must pay him. I ask no extravagant fees—nothing like what a man would rightly exact who is called to a consultation; but at least in some measure pay him as you would a professional gentleman, and not as you would an artisan. Let me, however, say a word to the profession on this point. Do not be too exacting; do not expect to make money by medico-legal work; but with even a comparatively slender remuneration be content, and console yourself for small payment with the reflection that you may thereby personally gain repute, and that you are showing to your country how truly a scientific profession, how far reaching in its influence, that of medicine is.

You will say, But how is the prosecution to know where to find this qualified man, if it be willing to pay for him? I can understand the difficulty under the system of prosecution by private parties. A solicitor, who is only now and then, perhaps at rare intervals, called upon to carry out a prosecution, may readily be at his wits' end, and may very likely

select the wrong man; but the public prosecutor, who is constantly engaged in the investigation of suspicious cases, will soon come to learn the character of the medical men within his call, as he will through his myrmidons come to know the character of every thief and poacher in the county. He will make it his business to be informed about these doctors. His first precognition of a medical man will show him whether the doctor is or is not a well-informed man, capable of answering questions in a clear and ready way, capable of expressing himself distinctly; in short, whether he is a good expert and a good witness, and if he be not up to the mark he will not have any more to do with him. There is no need, in my opinion, for the official, be he coroner or what you will, having a special appointment made of a man to be always called upon, or even a specialist, from which he must make his selection. He will naturally turn his eyes to the man in such a position as that of a medical officer of health or medical officer of police, and, if he find him a good man and true, will have recourse to him; but there is no need for a special appointment. We have none of this in Scotland, under our system of public prosecutors. For more than thirty years I have been constantly engaged in conducting investigations and giving medical-legal advice to our Crown authorities. Successive Lord Advocates, with their retinue of Solicitors-General and Advocates Depute, have been pleased to continue their confidence in me. I do not hold, and never have held, any formal appointment, and they are at perfect freedom—and it is right they should be so—to go to anyone else when they think he can serve them better than I can.

Although holding no formal office under the Crown, I am in no dubiety as to getting my due *honoraria*. No Procurator-fiscal can call upon a special expert; for instance, by sending him articles for analysis on his own authority. These must always come through the Crown Office, to which I look for my fees; and I have no reason to complain of my remuneration for this kind of work. It rests with myself if I am underpaid. I and all my brethren, however, do complain of the Exchequer rules regarding payment for attendance at trials. To allow a medical man only two guineas a day and railway fares for attending a circuit court is simply disgusting. Who my lords are who are obdurate in this matter I do not exactly know, but I know it has been remonstrated against, not only by medical men themselves, but by Crown counsel, who have occasion to call them as witnesses. Nor have the Crown authorities any difficulty in conjoining with me or substituting for me any man who they have reason to believe has a special knowledge, of which it is advisable they should avail themselves. I have ever found them ready to adopt any suggestion of mine to call in a special expert, when I wished my opinion in a difficult case to be confirmed by other testimony. Is there any reason why this should not be done in England? If not, which I believe to be the fact, why these complaints from legal coroners and others as to the difficulty of getting properly qualified experts? If there be, what can make the difference between my country and yours, excepting the existence among us of the public prosecutor?

And now, gentlemen, since, by a rather tedious journey, we have got to Scotland, let us for a moment glance at the initial investigation of a suspicious case as it is conducted there. I suspect there are very false ideas abroad in England respecting it, and I do not find that your legal writers, who are the proper people to do so, have taken any special pains to dispel them. It is to me rather remarkable that such a writer as Sir Fitzjames Stephen, in his "General View of the Criminal Law of England," should give an elaborate comparison of the English and French systems, but should take no more notice of the system of Scotland than if our "land of brown heath and shaggy wood" had never had a placed in civilised Europe. In Scotland, the investigation of every kind of case, whether obviously criminal or only suspicious, the inquiry into deaths attended with suspicious circumstances, or deaths from accident, or cases of sudden death, is conducted by the Procurator-fiscal. We need here concern ourselves only with inquiry into deaths and offences against the person. This functionary has for his guidance not only the law of the land, to which, of course, he must conform, but he has the advantage of a carefully prepared code of instructions, drawn up by the Lord Advocate, and issued from the Crown Office to every Procurator-fiscal. This code of instructions was first issued as far back as 1824, and the edition at present in force is the third, and bears the date 1868. It contains, *inter alia*, an appendix of fourteen folio pages, furnishing detailed directions to medical men for the making of post-mortem examinations; such an appendix having been first added to it in 1839 and revised in 1868. It is not for me to characterise these directions, as I had the honour of being associated with Sir Robert Christison and the late Professor Syme in drawing up the existing edition. Suffice it to say that, besides general regulations for the external and internal examination of a body, it contains special directions for making such examinations in the several cases of wounds and bruises, poisoning, asphyxia in its various forms, burning, criminal abortion, and infanticide, so that it not only forms a guide to medical examiners as to the points to be specially observed, but enables the Procurator-fiscal to know what he has a right to expect in the report of the dissection. When any circumstance, showing a death to be unexpected or ill explained, comes to the knowledge of the Procurator-fiscal, he is bound at once to make inquiry; and, unless this is *primâ facie* satisfactory, he has to proceed to take a precognition. To effect this, he presents a petition to the Sheriff of the county, praying for the authority (which is almost invariably granted) to cite the necessary witnesses. Where a death is not clearly accounted for (for instance, by the testimony of the medical man who knew the case), he has to get a written report from a duly qualified medical man; and where a post-mortem examination is necessary, two medical men are always employed. The whole of the documents are then forwarded to the office of the Crown agent in Edinburgh, and are by him at once put into the hands of the Advocate Depute in charge of the district in which the case occurred. If the Advocate Depute is satisfied that there is no suspicion of crime, he marks on the paper "No proceedings," and the case is at an end; and it is now the duty of the Procurator-fiscal to furnish the Registrar of the district with the due certificate of the cause of death, that it may be entered in his books. If the Advocate Depute is of opinion that there is a suspicion in the case, he sends it back to the Procurator-fiscal for further investigation; or, if anyone be in custody, he orders him to be committed until liberated in due course of law. If there be doubt or difficulty as to how the case is to be dealt with, the Advocate Depute brings it before the other Crown officers, who are the Lord Advocate, the Solicitor-General, and other three Advocates Depute; and as these officials meet for consultation generally twice a week, no time need be lost. The result of this consultation may, of course, be to put an end to the proceedings; or, on the other hand, to order the case to be completed; and when this has been done with this view, the whole documents *in causâ*, precognitions of witnesses, and scientific reports, are returned to the Advocate Depute, who, in consultation with the other Crown counsel if necessary, draws up the indictment and attends at the trial as counsel for the prosecution. In cases which, either from their *locus*, or from their importance, are tried at the High Court of Justiciary, the Lord Advocate himself, or the Solicitor-General, or both in conjunction with the Advocate Depute, conduct the case in court, the Crown agent and the Procurator-fiscal, with whom the case originated, officiating as solicitors for the prosecution. The proceedings in a Scotch criminal court do not differ essentially from those in England, except in this respect, that, whilst in England all the witnesses may be in court and hear the testimony given before they are examined, the witnesses in Scotland are excluded until called for. But in special circumstances, alike in civil or criminal cases, the court may be asked to permit the scientific witnesses to be present while the general evidence is being taken. I am not here to make a laudation of the practice of my own country, but to give you, as clearly as I can, a narrative of it; but I think, in reference to these preliminary inquiries as to suspicious or sudden deaths, I may fairly say that a body of gentlemen such as Crown counsel, all accustomed to weigh evidence, and who have been taught forensic medicine, discussing the evidence in official chambers, is at least as likely to form a correct judgment as to whether there is or is not a crime to be traced out and punished, as a coroner's jury of twelve men, sitting in a public-house; and certainly the example of holding a judicial inquiry in such a place, by which I observe many persons are greatly exercised, is unknown north of the Tweed.

None of these inquiries by the authorities are, you observe, conducted in public. Upon this subject I shall presently

say a single word; but in the meantime I allude to it for the purpose of remarking that people, from seeing in Scotch newspapers notices of sudden deaths, or of persons found dead, and seeing no reports in the public prints of the investigation of them, are apt to conclude that they are not inquired into at all. In a memorandum addressed by Dr. Alfred Taylor to the Conference in November last, he says:—"There is no reason to believe that crimes escape detection under the Scotch system more than under the English. On the contrary, experience seems to show that under the English practice it is more likely to remain undetected." I can, I think, give my esteemed friend, now enjoying an honourable retirement from his useful labours in the field of medical jurisprudence, some assurance on this point. I know of no system under which it would be impossible for a criminal to escape; but I am, on the other hand, sure that under our Scotch system, in conjunction with our well-organised registration, it is extremely difficult. But, in reference to the question as to whether due inquiry is made regarding sudden, or suspicious, or accidental deaths, I prefer quoting figures to making general statements. Now, I find from a return made by the Crown agent to an order of the House of Lords, that in the years 1875 and 1876 respectively the following were the numbers of cases which were made the subject of precognition by the Procurators-fiscal. In 1875 there were 2516 precognitions, referring to 2579 deaths; in 1876, 2606 precognitions, referring to 2791 deaths. But this is exclusive of cases which, from the first, were connected with charges of murder or culpable homicide, which amounted to, in 1875, 88 investigations, referring to 97 deaths; in 1876, 92 investigations, referring to 97 deaths. I think we may gather from these numbers that the making of such investigations is not neglected in Scotland, when we bear in mind that the estimated population of the whole land in 1876 was only three and a half millions—not so great as that watched over by the London police.

I have hitherto spoken of these investigations without any reference to the way in which Scotch procedure deals with persons when suspected or accused of crime. This does not directly involve medical considerations; but I must say a few words regarding it, and I am quite prepared for your looking upon me as especially heterodox when I speak with approbation of the system of secret—or, rather, let me call it non-public—inquiry. I respect the attachment to the love of fair play which characterises Britons, whether it refer to sharp dealing with a prisoner in the dock, or to the enormity of shooting a hare in her seat; but in a matter of this kind we must not be guided by sentiment, but look at it with a practical eye, and ask whether the secret inquiry (I purposely use the more offensive expression) is the best for the furtherance of justice. By this I do not mean whether it best conduces to the procuring of convictions; I mean whether or not it is fairest for justice on the one hand, and on the other to the inculpated party, be he innocent or guilty.

I have my own ideas of its bearings upon justice, and am by no means sure that a public preliminary trial before a coroner or a magistrate, or both, may not tend to defeat justice by leading unscrupulous people, when they see a "pal" in trouble, to fit their evidence to the requirements of his case, and do a little astute business in the way of perjury. I rather like to look at the secret inquiry in the interests of the accused; and, provided it is guarded by due securities, it seems to be in his favour—at all events, not to his disadvantage. On these securities I cannot enlarge; they are not peculiar to Scotland. There is, for instance, with us the provision that the public prosecutor, who has no fear of prosecution for wrongous imprisonment or false accusation, can by the accused party be compelled, by a process called running his letters, to bring him to a final trial within a limited period. There is the provision that the public prosecutor cannot spring a mine upon the accused in the way of unexpected evidence, because the indictment which is served upon him must contain a list not only of all witnesses who are to be brought against him, but of every report or other document—yea, of every article, be it a bottle or a rag—which is to be exhibited by the prosecutor; and, as all the witnesses for the Crown are also witnesses for the defence, he is entitled to, and almost invariably takes care to, have them duly precognosed for the defence. What I most dislike is the effect of a public inquiry, fully reported as it is by the press, on the minds of those who are to make the jury at the final trial, where, it may be, the life or death of the accused may be trembling in the balance. "Give a dog a bad name and hang him," is a proverb with a great deal of truth in it. It is all very well for the judge, in his summing up, to tell the jury that they are to decide only upon what has been sworn to in court, and are to discard all impressions which have been made upon them by what they have heard previously. Under a secret inquiry they have heard nothing previously; they know nothing of what is to be proved until it *is* proved. If from the newspapers they have heard previously of a murderer's schemes and of his antecedents, which are generally none of the best, can they, with every conscientious desire to do so, shake themselves free from all bias against him? I do not know how it may be elsewhere; but of this I feel convinced, that in the recent great murder case which we had in Edinburgh, if all that was ascertained by precognition had been published in the newspapers, you could not have found fifteen men to form a jury totally unbiassed against the wretched man who has passed from the bar of a human tribunal to the judgment-seat of the Eternal. My belief is that, guarded as it now is, private inquiry is the best for all parties.

But, supposing it turned out that there is no crime at all, why should any person, say the last one seen in company with the deceased, be dragged before the public when he is quite innocent, nay, even if his conduct, when inquired into, may involve doings which, though not criminal, are much to his discredit, such as intoxication or other immorality? It is right that he should pay the penalty of his sins, but not in this way. It is very easy to let the idle portion of the public, always agape for any gossip or scandal, know that a man has been under suspicion of having been guilty of a crime; but, though you prove him innocent, you do not easily free him from the unjust loss of character which this may involve, or deliver him from the inevitable *monstrari digito*. I could, from cases which have come under my own cognisance, fully illustrate the hardship to individuals which may follow from these inquiries being made in public.

Do not go away with the impression that I regard the Scotch system as perfection. There are several *lacunæ* in it which I should like to see filled up. One, for instance, is that the death-registers should be inspected, say, once a week by a medical man—not for statistical purposes, but with a view to seeing that all the causes of death are clear and free from all element of suspicion, and, when this is not the case, at once to direct the attention of the local public prosecutor to the case, so that it may be investigated without loss of time; another is, that it should be made imperative on all candidates for the office of Procurator-fiscal to follow the example of the barristers, and attend a course of instruction on forensic medicine. Most of the present occupants of the office have, I believe, done so; but there is no security for this, and the Sheriffs, with whom this patronage lies, should make this a necessary qualification. I must not, however, go further into details.

Gentlemen, I have to apologise for having detained you so long. I cannot expect you to accede to my opinions, but all I ask of you is, that you should, as Englishmen, not look askance on a system of criminal jurisprudence which is geographically separated from your own only by the Tweed and the Cheviots, and from which, whether regarded from a medical or legal standpoint, permit me, as a Scotchman, to say I think English jurisprudence might usefully take a hint or two.

ADDRESS IN SURGERY.

By C. G. WHEELHOUSE, F.R.C.S.,
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A REVIEW OF THE PROGRESS OF SURGERY.

Mr. President and Gentlemen,—My first duty in assuming the readership of to-day is, through you, sir, to offer my grateful thanks to the Committee of Council for the confidence you have reposed in me when entrusting the preparation of the present address to my care. But a thoughtful and appreciative survey of the entire field of the labour of his lifetime, let anyone enter upon it when he may, can hardly prove other than a difficult and an onerous task.

Yet when, in the autumn of last year, I received the distinguished honour of an invitation from your Com-

mittee of Council to deliver the Address in Surgery on the present occasion, the idea arose at once, and irresistibly, in my mind, that such ought to be its nature, and that such review, fragmentary and imperfect as it must necessarily be, would probably prove more generally interesting to those assembled to hear it than the mere elaboration of any individual subject in surgery. I propose, therefore, that the present address shall, in the main, be retrospective in character; that it shall include, as far as is possible, the advances made in surgery during the period of my own professional lifetime, and shall gather together the chief gains upon which, as a profession, we can count as the result of our labours during that time.

Empirical Practices of Former Days.—In the first place, I would hail with satisfaction the fact that, while in the earlier history of surgery, as of medicine, empiricism was, of necessity, the chief guide men were content to follow, we are learning, as years roll on, to rely more and more on the guidance of strictly physiological principles. I do not doubt, for instance, that it will be within the recollection of many who are here to-day, how common and regular a custom it was in former times for almost everyone to think it necessary that at certain periods of the year he should be bled; not because he was either ill or threatened with illness, but simply because it was the custom of the district in which he lived, the tradition of his family, or for some such purely empirical reason. Or that many persons were content, for similar reasons, to bear the infliction of wearing, year after year, such nuisances as perpetual issues, setons, and such like means of "purifying the blood," and "getting rid of humours." Many is the arm that I have seen seared and scarred by such evidences of barbaric surgery, and many, I doubt not, has been the feeble constitution done to death by them.

And, gentlemen, these things were not done in wilful ignorance; they were not done merely from paucity of knowledge; they were the direct results of empirical teaching, and, until the light shed by physiological science upon the mysterious secrets of the animal economy had grown into a brighter and more steady beam, upon what better guide could men rely?

We may look back with horror upon the time when the surgeon, about to amputate a limb, would arm himself with a brazier, the glowing cautery, and the boiling pitch, because, taught by experience, he knew that these means would sometimes so suffice to staunch hæmorrhage that, perchance, his patient might not die; but until Harvey arose and demonstrated the motions of the heart, and displayed before wondering minds and astonishing eyes the great secret of the circulation of the blood, and of the functions respectively of arteries and veins, how, in the name of reason, was the surgeon to know that all he wished to attain might be effected by simply placing a thread around the ends of the severed and gaping arteries?

Save only as a result of thoughtful observation, could Jenner ever have discovered the utility and boundless value of vaccination, and have thereby enabled us to rid the world, whenever we will, of the direst scourge by which it has ever been afflicted?

Thus, then, whilst we should not foolishly underrate the teaching of mere experience, yet, steadied as our own practice is by a clearer knowledge of physiological principles, it should be our happier lot to subordinate the one to the teaching of the other, and from the heap of chaff accumulated in earlier times to winnow out such grains of living seed as we may reasonably trust will yet bring forth fruit in the future.

Extended Range of Modern Surgery.—What have we then to show in proof of our having done this? In what does the surgery of to-day differ in broad principles from that of fifty years ago? In the first place, the *range* of our art has been greatly extended. Operations which in former times were considered to be wholly beyond the pale of legitimate surgery, are now matters of everyday practice. Lives which were formerly lost, being abandoned as beyond the reach of either help or hope, are daily saved. Limbs which were doomed unhesitatingly to the amputating knife are spared, and are often restored to a large measure of utility. Thus, the surgery of to-day is a far grander science than was that of former times.

Moreover, it has also become an immeasurably less terrible one; for, robbed as it has been, by the introduction of anæsthetics, of much of its horror, a surgical operation has ceased to be the fearful ordeal it once was, and has become the endurable, if heavy, price to be paid for restoration to life or comfort.

Gentlemen, let your minds fall back by the space of only a few years, and picture for yourselves the wondrous change in surgical proceedings that has been brought about by this method of anæsthesia. Imagine the mental strain to be endured in former times before courage could be found to submit to the dreaded ordeal, the shock to the system which such mental strain and agony must have produced; picture to yourselves the shrunken, terrified aspect of the sufferer, the bandaged eyes, the securely bound limbs, the prostrate form, and the agonised uncontrollable resistance to the whole proceeding, and contrast it with the calm and trustful confidence of a patient prepared to undergo a modern operation.

Thankful for the assurance we can confidently hold out to him of complete freedom from pain, the patient of to-day can contemplate even the severest operation without great fear; and the surgeon, aided as much almost as the patient by the action of the anæsthetic, is enabled to do all that he desires deliberately and efficiently. As I am operating myself, or watching my colleagues, I often think that this deliberation of procedure is one of the most important of all our more recent advances. There is no longer any need of the old rapidity and "dash," the "brilliancy" of former times; there is comparatively little fear of imperfection of result; there is none on the score of prolonged suffering to the patient; the inanimate form before us is insensible to pain; the deepest traces of disease may be carefully and accurately followed: and thus a greatly superior and often more lasting result may be obtained.

Surgery rendered Bloodless.—Of all the difficulties with which the art of surgery is beset, none is more serious than the effusion of blood. In a twofold manner this difficulty tends to endanger the success of our proceedings: first, by impeding our view; and, secondly, by diminishing the vital power of the patient for recovery; and we all feel instinctively how greatly the difficulties in the way of the surgeon, and therefore the danger to the patient, would be removed if the parts could only, for the time being, be rendered absolutely bloodless.

To this feeling, unquestionably, we were indebted for the introduction into surgical practice of the tourniquet; and the temporary arrest of the influx of arterial blood into a part or limb, the subject of an operation, by this most useful instrument, marks an era in the science of operative surgery as clear and distinct as did the introduction of the forceps into the sister art of midwifery. But, great as has been the help given by the tourniquet, it has by no means sufficed to remove the whole difficulty. We are still embarrassed by the constant pouring of venous blood into the wound, and it takes all the time and attention of our assistants with sponges and otherwise to keep our way clear for us. Hence the thoughts of surgeons of every age have been bent on the discovery of some more perfect means of controlling hæmorrhage than any so far known to us; hence, also, the satisfaction with which we have welcomed the method of procedure introduced some years ago by Professor Esmarch, of Kiel, and entitled "Bloodless Surgery."

By the adoption of this method where possible—for there are, unhappily, regions where it is quite inapplicable—we score another great advantage. We can not only have our patient insensible and unresisting, but we can also have the part on which we are operating absolutely free from blood until the last stroke of our knife is completed.

Often, since the introduction of this method, have I had reason to be thankful for it; and in no cases, perhaps, more frequently than in such as the clearing out of sequestra in cases of necrosis, the removal of growths and tumours from the immediate neighbourhood of important vessels or joints, and in many amputations and excisions.

I say "in many amputations"; for, while your experience will at once suggest to your minds the thought that there are amputations in which such total suppression of all hæmorrhage might not be for the patient's good, there are many in which it forms almost the only hope upon which either the success of the operation or the life of the patient may be said to hang.

As I record this opinion, a case in point arises in my memory. It occurred in the practice of my colleague, Mr. Jessop, and, if related, will serve to show the desperate

circumstances in which Professor Esmarch's plan may come to our assistance. A little child, worn and emaciated to the last degree, was brought to our hospital suffering from total necrosis of the femur; the poor withered limb had been riddled in every direction by abscesses, and the whole frame was scarcely more than skin and bone. It was clear to us all that nothing but amputation at the hip-joint could offer but the faintest possible hope of recovery; but, unhappily, we were equally clear that the loss of even a few ounces of blood would suffice to turn the scale towards death. Then the question was mooted, "Was Esmarch's method possible in such a case?" Looking at the wan little sufferer, the idea at first startled us all, but eventually the plan was adopted. The limb was elevated and emptied of blood, the perineum, the hips, the pelvis, the lower abdomen were carefully padded and slowly compressed, and finally the amputation was performed. Every vessel that could be discovered was secured, the few ounces of blood—the loss of which would probably have killed the child—were not shed, and the patient made a brilliant recovery.

Further, in an indirect manner, I have seen and have used Esmarch's method in regions where its direct and ordinary application would be simply impossible. In this preparation I show you what must, I think, be admitted to be a large nævus to have been growing in the cheek of a child only fourteen months old; nevertheless, my colleague, Mr. Teale, removed it with so little loss of blood that the operation caused him positively no anxiety! Acting on a sudden suggestion of our house-surgeon, Mr. Vernon, he first carefully surrounded the base of the tumour with a subcutaneous ligature, which, after he had emptied the nævus of blood, he tightened, and he was then able to proceed deliberately to the almost bloodless removal of the entire growth.

I think, therefore, I may fairly sum up my opinion on this subject thus: that in "bloodless surgery" we have an aid which, though not always, yet often, is most welcome, and which on occasions proves simply invaluable; that it is one whose range of applicability will probably increase as time goes on; but that there are cases to which it is as yet inapplicable, and some in which it would prove disadvantageous.

The Battle of the Ligatures.—Whilst speaking of hæmorrhage and its prevention or arrest, I cannot refrain from saying a few words upon the question of ligatures, which is just now agitating the surgical world.

During the last few years I have been watching carefully and curiously the efforts that have been made to adapt the material of which ligatures are made, and to harmonise their necessary presence in wounds with the requirements of antiseptic surgery.

First, I have noted that various materials—elastic threads, catgut, horse-hair, jute-fibre, and silk of different kinds (all carbolised, of course)—have, one after another, been employed. Secondly, the methods of their application have been almost as varied as the material of their structure. Some surgeons have inclined simply to close the arteries without wounding their coats; and some, as of old, to cut into these. One will cut off one end only of the ligature, while another will take away both, and leave the knot to be dealt with by absorption.

The conclusion at which I have arrived is that, as regards the whole subject, we are for the moment off the track, and are erring from true principles. I hold that the laws laid down by Jones so long ago as 1805,(a) and afterwards affirmed and substantiated by the late Mr. Hodson, based as they were upon the safe ground of exhaustive experimental research, are as true now as they were when first promulgated—viz., that the only safe way of securing an artery is fairly to *divide* the inner and middle coats of the vessels, and that the only ligature to be trusted to do this efficiently is a well-made, firmly twisted round cord of silk; that elastic threads, after dividing the coats, if they do so at all, lose their elasticity, yield when they should hold on firmly, and thus permit the efflux of blood; that catgut softens too readily, bursts or slips, and is thus unsafe; that silk ligatures, when cut off at both ends, fail to become absorbed, and become prolific sources of after-mischief; and that horse-hair fails not only to be absorbed, but acts as a source of direct irritation from first to last. With both these two last, when cut short, I have seen wounds heal perfectly, and all seem well; but later on small abscesses have formed in various parts of their track, and from each of these, when they have given way, I have had to remove the unabsorbed knots and minute circlets of ligature before they have finally become firm and sound.

Antiseptic Surgery.—Among the broader outlines of advance in surgical science, antiseptic surgery must always henceforward hold a prominent position. To Mr. Lister, and to the unconquerable perseverance with which he has pressed upon us the advantages of this method of dealing with surgical injuries and wounds, we surgeons of the present day unquestionably owe a lasting debt of gratitude; for, although there are those in our ranks who honestly believe that all the good derived from antiseptic dressing is due, not so much to any special virtue in the means adopted, as to the cleanliness and care which the practice involves, yet I cannot think that those who, having used the plan on a large scale, have watched the result with observant and truth-seeking eyes, can really doubt its special virtue and efficacy. For my own part, I can call to mind almost numberless cases, in the treatment of which it has been the turning-point between success and failure; many in which it has been the means whereby a successful issue has unquestionably been attained; and many in which, without its aid, limbs and joints must have been amputated, which, by its help, have been saved. To those of us who have seen much of serious compound fractures, and have noted the restraining influence of antiseptic dressings upon the exhausting discharges which usually accompany such accidents, the gain, I think, will appear to be a very clear one. Again, in the treatment of very large and serious wounds, such as in my earlier days would have been considered to demand amputation, I can confidently assert that, by the aid of antiseptic dressings, I have obtained results which, without such help, would have been impossible. This opinion I feel sure my colleagues will endorse; for, though we all took the matter up cautiously at first, and for many years were met with the views and objections of a confirmed and hardened sceptic on our staff,(b) the practice has grown so steadily and surely in our wards that, in serious compound fractures, wounds into joints, large lacerations, and flesh-wounds, in many major operations, such as amputations and excisions, and in all ovarian operations, it may be said to have become our all but invariable rule. Of the *modus operandi* I have no intention now to speak, nor to enter upon any discussion of the "germ" or other theories. These have been so ably dealt with and expounded by men who have devoted years to their persistent study, and the results of whose labours have been freely laid before us, that to do so would be to weary your patience and to waste your time; suffice it to record my view that by the practice of the "antiseptic method" we reap a real and very substantial benefit; and that we found it upon no merely empirical grounds, but upon clearly defined principles.

The question has very recently been asked in our own *Journal*, whether, in adopting this principle of antiseptic surgery, we "may not possibly be encouraging a great delusion?"(c) As a practical surgeon, I emphatically answer, "No! it is not a delusion, but a truth of the greatest value." And in my mind I call up many cases in which, except for such "delusion," my patients would have lost their limbs, and oftentimes their lives also.

Drainage of Wounds.—Another novelty, or at least an innovation of comparatively recent years, concerning which I desire to say a word or two in passing, is the "drainage of recent wounds, of general surgical injuries, and of abnormal secretions from the interior cavities of the body." I speak of it as a novel procedure, and I conceive that I am justified in doing so, since it is only within very few years that it has come into anything like systematic use, and seeing that mention of it has only recently found its way into our standard surgical works. Its admissibility as an accessory in the treatment of large chronic abscesses has been for some time allowed; but not until lately has it been spoken of as a useful method of dealing with recent surgical wounds. We know how large an amount of discharge of various and mixed kinds is thrown off from freshly made wounds; of blood in the first instance, and of serous or purulent discharge at a later period; and how apt these secretions are,

(a) "A Treatise on the Process employed by Nature in Suppressing Hæmorrhage from Divided and Punctured Arteries, and on the Use of the Ligature." By J. F. D. Jones. 1805.

(b) *Vide* "Address in Surgery," delivered in Leeds (1869), by T. Nunneley, Esq.

(c) "The Antiseptic Treatment," by Charles Shrimpton, M.D. (*British Medical Journal*, May 4, 1878, page 666).

when retained, to decompose and putrefy, and how grievous is the constitutional disturbance they are sure to set up if re-absorbed into the system. By the irritation caused by their presence, they unquestionably interfere with the direct healing of well-nigh all wounds, and any means calculated to facilitate their escape can scarcely prove other than advantageous. I imagine that the practice of antiseptic dressing has brought the necessity for some such process more prominently before our minds than would otherwise have been the case, as the necessarily close swathing of wounds for the exclusion of atmospheric air or germs has an unquestionable tendency to cause the retention of such discharges as are poured out, and though by its "antiseptic" power it may prevent their decomposition and obviate their poisonous effects, it cannot hinder their formation or accumulation. Hence, any means that will enable us to get rid of them from the interior of a wound may reasonably be considered useful. For this purpose various methods have of late been used—the perforated caoutchouc tubes, originally introduced by Chassaignac, a bundle of carbolised catgut threads, a wisp of carbolised horsehair, and, lastly, a long tube inserted at one end into the wound, and at the other into a bottle in which an antiseptic fluid has been placed.

This last method, first introduced and practised, I believe, by my fellow-townsman Mr. McGill, and fully described in the January number of the *Edinburgh Medical Journal*, page 637, has proved of very great service in the hands of my colleagues and in my own, often draining away large quantities of fluid during the first few hours after an operation, clearing the wound of its first danger, contributing largely to its chance of primary union, greatly economising both time and suffering, and lessening the necessity for frequent dressing. I have further seen the application of this principle prove to be of the greatest utility in the treatment of wounds, whose healing must unavoidably be slow and accompanied by much purulent discharge. Thus, in a recent case of my own, in which I had excised the head of the femur, and had scraped out a thoroughly carious acetabulum, so long as I kept in a good drainage-tube all went well, but, as soon as it was removed, there were an exacerbation of fever, a dry hot skin, a quickened pulse, and an immediate rise of temperature, all to be as speedily quieted again by the re-introduction of the tube. The same point has also been further exemplified in the treatment of abscesses and empyema; a similar train of evils has been observed rapidly to follow the removal or blocking-up of a drainage-tube, and as quickly to subside again on its re-introduction and the washing out of the pleural or abscess cavity, so as to remove such secretion as, owing to retention, had begun to putrefy. Hence I am inclined to regard this principle of drainage as one likely to grow in the estimation of surgeons, and to think that in a carefully planned, well drained, and antiseptically dressed wound we have the perfection of the surgery of the present day.

Conservative Surgery.—Of the more open forms in which "conservatism" in the art of surgery has developed and has flourished of late years, I need not stay to speak. Fostered mainly by the teaching of the late Sir William Fergusson, the principle is now so thoroughly accepted that it needs little more than simple comment on an occasion such as this. So well have we learned how often a limb may be saved by the sacrifice of a joint, a hand by the removal of a finger or two, a larger by the loss of a lesser portion of the body, that every surgeon worthy of the name is now ready to accept the doctrine that nothing must fall before the knife except such parts as are beyond hope of restoration to life and utility. Who amongst us, twenty or thirty years ago, would have deemed it possible to save an arm in which both shoulder and elbow joints had been destroyed?—and yet, in our own *Journal* of January 22, 1876, page 101, such a case is placed on record by Mr. Mac Cormac, and is surely as grand a trophy as ever modern conservative surgery can desire to show. Side by side, too, with this form of conservatism in surgery, another of scarcely less importance has also been steadily growing up, has even now attained wonderful results, and has probably many brilliant triumphs yet in store, viz., "subcutaneous surgery." Mr. William Adams has taught us how, by subcutaneous section of the neck of a femur, anchylosed at right angles to the pelvis, we may restore a lower limb, grievously crippled and deformed, to utility and shapeliness again; and the daily triumphs of orthopædic surgery, aided by subcutaneous section of muscles, of tendons, and even of bones, will readily occur to your minds.

Physiological Rest in Surgical Cases.—Yet another subject arises in my mind, which I cannot pass over in silence, since it is becoming more and more one of the guiding principles of surgery. Mr. Hilton, in his admirable lectures on "Physiological Rest and Pain," has happily and very forcibly pointed out how intimate a relationship exists between physiological rest and the successful treatment of surgical ailments. Just as we look upon local and mechanical rest as the *sine quâ non* for the kindly healing of a wound or union of a fracture, so also, if we can only attain it, may we regard physiological rest as the one thing needful, the one thing without which all our efforts for the cure of many surgical diseases will prove vain. Just as reasonably may we call upon a horse, already jaded and worn out, to start without rest upon a fresh journey, as upon a kidney, exhausted by long protracted efforts to guard the economy from the effects of alcoholic stimulation, to bear up against the onset of threatening disease, or a brain, worn out by exhaustive work, to recover from, or to resist the effects of, mechanical injury to the head. Sir James Paget, in his recent charming work, entitled "Clinical Essays and Lectures," tells us that, in estimating a patient's prospect of recovery after an operation, he finds his "capacity to sleep" one of the best measures of his probable power of endurance; and just as, with the system in general, sleep or rest may be regarded as the great healing balm of nature, so, in the case of individual organs, may we look upon "physiological rest," when attainable, as one of our greatest aids. Time forbids that I should do more than point at the direction in which, at this moment, I am aiming to lead your thoughts, and I will only therefore adduce a single instance in illustration of my meaning.

Take a case of "irritable bladder": suppose all extraneous causes carefully sought out and removed, and a diagnosis established that the condition is one dependent upon disease inherent in the bladder itself, say of congestion, of inflammation, or of ulceration; is there any method by which we can place this organ physiologically and mechanically at rest? Its natural work being to retain the urine, it is clear that rest can only be procured by depriving it of its power to do this, for a time at least, by paralysing its sphincter. In the second volume of the *Lancet* for 1875, at page 765, you will find an interesting paper, by Mr. Teale, on this subject, in which he proposes in such cases, especially in the female, temporarily to paralyse the bladder by forcibly dilating and overstretching the urethra. Sir Henry Thompson, Mr. Teevan, Dr. Otis, and other authorities on such subjects, are all agreed that in attempting to cure such irritability, when the result of stricture, it is necessary very freely to dilate—indeed to over-dilate—the urethra, and thus, as I would put it, to place the bladder for the time being in a condition of comparative rest; and we—*i.e.*, my colleagues and myself,—in order to carry this principle to its logical conclusion, in several cases of serious ulceration of the bladder, have gone so far as to operate as if for lithotomy, with a view to procure absolute quietude of that organ for a time; and we have met with encouraging success. The principle is exactly the same as that on which the physician relies when he prescribes prolonged rest and freedom from work for an exhausted brain; and on which we ourselves act when, for the cure of fistula in ano, or of ulcer in the rectum, we divide or stretch the sphincter ani.

Time warns me, however, that I must not linger on the consideration of our advancement in general principles only, but must proceed to the review of such new modes of practice as have of late enriched our means of action, and by which our hands have been strengthened. In doing this, I propose to refer to novel operations and new methods of treatment, as they have been found applicable to the ailments of various regions of the body.

Surgery of the Head and Trunk.

The Plaster-of-Paris Jacket in Spinal Curvature.—It will be within the recollection of many whose good fortune it was to be present at our meeting last year, at Manchester, that, aided by the powerful advocacy and graphic description of Dr. Sayre, of New York, an entirely new method was demonstrated and described of dealing with curvatures of the spine, whether of the angular, or lateral or, as Dr. Sayre prefers to call it, the "rotary-lateral"

varieties. During the past year this method of treatment will doubtless have been put upon its trial by many who were privileged to hear Dr. Sayre's description of it, and who will, by this time, have formed a definite opinion concerning its merit. That it is efficient for the cure of many grievous cases will be admitted by all, and that, in cases otherwise beyond the hope of cure, it is productive of an amount of comfort never previously attained, will have been put beyond all doubt. Useful as such appliances as the starch, dextrine, and plaster-of-Paris bandages have been in various other forms of surgical disease and injury, and used for so long, it seems almost inconceivable that their applicability to spinal curvatures should have escaped the surgical mind; yet so it was, and until Dr. Sayre exhibited the application of the plaster-jacket at Manchester, I think I am justified in saying that no one, at any rate in this country, had ever suggested such an appliance; and I should be doing Dr. Sayre less than justice if I did not further add, that probably as much of the success of the method is due to the ingenuity with which he showed us how, in the first place, to obtain the necessary elongation and straightening of the diseased spine, as to the efficiency of the bandage in maintaining the extension thus effected. Moreover, the perfect freedom with which it enables the sufferer to enjoy the blessing of movement and recreation, so long denied to those afflicted with this form of disease, is invaluable. When I think of the many cumbrous and expensive contrivances which, for years past, I have seen in use in the treatment of such cases, I feel inclined to blush for the skill which had failed for so long to seize and act upon an idea so simple and at the same time so perfect. One caution only, with respect to it, is advanced by its author, and I think it wise to repeat that caution now—viz., that, while it is thoroughly efficient in the cure of most cases of angular curvature in the *earlier* stages, too much must not be expected of it in the *later* ones. When once there is reason to believe that anchylosis has fairly set in, it would manifestly be cruel to run the risk of rekindling danger by any attempt to straighten the spine. But surely, as years roll on, with so perfect a means at our command of securing absolute rest, of preventing deformity, and of sustaining the general health, such cases as are now only too common in our streets will be a reflection on our skill, and will become of comparatively rare occurrence.

Injuries of the Head.—With respect to injuries of the head, my friend Mr. Favell, in his Surgical Address at Sheffield, asked the question, by implication at least, whether we are any nearer now than we were in former times, to a safe and sure rule of action in the treatment of depressed fractures of the skull? No one will doubt, I think, that we see the "trephine" much less used now than was the custom formerly; and in asking myself the question, Is this because it was used with unnecessary frequency *then*, or because we too seldom resort to it *now*?—the answer of the practical experience of my life comes without hesitation to my mind. As was the case with the lancet, so it was also with the trephine: its indiscriminate use in all, or nearly all, cases of depression of the skull, whether simple or compound, was an undeniable evil, which has led to a revulsion of feeling in the minds of thoughtful men; and steadily, as time has gone on and experience has accumulated, operative interference has been found to be much less frequently called for than was considered necessary in former days. Yet, in spite of all the aid derived from the various novel methods, antiseptic or otherwise, with which we dress our wounds, I cannot bring my mind to doubt the value of the old rule, that "in cases of compound depressed fracture, symptoms or no symptoms, where we can be at all clear that the entire thickness of the cranium is involved, it is the duty of the surgeon, either with the trephine or by some other means, to raise the depressed fragments or portion of bone, and so free the subjacent structures from irritation and pressure."(d)

Nævus.—I have already made casual mention of the subject of nævus, and as we in our hospital at Leeds have, for some time past made, the subject of the treatment of this disease a matter of special study, I desire to say a few words respecting it.

Some years ago, Mr. Teale, having satisfied himself that, in many cases, the mass of a nævus was so surrounded by condensed connective tissue as to be practically encapsulated, set himself earnestly to work to ascertain whether it was not possible, by careful and deliberate dissection, to enucleate such growths. Setting aside the rule that in, in excising a nævus, the knife must travel wide of the diseased structures, and pass only through surrounding healthy tissues, I have seen Mr. Teale, with the utmost deliberation, dissect out from their immediate bed such nævi as these, which by his kind permission I am enabled to show you, and remove them even from dangerous regions, and from subjects of the tenderest age. As the result of these operations, we have also, further, learned another lesson of great value—viz., that they are applicable not to *subcutaneous* nævi only, but even to such as have already involved the skin; and that, in removing them, it is not necessary to sacrifice the skin by which they are covered, simply because it is nævoid or traversed by a network of diseased vessels. These, Mr. Teale has found, will shrink and completely disappear under the influence of after cicatricial contraction, and such skin is ultimately restored to a natural condition.(e)

Before I leave this subject, permit me to add yet one word more as to his most recent practice in this matter—viz., that by first passing a subcutaneous ligature circumferentially around the tumour, and using it as a "twitch," such operations may be almost bloodlessly concluded.

Ophthalmic Surgery.—Of the enormous advances made in ophthalmic surgery during the past half-century, it would scarcely be becoming in me to speak. I am in no sense a specialist; indeed, desirous as I am to record my opinion that specialities in surgery are distinctly disadvantageous, I yet feel bound to exempt ophthalmic surgery altogether from such condemnation: the field is so large, the tissues involved are so numerous, the operative procedures required so delicate in their character, that it is well, in my judgment, that ophthalmic surgery has been erected into a special science; and with the acknowledgment to those in my audience who have elected to devote themselves to the study of this branch of surgery, that, in no portion of the whole field of our art has greater activity been shown, or greater advance been made, I will dismiss the subject. I will not even stay to add the ordinary eulogium in praise of the ophthalmoscope, since the value of the instrument, and the flood of light it has thrown on, as well as into, the eye and its diseases, has long since been abundantly acknowledged, and is on all hands admitted to be one of the great triumphs of our time.

Laryngoscopy.—Of the laryngoscope, it may fairly be expected that I should say a little more. The difficulty experienced in using this instrument, both on the part of the surgeon and of the patient, have undoubtedly combined up to the present time to delay its general introduction into practice; but when young men become familiarised with its manipulation, as part of their professional education, it will more and more be found to be one of the indispensable appliances of their daily work. As an aid in the removal of foreign bodies from the larynx; as a guide to the advisability, or otherwise, of the performance of tracheotomy in certain cases; with the help of this latter operation, in the treatment of the diseasse of the air-passages it will prove invaluable. I have myself seen it brought into use with the happiest results for each of such purposes. On one occasion, a patient was brought into our hospital, apparently dying, with some foreign body supposed to be impacted in the larynx. An exploration with the laryngoscope cleared up the matter; the thin edge of a piece of bone was seen wedged in the glottis; the trachea was then opened, and no sooner was the freedom of breathing thereby restored, than the spasm in the throat relaxed: a clear view of the parts was obtained, and the parietal bone of a rabbit was seized and withdrawn through the tracheal wound. Shortly after this, a second case, equally illustrative of the value of the instrument, came under our observation. A patient, received for stricture of the urethra, and waiting for perineal section, was seized with spasmodic difficulty of breathing and loss of voice. Examined with the laryngoscope, the left vocal cord was seen to be paralysed and inactive; aneurism pressing on the left "recurrent nerve" was immediately inferred. The proposed operation was abandoned; and when the man died, as he did

(d) See Mr. Prescott Hewett in "Holmes' System of Surgery," vol. ii., page 118.

(e) See article by Mr. Teale (*British Medical Journal*, December 11, 1869), entitled "Atrophy induced by Cicatrix, and its Surgical Value."

very shortly afterwards, it was found that his death was the result of the bursting of an aneurism, which had existed in the arch of the aorta.

Ablation of the Tongue.—Of complete removal of the tongue for malignant disease, an operation frequently performed of late both by my colleagues and myself, and rendered peculiarly easy by the use of the wire écraseur, I fear I cannot speak in terms of as high commendation, or with the promise of results as favourable as we at one time hoped to achieve. That great relief may be afforded to a patient by the operation, for a time at least, I am quite prepared to admit; but the final result, in such cases as have passed under my observation, has unquestionably greatly disappointed me. Early return, either in the tongue itself, or if that have been completely removed, in the glands near, has, so far, been the invariable result; and, on the whole, the final condition of the sufferer has been such as to be far from encouraging. Nevertheless, there are cases in which even temporary relief afforded by the operation has been such as, in my judgment, would justify its performance, provided too great hope be not entertained as to the ultimate curative effect. Of the operation of subcutaneous division of the gustatory nerve, performed and highly spoken of by the late Mr. C. H. Moore, I have no experience, and can therefore offer no opinion.

Extirpation of Larynx and of Thyroid Gland.—Of extirpation of the larynx, as originally performed by Billroth, and more recently repeated by Bottini and Langenbeck; and of the entire thyroid body, as practised and recommended by Dr. Patrick Heron Watson, I have no experience to offer; but the fact that such operations are *possible*, and have been *successfully* performed, may be taken as an encouragement, and may nerve us to their performance in cases which seem otherwise hopelessly condemned to death.

Aspirator.—As one of the more recent and valuable of the additions to our means of treating deeply seated surgical diseases, or diseases curable by surgical help, I would call to mind our acquisition of the aspirator of Dr. Dieulafoy. No instrument of greater general utility has, of late, been placed in the hands of the surgeon than this. Combining as it does the uses of the old grooved needle with those of the more modern exploring trocar, and with the addition of suction-power, sufficient to enable us either to explore, or empty, or wash out, at will, any given cavity, it is one of the most valuable of the additions of modern times to our means of dealing with the surgical diseases of the inner cavities and structures of the body. By its use, an empyema, a fatal effusion into the pericardium, a bladder distended almost to bursting, a dropsical knee-joint, or blood effused, are placed as easily under control as the ascitic abdomen was in former days; and structures even more delicate than those I have mentioned are rendered equally amenable to attack and relief, under certain conditions of disease. I have myself removed from a pyæmic abscess, in the centre of the lung, no less than thirty-six ounces of fetid pus; I have seen similar collections in the liver, the kidney, and the brain, attacked with equally favourable results; and, indeed, there seems to me to be no organ in which suppuration has occurred, or within whose investing membranes the normal secretions have become superabundant, that may not be dealt with by this useful instrument.

Foremost amongst these I would place the organs and serous spaces contained within the chest. I have already said that I have, without hesitation, pierced the walls of a pyæmic abscess in the centre of the lung; and, to the immense relief of the patient, have withdrawn its fetid contents. Is it too much to hope that the time may come when we may occasionally be able to empty an offensive vomica, and wash it out with some innocuous antiseptic fluid, such as Condy's solution or solution of quinine? And instead of permitting a patient to expectorate the contents of such a cavity, may we not thus be able to withdraw them at once, and so procure refreshing sleep during many hours, which would otherwise be spent in vain and exhaustive efforts to do the same thing *per vias naturales*?(f)

Aspiration in Pleuritic Effusions.—In pleuritic effusions, whether serous or purulent, we have, in the aspirator, a ready means of holding the evil under control. Thus, though rapidly accumulated effusions, the result of acute inflammatory action, generally subside, and comparatively rarely degenerate into pus, they may occasionally be poured out in such great and alarming quantity as to render their evacuation imperatively necessary *if life is to be preserved*; and compared with the elaborate precautionary measures of former times, how simple has their withdrawal, or diminution, been rendered by the aspirator! Again, although more chronic and simply serous effusions into the pleura may, and often do, subside under judicious medical treatment, and need no surgical interference, yet if, as sometimes happens, they *persist in steadily increasing*, oppression to both breathing and circulation may become so urgent as to demand instant relief. A new danger, too, may thus arise, involving the re-expansion of the lung, or the return of a displaced heart to its normal position; and here, again, in aspiration we possess not only a powerful but a *certain* mechanical means of control. There is, however, a point at which the power of the aspirator fails us, and at which we are driven to seek help from even yet more radical means.

Empyema.—When once we are satisfied that the pleura is full of pus, having regard to the danger that will arise, that such pus will seek an exit either through the lung, to its irreparable damage, or by a prolonged and imperfect process of ulceration through the chest-wall, we are, in my judgment, called upon to adopt more decisive measures than either the aspirator or the old method of paracentesis affords. Under such circumstances, and none the less when a pulmonary fistula is already established, a permanent and free opening, in a well-chosen position, as low down as possible, becomes, as my experience teaches me, the only safe and certain procedure for the surgeon to adopt. Complete, persistent, and efficient drainage may in the end in such cases effect a radical and lasting cure; while mere palliation, by simple withdrawal of the fluid, is certain to lead, time after time, to its re-accumulation, and finally, in at all events a great number of cases, to a fatal termination.

Paracentesis of Pericardium.—So, too, as we have for years past dealt freely with effusions into the pleural space, we have also learned that we may safely deal with similar diseases of the pericardium. Late one night, in the year 1866, as I was entering our hospital to take charge of a serious accident, I met my friend and colleague Dr. Clifford Allbutt leaving it, apparently in a very desponding frame of mind. A word or two sufficed for explanation; he had just left a patient in a dying condition, who, after passing through a grave attack of rheumatic fever, had suddenly developed acute dropsy of the pericardium. All *medical* means had failed either to control or to reduce the effusion, but our accidental meeting in the doorway of the hospital seemed suddenly to inspire Dr. Allbutt with the thought that relief might possibly be attained by *surgical* interference. Accordingly, we hastened upstairs, where we found our patient apparently moribund—cold, almost pulseless, livid, bathed in profuse perspiration, and gasping for breath; he had been screened from the other patients that they might not see him die. Without a moment's hesitation, I plunged a small exploring trocar into the distended pericardium, and, to our intense delight, there began forthwith to issue a tiny but steady stream of slightly blood-tinged inflammatory serum. This continued to flow until about three ounces had drained away. Presently a long-drawn inspiration followed, and this was succeeded by steady general improvement of respiration; the pulse became again perceptible, the duskiness diminished, and in a few minutes the man heaved a deep sigh, and exclaimed, "My God, what relief!" From that time onward the relief continued, improvement was progressive, recovery in the end complete, and the patient remains alive and well to this day.(g)

Since that time, the operation of paracentesis of the pericardium has been many times repeated, and though not always, yet often, with the same marked degree of success.

Speaking to Dr. Allbutt the other day upon this subject, I find that he gathers hope that, as time goes on, the operation will become better and more widely known, and will presently be more frequently resorted to, at least when danger becomes imminent; and he writes to me on the subject thus:—"The exit of even an ounce or two of fluid suffices to give relief, because, when it reaches a certain height, it compresses the auricles, and thereupon, of course,

(f) Since I wrote the above passage, I find that this operation has been twice successfully performed—once in London, by Mr. Erichsen, for a patient under the care of Dr. Theodore Williams (see *British Medical Journal*, July 20, 1878, page 101); and once in Leeds, by Mr. Jessop, at the suggestion of Dr. Clifford Allbutt (case not yet published).

(g) For report of case, see *Medical Times and Gazette*, November 3, 1866.

as return of blood by the veins becomes impeded or arrested, the ventricle continues contracting, *and contracts for a time upon nothing;* the pulmonary vessels become more and more engorged, and finally the patient dies." And he further, with characteristic terseness, adds the following case in proof:—"I was called to Morley a few months ago to meet Dr. Steel. The case proved too urgent to await my arrival; the patient became moribund. Dr. Steel, therefore, drew off from the pericardium four ounces of fluid with the aspirator. Pericardial dulness immediately diminished; the pulse refilled; and the man, aged thirty-five, a miner, suffering from chronic bronchitis, was relieved before my arrival, and for a time did well."

Intrathoracic Aneurisms, Tumours, etc.—Of the surgical treatment of intrathoracic aneurisms and tumours, whether by galvano-puncture, electrolysis, or otherwise, I have nothing favourable to say. We in the North have given both methods a fair and impartial trial, and, so far, I can only speak of the result as disappointing. Temporary relief seems, indeed, occasionally to have been obtained, and possibly in the future something better may come of our efforts in this direction; but up to the present time I have seen no case of permanent cure. In one instance, death from embolism of the carotid followed the operation; and, until I have seen some much more promising result from surgical interference than I have hitherto done, I shall rest content to follow the advice of Mr. Tufnell and our fellow-workers in Ireland, and shall continue to rely on the enforcement of rigid recumbency, rest, mechanical and physiological, spare diet, and the free use of iodide of potassium, as the most promising plan of treatment hitherto proposed.

Surgery of the Abdomen and Pelvis.

Of all the triumphs of modern surgery, none can compare in magnitude or importance with those obtained in the region of the abdomen. If we had nothing to show in proof of the advance of our art beyond the one modern operation of ovariotomy, that alone would entitle surgery to rank amongst the foremost of advancing sciences. When we remember the few but trenchant sentences in which our distinguished associate, Mr. Spencer Wells, in the Address in Surgery, at Manchester, pourtrayed the number of years that have, by this operation alone, been added to the sum of human life,(h) and call to mind the fact that, by the hands of two operators only—Mr. Wells and Dr. Keith—the lives of more than 1000 women have been rescued from death, to say nothing of the results of the same operation in other hands, and of its steadily-increasing success, we have assuredly as great reason to be proud of our work as any class of men in the world! But when we add to this the fact that, in addition to the ovary, there is scarcely a single abdominal or pelvic organ the diseases of which have not been successfully grappled with by the surgeon, our success stands out in yet more bold relief.

Forty or fifty years ago, the domain of the peritoneum was considered almost supersacred; he who would trench upon it was little less than a heretic in surgery; and loud indeed was the cry of disapproval which arose on all hands when the first bold proposals were made to deal more freely with it. I myself have heard the operation of ovariotomy denounced as "barbarous," and unhesitatingly condemned as "unjustifiable," and that chiefly because its performance rendered necessary the laying open of the peritoneal cavity. But the hand of the innovator has changed all this, and he who would now hesitate to make the attempt to save a life, simply because it involved the risk of opening the peritoneum, would hardly be worthy of the name of "surgeon." I would not indicate by this that we have lost a tittle of our real respect for the peritoneum, but only that we have learned that, with the exercise of due caution, it is no less approachable than other important portions of the body; and that diseases, the cure of which involve its exposure, are none the less to be undertaken.

Permit me to illustrate this proposition by the mention of a case which has passed under my own observation. Mr. Teale, on one occasion a few years ago, called the surgical staff of our hospital together in consultation on the following case:—A middle-aged man suffered from persistent obstruction of the bowels; every conceivable effort had been made, first, to relieve him, and, secondly, to ascertain the exact seat of obstruction, but unsuccessfully on both points. Nevertheless, it was believed that the obstruction must be in the large intestine, and that it was probably low down; the exact whereabout was the knotty point we were met to determine. Nothing could be felt from the rectum; no clue could be obtained by examination through the abdominal walls; and yet, as the man was clearly going to die, what was to be done? The abdomen was laid open; the stricture was sought for, was ascertained beyond doubt to be seated in the sigmoid flexure, and to be impassable. The abdominal wound was immediately closed; Amussat's operation was performed while the man was still under the influence of the anæsthetic. The patient made a good recovery, and afterwards resumed his duties as a butler.

Indeed, the operation of "Gastrotomy" has of late been so successful in our hands that we are beginning to question the propriety of permitting anyone to die from obstructive intestinal mischief, without first ascertaining whether relief may not possibly be obtained by this means; and since it has been shown that, under the protection of antiseptic precautions, such operations may be performed with less risk than was possible even a few years ago, we are becoming more and more confirmed in the view that it is our duty to accept the responsibility of such action.

In connexion with this subject of abdominal section, it has further been in our power to show that in cases of extra-uterine fœtation it is possible not only to save the life of the mother, but, in some cases, of the infant also. My colleague, Mr. Jessop, has placed on record a case in which it was his great good fortune to be thus successful; and when we, who had seen the woman apparently dying before our eyes, saw her again, six weeks afterwards, herself exhibiting her living child to the members of the West Riding Medico-Chirurgical Society, we felt that he had achieved a triumph of which he had indeed just reason to be proud.(i)

Extirpation of Uterine Tumours.—Of the extirpation of uterine tumours I have nothing that is new to say; and of removal of the uterus itself I have no personal experience to offer you. That such an operation has occasionally been successfully performed is, I believe, beyond doubt; but, up to the present time at least, the number of cases is so few, and the result so unpromising, that I feel I cannot speak with any confidence concerning them. I would fain hope, however, that in the future greater success may reward the efforts of those who seek to extend the range of surgery in this direction.

Diseases of the Kidney.—In dealing with affections of the kidney, we have of late had experience well worthy to be placed on record.

Several cases of that somewhat rare form of disease which, for want of a better name, we call "perineal cyst," have passed under our observation. We believe these to be cases in which either the kidney itself has become dilated, or in which, by condensation of the cellular tissue surrounding it, a cyst has been formed, and that, between this and the kidney, either a direct communication is established, or that, by transudation through the walls of the kidney, the constituents of the urine become freely intermingled with the secretion of the cyst itself. Certain it is that these contents, which often accumulate to the extent of many pints, are strongly impregnated with urinary constituents, and, if not actually urine itself, constitute a very near approach to that fluid. If left to themselves, after accumulating to a very large size, they become liable at any time—either by rupture into and diffusion of their contents into the surrounding cellular tissue on the one hand, or into the peritoneum on the other—to bring about a fatal termination; and hence, since they appear to be beyond the reach of medical treatment, we have thought it right to attempt their cure by surgical means. Our first attempt to deal with them was by simple "aspiration," and that failed us; the sac in every

(h) "Lord Selborne, in opening the new branch of the Samaritan Hospital, entered into a curious calculation, and showed the total gain of life of 373 survivors of my first 500 operations to be 10,817 years of average healthy life, instead of the 1492 years of miserable endurance which they might have passed before death without operation. Of the 400 patients operated on since the 500, 306 are cured, making the total recoveries 679. Multiplying this number by twenty-nine years, the average estimated gain of each patient, the total gain amounts to 19,691 years." (*Vide* T. Spencer Wells' "Lectures on the Diagnosis and Surgical Treatment of Abdominal Tumours," *British Medical Journal* or *Medical Times and Gazette*, July 13, 1878).

(i) *Lancet*, November 4, 1876, page 661.

instance speedily refilled, and the drain upon the patient was thereby only increased. Next we have followed aspiration by efficient drainage; and in this we have succeeded better, one case having completely recovered. Finally, should these means continue to fail us, we propose to attempt their radical cure by the use of iodine or other irritant injections.

Greater success has rewarded our attempts to deal with certain forms of disease of the kidney itself. In cases, for instance, of chronic suppuration, rather than permit the pus to drain away through the bladder to the great and constant irritation of that organ, and the steady detriment of the patient's general condition, Mr. Jessop has, on two occasions, sought the suppurating kidney through the back, and, after opening it freely, has left a drainage-tube in it, to the unspeakable comfort of the patient at the time, and with a fair prospect of eventual recovery; and, on one memorable occasion, rather than permit a child to die from malignant disease of the kidney, the same gentleman succeeded completely in removing the entire organ. By his kind permission, I am enabled, in this preparation, to show you the kidney so removed, and to state that the child, so far as the operation was concerned, made a most excellent recovery, though it afterwards died from return of the disease.

On certain occasions, when we have been convinced of the presence of a calculus or of calculi in the kidney, a search has been made there for the concretion. Hitherto, however, no great success has attended our endeavours in this direction; but we have felt encouraged, by the results of other cases involving section of the kidney, to repeat such operations whenever a reasonably clear diagnosis can be made: for in no instance has death appeared to have been accelerated by such procedure; and in one, though no stone was discovered in the kidney at the time of the operation, it was found after death, a few weeks later, that the diagnosis had really been correct, that there was a calculus impacted in the upper portion of the ureter, and that, had the search at the time of the operation been only a little more boldly pressed, and had a sound been used in addition to the finger, it would have been detected, and could easily have been removed.

Lithotomy and Lithotrity.—This brings me to the consideration of the subject of our treatment of stone when lodged in the bladder. At the time when I entered the profession, lithotomy was, practically, the only method open to the surgeon for the cure of this condition, and it is during the time to which this review is limited that the whole subject of lithotrity has been developed and worked out.

True, the earlier attempts in this direction had been previously made, but so little progress had been attained, and so crude were the instruments at that time in use for the purpose of crushing stones, that, practically, lithotrity could hardly be said to have been an accepted and recognised method of dealing with calculus.

But how steadily the subject has since been followed out, how exquisitely the instruments required for the purpose have been modified and perfected, and how surely the operation has itself been advancing in favour in the eyes of surgeons of the present day, let the wondrous tables of operations and results lately published by Sir Henry Thompson show.(k)

My own experience of lithotrity is such as to lead me to hope that the time is not far distant when the major operation of lithotomy *in the adult subject* will have become a surgical rarity; that no stone will be permitted to remain so long in the bladder as to pass beyond the reach of the lithotrite; and that, *except in the case of children*, lithotomy will have become one of the operations of the past. Greater accuracy in diagnosis, more thoroughness in the acquirement of manipulative skill by students and junior practitioners, and an increasing knowledge on the part of the public—all, in my judgment, point in this direction; and, even as I write these words, I learn that, with a promptitude worthy of the restless activity of our profession, the very latest acquisition of science, the microphone, has been pressed into the service of our work; that, by its aid, Sir Henry Thompson has been able to demonstrate the existence in the bladder of even the most minute fragments of a broken stone; and that henceforward little excuse will remain to us if even the smallest calculi should escape detection an successful treatment by the lithotrite.

But a few words more as to the surgery of the urinary organs, and I dismiss the subject.

The many ingenious and varying methods proposed of late years for dealing with inveterate and impermeable strictures attest the magnitude and importance of that subject. Internal urethrotomy, as performed by Mr. Lund; dilatation from behind, as practised by Mr. Cock, Mr. Furneaux Jordan, and others; the sudden rupture and forcible dilatation of Mr. Barnard Holt; the various and ingenious methods recommended by Mr. Teevan; and, finally, my own operation, if I may be excused for speaking of myself, by which the stricture is carefully traversed through the centre, by division from without,(l) suffice to attest the activity of the surgical mind in this direction, and all tend to show that it will be long before our ingenuity in this matter is likely to be exhausted.

Surgery of the Limbs.

In no department of surgery has greater advance been made than in dealing with the treatment of injuries, diseases, and abnormal conditions of the limbs. It is not my intention to detain you at any length with the consideration of this portion of my subject; but there are certain points without mention of which I should deem my address to be wholly incomplete.

Modern Treatment of Dislocations.—Need I mention, in the first place, the essentially different conditions since the introduction of anæsthetics, under which the surgeon of the present day is placed in dealing with the major dislocations, from those under which his brethren in former generations were compelled to work? Contrast the reduction of a dislocated hip, for instance, now with what it was in the days of Sir Astley Cooper. Remember the preparation and appliances deemed necessary in Sir Astley's time. Bleeding almost to syncope, the hot bath, large doses of tartar emetic, of digitalis or tobacco, to lower the patient to such a degree as to enable the surgeon to overcome the action of powerful muscles; then relays of men or multiplying pulleys, and force almost unlimited, to drag the bones into their proper positions. Whereas now a few inhalations of ether or chloroform, and the patient lies powerless, relaxed, and unresisting at our command; a few simple, well-directed, and effective manœuvres on the part of the surgeon, and the dislocation is reduced! No blood is lost; no bodily agony is endured; there is no violent and forcible stretching by powerful pulleys; no strength is exhausted; no constitutional deterioration is inflicted: save only for the injury done to the joint by the accident, the patient is no worse than he was the moment before it happened, but awaking, as from slumber, finds, to his unspeakable comfort, that all has been put right for him, whilst he has known nothing of what was being done!

Excision of Wounded Joints.—Or suppose one of the larger joints—the shoulder, the knee, or the elbow—to have been injured and so lacerated as would have compelled the surgeon in former days to amputate the limb; have we not, in a carefully performed excision, a vastly more hopeful method of dealing with the case?

And even while we are still rejoicing in what excision has enabled us to do for the cure of joints disabled by disease, are we not learning from our Liverpool friends, under the leadership of Mr. Thomas,(m) that a better method even than excision is at our disposal, and that, by an intelligent and persistent use of absolute immobility, we can procure for our patients, without the smallest risk, results far better and more perfect than follow the most skilfully performed and most successful of excisions?

Subcutaneous Osteotomy.—For acquired deformities of the limbs, whether resulting from rickety disease of the bones, from faulty muscular action, or remaining as legacies left by diseases of the joints already in a measure cured, we have in subcutaneous division of the muscles, and of the bones themselves, a means of restoration to utility altogether unknown to former generations.

Reunion and Restoration of Divided Nerves.—Neither, so far as the limbs are concerned, do the muscles, the bones, or the joints mark the limit of our recent surgical acquisitions. In the *Lancet* of June 1 of the present year,

(k) *British Medical Journal*, March 16; and *Lancet*, March 16, 1878: "Analysis of Five Hundred Cases of Operation for Stone in the Bladder of the Male Adult," by Sir H. Thompson.

(l) See *British Medical Journal*, June 24, 1876: "Perineal Section, as performed at Leeds."

(m) See Thomas on the "Diseases of the Hip, Knee, and Ankle-Joint."

a series of experiments are recorded as in progress in Germany, the object of which is to ascertain whether the nerves, like other structures, are not amenable to surgical treatment for their restoration after division and complete loss of function; but, whilst the Germans are patiently experimenting to determine the point, it is my good fortune to be able to answer this question distinctly in the affirmative, as the following case will show:—

On May 5, 1875, a patient named Adam S., a labourer, aged twenty-two, entered the Infirmary at Leeds, under my care. He limped into the ward on crutches, his left lower limb being completely paralysed and useless, and stated that he had come to request us to remove it, as an encumbrance. The story he told me concerning it was this:—Nine months previously, as he was returning home one evening, at the close of his day's labour, carrying his scythe over his shoulder, being anxious to make a short cut to his cottage, he attempted to climb over a fence; in doing this, the point of his scythe caught in the hedge behind him; he was jerked suddenly backward, and fell with the back of his thigh upon the sharp edge of the implement. The result of this was a ghastly wound, the contracted cicatrix of which measured nine inches in length when I first saw it nine months afterwards. He lay, bleeding profusely, where he fell, for many hours before he was found and carried home; there the hæmorrhage was staunched, the wound was dressed, and, in process of time, it slowly healed; but he noticed, during the whole time so occupied, that the limb was slowly wasting and withering away, and that it manifested no sign whatever of any returning sensibility.

Eventually, when he was able to leave his bed, he found to his horror that, although the wound was healed and the limb was apparently saved, it had become wholly useless to him. So far as the distribution of the sciatic nerve was concerned, the power of sensation was entirely lost; of voluntary muscular power he had none, and the joints were relaxed and flaccid.

I need not detail to you all the efforts, vain efforts indeed, that he made to recover the lost powers of the limb; suffice it to say that, receiving no benefit from anything he did or tried, he finally came to the hospital to ask for its removal.

The whole cause of the mischief was, of course, clear at a glance. The sciatic nerve had been divided, and, in the healing of the wound, the separated ends had never reunited. Here, if ever, was a fair opportunity to test the question, Are nerves which have been divided, and have for long remained disunited, capable of restoration?

I called my colleagues to my assistance in forming an opinion on the matter. Dr. Clifford Allbutt was good enough most patiently and carefully to test electrically the condition of the disused and wasted muscles, and he reported that, though not wholly destroyed, their irritability was well-nigh exhausted. My surgical colleagues agreed with me that whereas, should the attempt to restore the lost nerve-power altogether fail, I could still, as a last resource, remove the limb, I should be justified in making an attempt to reunite the ends of the divided nerve. After fully explaining to the patient the position of affairs, and obtaining his assent, I determined to do so.

Having laid open the back of the thigh, and, by a careful and deliberate dissection of the parts, exposed the wounded nerve, I found it completely cut across; the two ends were firmly felted in cicatricial tissue, two inches apart. On the upper one was a large bulbous swelling, the lower appeared atrophied and somewhat wasted. Both were carefully loosened and detached; the bulb was removed from the upper one, and each was then pared obliquely until apparently fresh nerve-tissue was exposed. When I then attempted to bring them together, the nerve was found to be so much shortened that I could not do so until I flexed the knee fully. This enabled me to make the ends of the nerve meet without strain; they were then carefully stitched together with very fine carbolised catgut thread, the wound was closed, the ankle was firmly lashed to the buttock, and in this position the patient was put to bed.

I will not weary you with details. Suffice it to say that little by little, and in very wandering fashion, day by day, and week after week, sensation was found to be returning in the limb. At the end of five weeks I began slowly to relax the position and let down the leg inch by inch, until at length it became straight again, and then, to my intense satisfaction, I found that the restored sensibility remained. By very slow degrees the power of voluntary motion also returned, and on August 7 he was discharged from the hospital so far cured that, with the help of two sticks, he was able to support himself on the limb and could walk. From that time to this he has gone on improving. During the whole of the past winter he has worked in the fields as he was wont to do before his accident, requiring neither stick nor support, nor help of any kind; and, though the limb remains greatly inferior in size and nutrition to the opposite one, it is, to all intents and purposes, a useful member again.

Since the performance of that operation, my colleague Mr. Atkinson has in similar manner successfully reunited a divided median, and Mr. Jessop has reminded me that, long prior to my case, he also had been equally happy in thus dealing with an ulnar nerve.

Thus, gentlemen, aiming discursively at much, and accomplishing only, I fear, too little, I have wandered over the field of more recent surgical advancement, and it only now remains for me to thank you for the kind and patient indulgence with which you have listened to the feeble effort I have made to acquit myself of the very onerous and responsible duty it has been the pleasure of your Committee of Council to impose upon me.

ORIGINAL COMMUNICATIONS.

IODOFORM IN EYE-DISEASE.

By PATRICK J. HAYES, L.R.C.P. Ed., L.R.C.S.I.

I AM anxious through the columns of the *Medical Times and Gazette* to direct the attention of my professional brethren to the value of iodoform as a therapeutic agent in the treatment of certain subacute and chronic diseases affecting the eyes and eyelids.

Many practitioners are of course aware that for a considerable time iodoform has been used as an application in cases of trachoma or granular lids, and reports have been published, in America and elsewhere, illustrative of the good results which frequently ensue upon its employment. I have not, however, seen any recommendation of it for such cases as phlyctenular and pustular ophthalmia, corneal ulceration, obstinate keratitis, ciliary blepharitis, etc.; hence, as I have found it to benefit several patients so affected, I venture to invite for it a trial at the hands of my *confrères*. With respect to the method of application, I may mention that it is my custom to crush the crystals until they become reduced to a very fine powder, and then, with a delicate camel's-hair pencil, the powder is *freely* dusted over the affected surface. For use upon the eyelids such an ointment as the following will be found convenient:—Iodoform, 1 part; vaselin, 4 parts: mix.

Iodoform, when brought into contact with the eye, does not give rise to pain, and children who have once experienced its effect will readily tolerate subsequent applications.

I have only to add that it is not suitable for, and ought not to be used during, the early or acute stage of conjunctivitis.

29, Westland-row, Dublin.

NASCENT OXYGEN AS A DISINFECTANT AND DEODORANT

IN THE TREATMENT OF WOUNDS AND ULCERATED SURFACES.

By JOHN DAY, M.D.

GENERALLY speaking, pure fresh air is the best and most natural of all disinfectants and deodorants, and it is universally admitted that the oxygen it contains is the only element on which these properties depend. In hospitals and sick-rooms, however, atmospheric oxygen alone is not always capable of destroying the whole of the organic matter which may be suspended in the air, and under such circumstances the use of nascent oxygen naturally suggests itself to our minds, oxygen in this state being much more active than ordinary atmospheric oxygen. My object in this communication is to show that, by a very simple and inexpensive method, nascent

*

oxygen may be readily, and, if advisable, continuously, applied to wounds and ulcerated surfaces. So long ago as November, 1869, I demonstrated before the Medical Society of Victoria the hitherto unrecognised fact that kerosine, gasoline, and benzine, eucalyptus and many other essential oils, linseed, almond, and olive oils, all animal fats, and a large number of other hydrocarbons, are capable of absorbing atmospheric oxygen and converting it into peroxide of hydrogen, which will remain stored up in them until they are brought into contact with substances for which the oxygen of peroxide of hydrogen has an affinity, when it will be liberated and oxidate them. Schönbein had previously shown that oil of turpentine is possessed of the same property. I have on several occasions been honoured by notices of my investigations on this subject in your journal.

Peroxide of hydrogen contains a larger proportion of oxygen than any other known substance, one-half of which is held in very loose combination, and readily given off in the presence of decaying organic matter, which it quickly oxidates and renders innocuous. Now, this property in itself strongly recommends the use of peroxide of hydrogen as a general disinfectant; but what renders it specially adapted for the disinfection of wounds and ulcerated surfaces is the curious property that both blood and pus possess, more particularly the latter, of decomposing peroxide of hydrogen, and liberating its oxygen in a nascent or ozonised state.

I have found that bandages, lint, and other dressings for wounds, after having been well soaked in the following solution—viz., oil of turpentine (the older the better) one part, benzine seven parts, oil of verbena (or any other agreeable essential oil) about five drops to the ounce—will not only at once become highly charged with peroxide of hydrogen, but will retain their power of actively generating it for many months. The drying process should be conducted slowly, either in a well-ventilated room or in the open air. Another advantage may be derived from the use of bandages, lint, etc., which have been thus prepared. Peroxide of hydrogen rapidly liberates the iodine from iodide of potassium; and in cases in which the local application of iodine is indicated either for curative or disinfecting purposes, they may be moistened, either before or after their application, with a solution of iodide of potassium, the strength of which may be regulated according to the effect it is desirable to produce.

Geelong, Australia.

Operations on the Diabetic.—Prof. Verneuil brought before the Société de Chirurgie a man fifty-eight years of age, who had entered the hospital for the purpose of having a tumour of the upper jaw removed on account of the intolerable pain to which it gave rise. Prof. Verneuil observed that few patients died in consequence of excision of the upper jaw for sarcomas, but almost all of them died from relapse. His reason, however, for not operating in this particular case is that the patient is diabetic (sixty grammes of sugar being found in the urine in the twenty-four hours); and although we may, and even ought to, perform urgent operations in diabetics, Prof. Verneuil is of opinion that a case like this ought not to be meddled with.—*Gaz. Hebd.*, August 9.

Reflex Ophthalmia.—Under this title, Dr. Coppez, of Brussels, called attention to the fact that writers on diseases of the eye and ear dwell far too little on the close sympathy which prevails between these organs, and which indeed is better appreciated by the public than by the profession. As a contribution to illustrate the subject, he relates some cases in which this connexion was so closely observed as to be clearly causal. Two of these were examples of what is sometimes met with in practice, of a severe affection of the eye following the suppression of discharge from the ear, this showing itself in one of them in the form of a fatal gangrenous phlegmon of the eyelids, and in the other as an acute panophthalmia, followed by total loss of the eye. Two other cases are related as examples of irido-choroiditis and iritis induced by the presence of foreign bodies in the ear, the eye being lost in the one case owing to the fact of the foreign body in the ear not being known of in time, while in the other its timely removal enabled the iritis and keratitis which had arisen to be subdued by energetic treatment. Dr. Coppez has seen several similar instances of this sympathetic action between ear and eye, and he thinks it is not sufficiently attended to by practitioners. —*Presse Méd. Belge*, June 23.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

CHILDREN'S HOSPITAL, PENDLEBURY, MANCHESTER.

CHRONIC PHTHISIS—LATENT TUBERCULOSIS OF BRAIN—MENINGITIS OF VERTEX.

(Under the care of Dr. HUMPHREYS.)

[Reported by Judson Bury, M.B., Senior Medical Officer.]

James C., aged seven, admitted June 16, 1877. Father has been blind for three years, but his health is good. Nothing is known about the mother. Patient is the only child. According to the father, he was in good health until March last; since then he has had a slight cough, accompanied by pain in the chest. During last week cough has been more troublesome. This was the only information that could be got as to the previous history.

On admission, face full, pale, waxy-looking; much emaciation; chest constricted laterally. Dulness in the first three right interspaces, with tubular breathing and metallic crepitation. The same physical signs in right supra-spinous fossa and below the left clavicle, where, however, the dulness was not so marked. Abdomen flaccid and somewhat sunken. Spleen not felt. Tongue thinly furred.

June 18.—Was sick yesterday afternoon, and again this morning. Bowels moved three times. Temperature 99·2° to 100·2°.

19th.—Sick four times yesterday. Temperature 101·2° to 100·2°.

20th.—At 1 a.m. became very low and deadly pale. Now lies with his eyes half closed, taking no notice of anything. Temperature 101·2° to 102·2°.

21st.—Takes no notice, and cannot be aroused. Eyes closed. Respirations 36. Breathing stertorous. Pulse 136, weak and small. Mucus collecting over corneæ; left one of which is beginning to ulcerate; ocular conjunctivæ reddened. Right optic disc pale; margin well defined; vessels very small. Left disc in a similar condition, but leading downwards from its apparent lower edge was a white oblong tract, resembling a tail of opaque nerve-fibres. The right arm stiffened out during the examination. Temperature 101·4° to 102°.

22nd.—Profoundly comatose. Has not been sick. Bowels loose. Pulse very small. Temperature 101·4° to 101°.

23rd.—Temperature 101·4° to 102·8°.

24th.—Temperature 100·6° to 100·4°.

25th.—Has been lying motionless since last note. Muscles of arms relaxed. Temperature 100·6° to 100·4°.

Died on June 26.

Autopsy.—Convolutions of brain somewhat flattened. Several areas of recent lymph seen in the pia mater of the convexity and of the longitudinal fissure, chiefly in the following situations: on the right side along the posterior two-thirds of the first frontal convolution both on its upper and inner aspect, and at the inner end of the ascending frontal. On the left side, upon the inner ends of ascending frontal and parietal convolutions, scattered streaks of lymph were likewise found in most of the sulci of the convex of the left frontal lobe. No lymph was found upon the base of the brain. On section a large caseous mass was found embedded in the cortex of the first right frontal convolution. It was situated upon the inner portion of the posterior half of the convolution, and penetrated from the surface into the brain-substance for a depth of three-quarters of an inch. Another caseous mass was found near the inner end of the fissure of Rolando on the right side; it involved the adjacent portions of the ascending frontal and parietal convolutions. The mass penetrated the cortex of each convolution for a depth of one-eighth of an inch. On the left side some small caseous masses were found upon the inner surface of the first frontal convolution. Here and there small knots of caseous material were found entirely surrounded by grey matter. The masses showed no tendency to soften in the centre; their borders were crenate; there were no zones of hyperæmia around them, and the transition from them to the unaltered brain-substance was abrupt. In no place did it appear that the brain-substance had been pushed aside by

the masses. No caseous material was found in the cerebellum. Brain-substance generally of firm consistency. No marked distension of ventricles. Thorax: Right upper lobe of lung adherent to chest-wall by firm cellular bands. Each lung was riddled with foul ulcerating cavities, between which were tracts of slate-coloured indurated tissue and caseous masses. Very little healthy lung-tissue was left. Bronchial glands were enlarged, hardened, and pigmented. Heart healthy. Liver pale and fatty; several caseous masses, some of them as large as hazel-nuts, were embedded in its substance, most of them resting against its diaphragmatic surface; weight twenty-seven ounces. The kidneys together weighed four ounces and a half, healthy. The ileum presented two small ulcers.

Remarks by Dr. Humphreys.—This case presents a strong contrast to the one described in the *Medical Times and Gazette* of July 27. In each there was a localised lesion of brain-substance at the inner end of the fissure of Rolando, together with tracts of lymph upon the neighbouring surface. But whilst the one was associated with unilateral convulsions and paralysis following them, the other, as far as we could ascertain, was unaccompanied by any motor symptoms whatever. It would appear that in the latter case the brain-substance had not been pushed aside, but had simply been replaced by caseous matter, and that the change had been accomplished without irritation of the grey matter. The only symptoms produced by the meningitis of the vertex in this case appear to have been vomiting and coma.

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Medical Times and Gazette.

SATURDAY, AUGUST 17, 1878.

THE ADDRESS IN FORENSIC MEDICINE.

In the admirable and instructive Address in Forensic Medicine which Dr. Maclagan delivered to the British Medical Association on the last day of its late meeting, he addressed himself chiefly to the advantages that the Scottish system of inquiry by Procurator-fiscal possesses over the English system of inquiry by Coroner's Jury. But before going into this subject, he made some remarks pregnant with sound, practical common-sense on the estimation in which forensic medicine is held by the public, and by the professions of law and medicine. The general public—*i.e.*, the public outside the professions of medicine and law—are, he thinks, astounded by the evidence given by true experts, and regard as something marvellous "the delicate chemical results, the logically connected physiological phenomena, and the accurately noted pathological appearances, say in a trial for murder by poison, by well-qualified experts." This is a very desirable state of things; and we entirely agree with him that "we need not in any spirit of mock humility deny the power of good medical evidence for the detection of crime, and we may with honest pride point to what it can do, and in numerous instances has done, in the way of vindicating the offended majesty of the laws of God and man." But we fear the description must be felt rather satirical if applied to the estimation in which forensic medicine is held by the general public in England; and indeed a vein of satire runs all through Professor Maclagan's able Address. This part of it, at any rate, gives, we fear, a description, so far as England is concerned, of what forensic medicine ought to be, and might be, rather than of what it is. And when he proceeds to consider the estimation in which that "department of State medicine" is held by the professions of medicine and law, we get very clearly the reasons why it is not more duly and effectively appreciated among us.

Our practising lawyer regards forensic medicine as a rather sharp weapon: Professor Maclagan says that he has rather a dread of it; it is a double-edged tool, he thinks, "or it is a kind of boomerang, which may make a deadly hit if skilfully thrown, but which may occasionally turn back in an unexpected way, and smite the arm which projected it." He has no acquaintance with the weapon, or next to none, and not knowing its powers and capabilities, he is afraid of it, or despises it; the results whereof not seldom being that the hands of barristers are crippled, nonsense is sometimes uttered from the judicial bench, and there is a miscarriage of justice instead of a vindication of the offended majesty of the law. But "no man is called to the Scotch Bar who has not attended a course of lectures on medical jurisprudence"; and consequently forensic medicine is more properly appreciated among Scotch than among English lawyers.

Still more fatal is the fact that in our own profession the study of medical jurisprudence is neglected and cold-shouldered, and students of medicine are led, if not taught, to think it a matter of little or no importance. Professor Maclagan very rightly demurs to the argument, not rarely heard, that forensic medicine is not a special science, but only that which is known to every man who is a well-informed and duly educated medical practitioner. This, he points out, is a very unsafe doctrine. "Medical questions assume a very different aspect, and reflect very different hues, when viewed in the glare of a court of justice, from what they do in the mild light of the hospital or the sick-room;" and the function of the teacher of forensic medicine is to teach the student to look at medical matters, with which he may be familiar as a practitioner, in the peculiar light under which they may be viewed in a court of justice. It has been proved over and over again that a man may be not only a good but an excellent and most successful medical practitioner, and yet may make a very poor appearance in the witness-box, or when, by an unhappy chance, he has to prepare evidence to be placed before a court of law. Yet the want of due appreciation of forensic medicine obtains, as Professor Maclagan points out, not only with students of medicine and medical practitioners in general, but also with those who regulate medical studies. In proof of this he cites the scheme for the Conjoint Examining Board for England. It will be remembered that under that scheme examiners are to be appointed "to conduct examinations in the following subjects:—1. Anatomy; 2. Physiology; 3. Chemistry;

4. Materia Medica; 5. Medical Botany; 6. Pharmacy; 7. Medicine; 8. Surgery; 9. Midwifery; 10. Forensic Medicine"; but a note is appended, stating, "Questions in Forensic Medicine are to be included among those asked by the examiners in Chemistry, Medicine, Surgery, and Midwifery." We have long ago, and more than once, commented on the insufficiency and extraordinary character of this arrangement, and we are glad to find that Professor Maclagan vigorously exposes its absurdity. He says that "it strikes him as curious that, whilst it is proposed to have a specific examination on medical botany (whatever that may be, as distinct from the knowledge of the vegetable materia medica, and scientific botany), forensic medicine is left to be distributed among the examiners in chemistry, medicine, surgery, and midwifery." He should have thought that the framers of the clause might have remembered two practical though musty old proverbs—one of which is, "That what is everybody's business is nobody's business; and that these various examiners, having their own subjects to attend to, are not likely to give much attention to forensic medicine. The other proverb relates to the danger of falling between two stools; but here we have no less than four of those articles of furniture on which forensic medicine is expected to poise itself, and I need hardly say that here there is a double chance of a tumble." He justly adds that "candidates for medical honours will not think much of a department of knowledge on which they are not to be asked questions except in a vaguely incidental manner by those who are engaged in examining them on other, and, as he proclaims them to be, more directly important subjects." He recognises the fact that this criticised regulation is only part of a scheme for the examination of candidates for the minimum qualification to practise—for the examination of the general practitioner—and that it may therefore be said to be sufficient for its purpose. But he refuses to assent to any such doctrine. He regards the regulation as an "educational phenomenon," for which it is difficult to account, but he presents a humorous and satirical explanation of it. He suggests that the framers of the regulation, in considering the subject of forensic medicine, "must have suddenly found themselves in close proximity to the law; that, fired with a spirit of surgical enthusiasm, they made an exploratory incision into the *corpus juris*, and from its 'awful belly' (to use an expression of Thomas Carlyle) they extracted that well-known nodule of the wisdom of the civil law, *De minimis non curat prætor*, and translated the maxim thus: 'The courts will not care much for the evidence of our minimists.'" And "the courts would be right," he adds, "if this be the way in which forensic medicine is to be set before the eyes of those who are working their way into the profession, provided the courts could dispense with the evidence of all but those holding the highest qualifications." But the very contrary of this is, as a rule, the case. "In the majority of instances, it is upon the evidence of the general practitioner, not on that of the special expert, that the tribunals must depend for the primary information which is essential for their guidance." And any member of the profession may any day be called upon "to narrate facts and state opinions in reference to a case with which he may one way or another have been connected." He has no choice in the matter. When a man is once qualified he may choose to confine himself to the practice of medicine, of surgery, or of midwifery; and no one can compel him to practise any branch but that which he has selected. But let him have became connected with any case presenting some element of suspicion, and "a magistrate, a coroner, or a procurator-fiscal may summon him, under penalties, to give evidence in a court," and thus may oblige him, *nolens volens*, to practise forensic medicine. Professor Maclagan opines that should a Joint Board be ever established in Scotland, forensic medicine will find itself in the position of an independent subject of examination, instead of being treated in the way the English authorities have treated it; and we trust, and expect, that he is right in this opinion.

Had Professor Maclagan confined himself to this part only of his subject, we should have been grateful for his Address, and have counted it as one of the ablest and most useful of the addresses delivered to the members of the Association. But he proceeds to give us an excellent and highly instructive description of the preliminary proceedings in the investigation of cases of suspicion in Scotland, comparing them with the method followed in England, greatly to the disadvantage of the latter, and to suggest how even the Scottish method may be made more perfect. He points out that the first and most characteristic difference between the practice of the two countries is the existence of a public prosecutor in Scotland, and the absence of such an official in England. He points out that this difference is "a radical difference in following the great fundamental principle, which, so far as we know (except in England), guides the criminal procedure of every European country, as it also does that of the United States of America—viz., that it is the duty of the State to undertake the prosecution of offences"; and he forcibly urges the appointment of public prosecutors in England. He then strongly denounces the coroner's court as an anachronism and an anomaly. He suggests converting the coroner into the local public prosecutor; and would reserve the medical man "for his proper professional work," making him "the indispensable adviser and guide of the public prosecutor whenever medical considerations are at all involved." All this part of Professor Maclagan's Address ought to be carefully studied by the profession and the public; and we shall take a future opportunity of commenting upon it in connexion with a consideration of the reform of the coroner's court.

ADDRESS IN SURGERY.

The Address in Surgery was delivered to the British Medical Association by Mr. Wheelhouse, of Leeds, and consisted chiefly of a review of the progress of surgery during the professional lifetime of the author. Such reviews have been not infrequent on similar occasions; and, of necessity, a retrospective survey of the kind must be in great part occupied with the details of the various improvements in surgery which have recently been made public, and cannot therefore be expected to have the charm of novelty or originality. A greater interest would therefore have been given to the Address had the author made some general deductions from his observations, pointing out or criticising the surgical tendencies of the age, or directing the attention of his hearers to the fields most needing investigation.

A very important contribution to our knowledge of the surgical treatment of divided nerves was, however, made by Mr. Wheelhouse at the end of his Address, by the relation of a case in which the lost functions of a divided sciatic nerve were restored by an operation, by means of which union of the divided nerve was obtained. The operation was, moreover, undertaken nine months after the injury, and when the limb was wasted and useless; and, as its result, the patient is now walking about quite well upon the limb which he applied to Mr. Wheelhouse to amputate. This case, though it has been sometimes alluded to, has, we believe, not before been published, and we have much pleasure in calling our readers' attention to it, as of itself rendering the Address in which it is related well worthy of perusal. Two other cases in which divided

nerves have been similarly restored are mentioned: one in which the median was operated upon by Mr. Atkinson; and another, said to have occurred long prior to Mr. Wheelhouse's case, in which Mr. Jessop obtained union of a divided ulnar nerve.

In M. Letiévant's elaborate treatise on Nerve-Sections, published in 1874, there is no mention of any such treatment, and Mr. Wheelhouse's experience on this subject will certainly be new to most surgeons.

At the outset of his Address, Mr. Wheelhouse speaks somewhat contemptuously of the empiricism of our forefathers. We are glad, however, to see that he qualifies these remarks by disclaiming the wish to "foolishly underrate the teaching of experience"; for it seems to us that one of the evils of the present system of teaching medicine and surgery, is that the young practitioner is prone to rely too much upon his theoretical knowledge, and too little upon the accumulated experience of his predecessors. After alluding to the use of anæsthetics in surgery, the advantage of Esmarch's bandage is spoken of, and its especial applicability to operations for the removal of bony sequestra is pointed out. Mr. Wheelhouse then goes on to speak of the various ligatures for the arrest of hæmorrhage, and states his opinion that "the only safe way of securing an artery is fairly to divide the inner and middle coats of the vessel, and that the only ligature to be trusted to do this efficiently is a well-made, firmly twisted round cord of silk." While agreeing with the first half of this statement, we cannot but think that the second half is too exclusive. We are not aware that secondary hæmorrhage has been more common in consequence of the use of properly prepared catgut for the ligature of arteries; while, on the other hand, there is a manifest advantage in the use of a material which allows of primary union of the wound in which it is left. Neither in dealing with the subject of ligature of arteries, nor with that of the surgical treatment of intra-thoracic aneurism, does Mr. Wheelhouse allude to the instances of distal ligature which have recently been published; but he prefers to rely upon Mr. Tufnell's method for the treatment of aneurism within the chest.

The lecturer expresses a decided opinion in favour of antiseptic surgery, and draws especial attention to the advantage of the drainage of wounds. He also alludes to Dr. Williams's case, and to one of Dr. Allbutt's, in which a vomica was emptied and washed out by external puncture. Some instructive cases of paracentesis of the pericardium are related, and the surgical treatment of empyema discussed.

In speaking of the advantages of physiological rest, Mr. Wheelhouse mentions several cases in which he has successfully treated ulceration of the bladder by a free perineal opening such as is made in lithotomy.

The plaster-of-Paris jacket is spoken of approvingly, but with a wise caution against expecting too much of it.

Mr. Wheelhouse records his opinion that "specialities in surgery are distinctly disadvantageous"; but, we think rightly, exempts ophthalmic practice from such condemnation; and he naturally takes account of the important aid to diagnosis and treatment which has been furnished us by such instruments as the ophthalmoscope and laryngoscope. It would not be fair to complain of omission in a lecture which includes so many subjects, but we are somewhat surprised to find no allusion to the remarkable progress that has been made in plastic surgery—notably, in the operative treatment of cleft-palate.

Among the triumphs of modern surgery, however, the success to which the operation of ovariotomy has been brought, is justly spoken of as pre-eminent; and, altogether, the retrospect with which Mr. Wheelhouse furnishes us shows that surgery has not been behind the other arts in rational progress and development.

BATHING IN PUBLIC.

We venture to return to the subject of "public bathing," for a very sufficient reason. In our former article we dwelt chiefly on the right of the public to be protected from indecent bathers, and we pointed out that the local "by-laws" of seaside resorts were insufficient, since the authorities had no power of regulating bathing other than that which took place from licensed bathing-stands, and no power of protecting visitors and residents from wilful indecency on the part of the great body of bathers. We remarked that the law, indeed, was open to all, and that anyone might prosecute an offender for a misdemeanour; but we insisted upon the well-known fact that what was everybody's business was never done, and so we expressed a hope that the Local Government Board would apply for further powers. We wish now, however, to say a word or two on behalf of bathers, and even of indecent bathers; for however offensive public bathing may be to travellers or residents, we have no desire to see a punishment inflicted which is not appropriate to the offence, by means of the distorted provisions of an Act which was never intended to regulate bathing in any way whatever. At the "Castle" at Exeter, on July 26 last, a bather was summoned for indecent exposure by the Town Clerk of Exeter, under "the Vagrant Act," which provides for the punishment of such an offender as a rogue and vagabond. The man, who did not appear in answer to the summons, was convicted, and, as the Act does not impose a fine, he was sentenced to one week's imprisonment with hard labour. In this case there were some circumstances stated which lead us to feel less pity for the offender, for he is said to have unnecessarily exposed himself before entering and after quitting the water; but we cannot shut our eyes to the fact that the real offence consisted mainly in his bathing from the banks of the canal, which are stated to be pleasant places of public resort at this season of the year. It is mentioned in the police report that the public bathing-place on the bank of the canal was open on the day the offence was committed, without payment, up to nine in the morning; and this may leave little excuse for the offender; but is impossible not to feel that the Public Health Act is defective if it does not enable the authorities of Exeter to enforce by-laws to regulate bathing, and obliges them to fall back upon the "Vagrant Act" to punish indecency. It exhibits a state of things neither fair to the authorities nor to imprudent bathers. We are reminded that one of the Articles of War—we believe it is the 105th—includes all crimes not specified in any of the other articles, so that, like some monstrous legal polypus, its arms embrace every object and strangle all who come within its reach. Lord Hardinge, we think, called it "the devil's article," as he thought no man could escape if indicted under its provisions. Now, it seems to us that at Exeter the Vagrant Act has been employed as a devil's article to insure a conviction for indecency when no other Act was available, and we are tempted to somewhat sympathise with an offender trapped and netted by such legal ingenuity. It must be remembered that nothing is easier than to impute wilful and aggravated indecency when the action is in itself an indecency legally, although the offender may not mean it to be so, and may not even know that it is so. It is hard that the magistrates should have to decide whether a bather's proceedings in the water, or while dressing or undressing, are unnecessarily and intentionally indecent. Some people take a long time to undress themselves, and others

play extraordinary freaks in the water. It is not fair that a man should be convicted as a vagrant for turning a somersault in the water, nor that he should be punished as a vagabond for running after his fugitive shirt in a high wind. The Vagrant Act was never passed to regulate bathing, and we hope it will never be called into action again, unless in cases where it is clear that the offender's object was not bathing, but only to find a way of outraging decency. It is certain that bathing in public, involving, as it must do, great exposure of the person, will always be offensive to some squeamish people. There are those who strain at a gnat and swallow a camel; and doubtless some of those who gaze with rapture upon an undraped form in an art gallery would be offended by the sight of a boy ten years of age with nothing on but his bathing-drawers. But, as a rule, the sensible public would ask for but little protection from bathers, although they rightly insist upon some; and we hope that the Government Local Board will bestir itself to provide adequate remedies for present inconvenience, and obtain powers which would be sufficient to protect those who bathe and those who are obliged to look on. In itself bathing is right and proper, and conduces to a healthy state of mind and body; and a bather, even if he somewhat misbehaves, should not be sentenced under the Vagrant Act. Swimming will hardly become popular if those who practise it may be called upon to pay for their amusement by a week's hard labour as rogues and vagabonds.

THE WEEK.

TOPICS OF THE DAY.

The recent verdict in the case of Henry George King, who was tried at the Central Criminal Court last week for the manslaughter of a child, through the use of a preparation of violet-powder prepared and sold by him, will have been anticipated by most of our readers. The prosecution called Dr. C. Meymott Tidy, Professor of Medical Jurisprudence at the London Hospital, who deposed to having analysed the violet-powder in question, which he found to contain thirty-eight parts of arsenic out of every hundred. Terra alba, he explained, was a sulphate of lime, and, in the case of children, was used to prevent chafing. He gave it as his opinion that not merely had a portion of the arsenic been absorbed through the skin of the child by the ordinary way in which the powder was used, but that in the act of powdering the dust went into the air and got into the system through the mouth of the child. At the close of the case for the prosecution, Mr. Justice Field expressed his opinion that no criminal negligence could be attached to the prisoner, and ultimately the jury concurred in that opinion. The judge admitted that the case was one which it was only right that the Government should have taken up to insure full investigation; but, taking into consideration the action of the prisoner, and his endeavours to rectify the evil as soon as the disastrous results were made public, he did not see how he could be found guilty by the jury of gross and criminal neglect.

The Society of Apothecaries have awarded their prizes for medical students as follows:—The gold medal to T. B. Franklin Eminson, of St. Mary's Hospital; and the silver medal and books to W. Egerton Starling, of Guy's Hospital. They have also awarded their prizes for young women as follows:—The gold medal to Alice Graham, of 155, Hungerford-road, N.W.; and the silver medal to Mary Isabella Webb, of West-hill Lodge, N.W. The third in order of merit received a prize in books from Miss Twining, of Twickenham. The examinations, both for medical students and young women, were conducted by the Rev. M. Berkeley, M.A., and the papers of many of the young women are reported to have exhibited considerable knowledge and ability.

It is not a usual thing for a man to write a certificate of his own death: but last week a bookbinder was tried at the Central Criminal Court for obtaining money by false pretences from the Hearts of Oak Benefit Society, by means of forged documents. He first secured various weekly sick payments by means of forged medical certificates, and this succeeded so well that he next forged a medical certificate of the birth of an imaginary child, which entitled him to a payment of 30s. Finally, he tendered to the secretary a forged certificate of his own death, which he attributed to cancer of the tongue whilst under treatment in Charing-cross Hospital. The jury found the man guilty, and his talent for forging medical certificates was stopped, at least for the present, by a sentence of eighteen months' hard labour.

Another of those buildings containing baths and wash-houses, so much required in London—more especially in the lower neighbourhoods—was recently opened in Goulston-square, High-street, Whitechapel, by Sir Thomas Fowell Buxton. The site had previously been devoted to a similar purpose some thirty years ago; but the baths have been closed for a length of time. Mainly owing to the interest taken in the institution by Mrs. Bullar, of Basset Wood, Southampton, whose husband was one of the promoters of the original scheme, a number of gentlemen formed themselves into a committee, and after paying off all the liabilities of the old undertaking, they have been able to hand over the present building complete, together with a sum of £1500, to the Vestry of Whitechapel. All the necessary alterations have been made, and all modern appliances introduced, and although there is no large bath for swimming, there are separate baths to the number of twenty-one first class and forty-seven second class for men, and seven first class and fourteen second class for women. The charges in the first class are fixed at 6d. for a hot and 3d. for a cold bath, and in the second at 2d. and 1d.

The three attendants belonging to the Gloucester County Lunatic Asylum who were charged with the manslaughter of an inmate on June 27 last, were last week tried at Gloucester before Mr. Justice Manisty, and although Dr. Packer, one of the medical officers belonging to the Asylum, gave it as his opinion that the injuries received had accelerated death, in which view he was confirmed by Dr. Mackenzie, another of the Asylum medical officers, the jury, without hesitation, acquitted the prisoners. The verdict at first sight scarcely seems to be in accordance with the evidence, but the judge, in his summing up, especially cautioned the jury on the subject of the deposition made by another lunatic in the Asylum who witnessed the struggle, remarking that it was impossible to say what effect upon a diseased brain might not have been produced by the scene, and which might have led this witness to exaggerate in giving an account of it afterwards. Still it is difficult to reconcile such injuries as a broken breast-bone and eleven ribs with only the necessary amount of force required to restrain a fractious patient.

The evidence taken before the Select Committee of the House of Lords, appointed last January to inquire into the prevalence of habits of intemperance, and into the manner in which those habits have been affected by recent legislation, etc., has just been printed in the form of a Blue-book. The Committee, which was presided over by the Duke of Westminster, held fourteen sittings in all, and examined forty-two witnesses, including Mr. Robert Whitworth, of Manchester, one of the honorary secretaries of the Sunday Closing Association; the Rev. Dawson Burns; Sir Henry Thompson;

Sir James Bain; Dr. Albert Bernays; Dr. B. W. Richardson; Dr. J. Murray McCulloch; Mr. Sullivan, M.P.; Mr. Murphy, M.P., etc. The Committee have come to no conclusion upon the subject, but they have expressed a hope "that they may be permitted to resume their inquiry in the next session, with a view to the further consideration of their report, which they have been unable to complete before the termination of the present session."

We take this opportunity of notifying that the subject selected for the Parkes' Memorial Prize Essay is "On the Effects of Hygienic Measures in Arresting the Spread of Cholera." The prize is of the value of £100 in money and a gold medal, and the competition is open to Medical Officers of the Army, Navy, and Indian Services, of executive rank, on full pay, with the exception of the Assistant Professors of the Army Medical School at Netley during their term of office. Essays are to be sent to the Committee of the Parkes' Memorial Fund, care of the Director-General, Army Medical Department, Whitehall-yard, London, on or before December 31, 1880. Each essay is to have a motto, and to be accompanied by a sealed envelope bearing the same motto, and containing the name of the competitor.

The Medical Officer of Health to the Chesterfield Union, Dr. Macintosh, has reported that scarlet fever is rapidly increasing in certain parts of the district. He attributed the spread of the fever in many instances to the fact of relatives attending the funerals of persons who had died from this infectious disease. At Blackburn, also, the epidemic of fever is on the increase; three bad cases from the west end of the town have been sent to the workhouse. At the eastern end of the town five cases of fever have resulted fatally. The Sanitary Committee propose a house-to-house visitation in fever districts. The outbreak is attributed to the poor diet of the factory workers during the recent nine weeks' lock-out.

The outbreak of typhoid fever in the suburbs of Bristol is developing, and already over eighty cases are known in forty-three houses. The Medical Officer of the city has reported that they have all been traced to one milk-supply at a farm on which was a well of water contaminated by sewage and typhoid fever germs, a convalescent patient having been staying at the farm. The well has now been stopped, and every precaution taken. He learnt that other convalescent patients had been accommodated at farms which largely supplied milk to Bristol, and this fact he thought pointed to the desirability of placing the milk-supply of large cities under some official supervision.

It is officially reported at San Stefano, that in the Russian Army to the South of the Balkans there are at the present time nearly 21,000 sick, in the Army of the North 6500, and in the reserves 5500; but there is no increase in the amount of sickness, and the rate of mortality is comparatively low. Since the month of March last, nearly 27,000 sick have been sent homewards by transport steamers. There are about 800 medical officers attached to the active Army of the Danube. The semi-civilised condition of Russia must, in the present case, be a great boon to its rulers. What would have been the language of the press of any other European power had such disastrous results amongst its troops have occurred in any modern campaign?

The Metropolitan Asylum Board recently visited the Asylum at Caterham, where eight years ago they purchased about seventy acres of land for building purposes, and were shown fruit gardens, vegetable fields, and corn fields, the crops on which have been treated with the sewage of the Asylum without any detriment to the health of the inmates. The Asylum has, at the present time, 1965 inmates—845 men, and 1120 women. It is built on the block principle, each class of patients having separate wards instead of being all classed together as imbeciles. There are no children in the Caterham Asylum, the young being under treatment at an asylum specially provided for them at Clapton; and it is worthy of remark that, although the patients at Caterham are classed as "chronic imbeciles," yet by skilled treatment in these good wards many are able to be discharged restored to mental and physical health.

WATERING-PLACES AND SUMMER RESORTS.

The Registrar-General's Return for the quarter ending June 30 of the present year gives some interesting and useful information regarding the sanitary condition—as indicated by the general death-rate—of certain watering-places and summer resorts. In the thirty-seven seaside towns the average mortality during the quarter was at the comparatively low annual rate of 18·2 per 1000, and in the nine inland watering-places of 19·1 per 1000. "The sanitary condition of most of them is," the Registrar-General remarks, "very satisfactory. In some places the practical result of the labours of the sanitary authorities has been remarkably successful." The following places give the best rates, the figures representing the annual rate of mortality during the last quarter: —Herne Bay, 8·5 per 1000; Worthing, Lowestoft, and Weymouth, between 12·0 and 13·0; Eastbourne, 13·9; Margate, 14·0; Dover, 14·1; Littlehampton, 14·6; Folkestone, 15·0; Isle of Wight, 16·2; and a few other places were also below the average of 18·2. In Torquay the general death-rate was below that average, having been 17·5; but in the sub-districts seven fatal cases of enteric fever and three of scarlet fever were registered. The Registrar-General well observes that "while a low rate of mortality from all causes indicates the healthy condition of such districts, a high death-rate does not always mean insalubrity, for, besides visitors in search of healthy relaxation, these places are the resort of the sick and infirm, whose deaths unduly augment the mortality." Thus, in Hastings (including St. Leonards), where the death-rate (20·2) was above the average, the deaths of twenty-four visitors are reported; and in Scarborough, "where it is believed the sanitary conditions are good," the death-rate (22·0) was also above the average. In Deal, where there were seven deaths from scarlet fever, and two from fever, the mortality was at the annual rate of 19·6 per 1000. In Southport it was 21·1, and in Blackpool and Fleetwood it was 22·3. In four of the Welsh sub-districts much has yet to be done in order to place them in a satisfactory position on the hygienic scale, for the death-rate of Llandudno was 25·0, Bangor 26·0, Rhyl 26·2, and Tenby 26·8. Of the nine inland watering-places the healthiest were—Malvern 10·9, Clifton 15·9, Leamington 17·5, and Cheltenham 17·6. In Bath, out of 320 deaths, 125 were of persons aged sixty years and upwards, and the rate was 23·5. The mortality for the quarter from seven zymotic diseases in the forty-six watering-places was at the annual rate of 1·63 per 1000, ranging from 0·25 in Weymouth and in Malvern, 0·31 in Worthing, and 0·44 in Eastbourne, to 3·39 in Llandudno, 3·59 in Tenby, 4·57 in Tunbridge Wells, and 8·03 in Penzance. The death-rate from the seven zymotic diseases in all England was 2·75, or 1·12 higher than the rate in the forty-six watering-places.

THE NECESSITY FOR A MINISTER OF HEALTH.

The Hygienic Congress held at Paris last week was largely attended, between 600 and 700 persons being present, the gathering proving one of the most extensively supported meetings of the kind ever held. On the part of England, Mr. Edwin Chadwick read a paper on the Limits of Central Control. In the course of his remarks, and whilst referring incidentally

to Cyprus, Mr. Chadwick explained that, although formerly a seat of high culture and of a large thriving population, the island was now only sparsely inhabited, was eaten up by sloth, and depressed with extensive marsh miasma. But the most important point dwelt upon by the lecturer was that which urged that the magnitude of the preventable evils to be dealt with for the protection of the health of populations required the organisation of a district central department of the public health, presided over by a Minister of State, of equal position with other Ministers, members of the supreme Government; that such Minister should be endowed with supervisory and consultative functions as president of a central board for the exercise of executive attributions for the protection of the public health; that in connexion with such central authority local representative bodies should be appointed, with supervisory and consultative functions over local officers of health, with securities for special aptitudes, giving their whole time to the responsible performance of their duties. He expressed his conviction that, whenever disconnected and weak local administrations were remedied by a completely organised administration, such an improvement would be effected in the health, strength, and well-being of populations as no age had ever witnessed or imagined. The discussion which followed the reading of this paper was entirely favourable to the views put forward by Mr. Chadwick.

THE BRITISH ASSOCIATION.

The Forty-eighth Annual Meeting of the Association commenced at Dublin on Wednesday, August 14. The University of Dublin, as on the two former occasions when the Association visited the Irish metropolis (in 1835 and 1857) set apart the various halls and lecture-rooms of Trinity College for the general and sectional meetings. Of these we hope to give some account next week. At present we can only mention that the first general meeting was held in the Exhibition Palace, Earlsfort-terrace, on Wednesday evening, when Professor Allen Thomson, M.D., LL.D., F.R.S., resigned the chair, and Mr. William Spottiswoode, M.A., LL.D., F.R.S., F.R.A.S., F.R.G.S., President-elect, assumed the Presidency and delivered the address. On Thursday evening there was a *soirée*, and on Friday evening a discourse on "Animal Intelligence" was to be delivered by Mr. J. G. Romanes, F.L.S. The medical profession is fairly represented in the sections. In Section B (Chemical Science) the President is Professor Maxwell Simpson, M.D., F.R.S., F.C.S; and the Vice-Presidents are Professor Apjohn, M.D., F.R.S., F.C.S., and Professor J. Emerson Reynolds, M.D., Ph.D., F.C.S., M.R.I.A. In Section D (Biology) one of the Vice-Presidents is Dr. Robert McDonnell, F.R.S., and among the secretaries are Dr. R. J. Harvey, Dr. Thomas Hayden, Professor W. R. McNab, M.D., and Professor J. M. Purser, M.D. Dr. W. M. Burke, the Registrar-General for Ireland, is one of the Vice-Presidents of Section F (Economic Science and Statistics).

THE POPLAR HOSPITAL FOR ACCIDENTS.

In the twenty-third annual report of the Poplar Hospital for Accidents, the governors call attention to the fact that the current income for the year 1877 fell £240 below the preceding year, and they regret to observe that about £60 of that diminution occurs in the collection by working-men, while their applications for assistance have been much more numerous. The Committee admit that trade depression must have due consideration, but they feel called upon to urge upon the working-classes the grave duty of making some sacrifices for the support of an institution existing wholly for their benefit. The Poplar Hospital authorities will be fortunate if they are able, by this appeal, to inculcate habits of providence in the great masses of working-men by whom their institution is surrounded. A subscription of one penny a week from the wages of the dock labourers of the district would raise a sum nearly sufficient for the support of the charity, but before that could be collected it would be necessary to eradicate the prevailing notions which exist in the minds of the lower orders on the subject of hospitals generally. Meanwhile, it is to the liberality of the shipping and commercial firms which abound in that district that the Hospital must look for sustaining its necessary amount of income.

MILK CONTAMINATION.

Epidemics of milk-typhoid and milk-diphtheria are, unfortunately, of so frequent occurrence, that any legislative measures of a preventive character must be received with welcome. In the Contagious Diseases (Animals) Bill, which comes into operation after September 30, there is inserted the following clause, which, it is to be hoped, will do good service in the direction indicated:—

"Dairies, Cow-Sheds, and Milk-Shops.—The Privy Council may from time to time make such general or special orders as they think fit, subject and according to the provisions of this Act, for the following purposes, or any of them:—1. For the registration with the local authority of all persons carrying on the trade of cow-keepers, dairymen, or purveyors of milk. 2. For the inspection of cattle in dairies, and for prescribing and regulating the lighting, ventilation, cleansing, drainage, and water-supply of dairies and cow-sheds in the occupation of persons following the trade of cow-keepers or dairymen. 3. For securing the cleanliness of milk-stores, milk-shops, and of vessels used for containing milk for sale by such persons. 4. For prescribing precautions to be taken for protecting milk against infection or contamination. 5. For authorising a local authority to make regulations for the purposes aforesaid, or any of them, subject to such conditions, if any, as the Privy Council prescribe."

THE KEW GARDENS REPORT.

Sir Joseph Hooker's Annual Report for 1877 contains a large amount of information on the acclimatisation, extended cultivation, or further development of useful plants. The ipecacuanha (*Cephaëlis ipecacuanha*), a native of Brazil, has been distributed from the Calcutta Botanic Gardens to Ceylon, Singapore, Burmah, and the Andamans. But Dr. King does not take a very hopeful view of its ultimate success in India. Its peculiarly slow grow growth tends to prevent its cultivation being taken up with spirit by European planters; and its insignificant appearance, we are told, does not excite interest among the planters. Sir Joseph Hooker suggests it as "worthy of consideration whether the Indian Government would not do well to establish a nursery in some part of our Indian possessions with the tropical climatic conditions necessary for its growth." And, considering the great value of the ipecacuanha in the treatment of dysentery, it is satisfactory to note that there seems to be some prospect of its cultivation being attempted in the native State of Perak, where the soil and climate are considered to be well adapted to its requirements. Sir Joseph gives a useful warning respecting the cultivation of the *Eucalyptus*. He says: "The merits of the numerous species of this genus are beginning to be understood, and there is no doubt that, where the climate is suitable, few timber-trees can compare with them for rapidity of growth and excellence of wood. Popular misconceptions, however, prevail on the subject to some extent. Attempts to grow in tropical climates the species of temperate ones such as *Eucalyptus globulus* can only result in disappointment." One interesting subject noticed in the Report is that connected with vegetable poisons, more particularly the arrow poisons. It is pointed out as "a subject well deserving of investigation, though it has been doubted whether the ingredients employed have any

really poisonous qualities." Some of the plants from which these poisons are obtained have been promised to Kew, so we hope to know something more definite about them before long. We are indebted to our contemporary, *Nature*, for a notice of Sir Joseph Hooker's Report.

HOSPITAL SATURDAY FUND.

The fifth meeting of the Board of Delegates for the present year was held in the Board-room of the West London Hospital, kindly lent for the occasion. In the absence of Mr. Samuel Morley, M.P., President of the Fund, Mr. John Hughes, the Chairman of the Council, presided. There was a good attendance of members, and the Secretary, Mr. Parr, gave a full report of the progress of the work, which the delegates seemed to think portended a successful collection. Mr. A. W. Mackenzie (Hon. Secretary) then brought up the plan of distribution, as approved by the Council. In moving its adoption, he explained that the Distribution Committee, in order to make the plan as perfect as possible, had put themselves in communication with some of the leading medical men of London, who had been good enough to give some valuable advice. They had also examined the plans in use by the Saturday or Sunday Funds of Dublin, Liverpool, Manchester, Portsmouth, Leeds, Nottingham, and Birmingham, and he thought the scheme as now submitted would be found to work well. After some discussion, the plan was adopted. It was stated that the Council had extended the time for the receipt of applications from the hospitals and dispensaries to participate in the year's collection to August 13. Hospital Saturday itself has been fixed for September 7.

THE PUBLIC HEALTH COMMITTEE OF DUBLIN.

We mentioned last week that this body had practically "gone on strike." The Dublin Sanitary Association have adopted the following resolution in consequence of the action of the recognised sanitary authority:—"Resolved, that the Executive Committee, having considered the resolutions recently passed by the Public Health Committee in reference to a proposed retrenchment of sanitary expenses, owing to the existence of a large debt due to the Borough Fund, are of opinion that retrenchment should, in the first place, be effected in all other departments whose expenses are defrayed out of the said Borough Fund, and that during the epidemic of small-pox there should be no interruption of the sanitary measures at present being carried out in the city; that this Committee are further of opinion that the Local Government Board should be requested to see that, if it became necessary to curtail the sanitary expenses payable out of the Borough Fund, ample means from some other source shall be forthwith provided to defray such expenses."

The Library of the Royal Medical and Chirurgical Society closed on Saturday last, and will re-open on Thursday, September 12 inst.

Annual Meeting of the Bradford Medico-Chirurgical Society.—This Society terminated its sixteenth annual session in July, 1878, under the presidency of R. H. Meade, Esq., F.R.C.S. The yearly report showed an increase in the number and attendance of the members, in the importance of the papers submitted to the meetings, and the value of the pathological and library departments. The financial report showed a large increase in the funds of the Society. After votes of thanks to the retiring office-bearers, the following gentlemen were elected for the ensuing year:—*President*: W. Burnie, M.D. *Treasurer*: W. Whalley, M.D. *Secretary*: D. Goyder, M.D. *Committee*: R. H. Meade, H. Meade, J. Dunlop, M.D., and J. Craig, M.D. *Curators*: T. C. Denby and J. Appleyard, M.B. *Auditors*: S. C. Hirst and J. Dunlop, M.D.

THE BATH MEETING OF THE BRITISH MEDICAL ASSOCIATION.

(*From our Special Correspondent.*)

Bath.

The forty-sixth annual meeting of the British Medical Association is now among the things of the past, and though we have to record it as one of the dullest known as far as the ordinary characteristics of such meetings are concerned, nevertheless it will live were it only for the vital questions settled thereat. So eventless and commonplace were the proceedings, that the whole sum of actual news then available with regard to the meeting was embodied in the short paragraph we published last week; but the subsequent days were thick with matters of importance.

It was augured from the list of papers to be read that from a scientific point of view the meeting would not be one of those to be marked by a white stone in the annals of the Association, and the augury was fairly borne out. Moreover, it was known that the then President-elect had been granted, in advance, a kind of bill of emancipation as regarded personal expenditure in entertaining the Association; and this did not look promising for festivity. In point of fact, there has been no meeting of the Association for many years where this feature has been less marked; and the growls of those who make this their annual outing have been both loud and deep. To finish with that which is now, however, we suspect, a matter peculiarly interesting to the Association, we may say that the hospitality shown towards strangers at Bath was very limited. Certainly, the Mayor and Corporation gave what is commonly called a *conversazione;* but of these things most men are heartily tired. Moreover, the Mayor himself gave a garden-party; but I saw a man vehemently raging on the second day of the meeting because he could get no ticket. Yet the members present at any one time never reached above 200. The President and Council did their duty by entertaining all officers of sections and readers of addresses, and therewith they were content. I am far from contending that these meetings should degenerate into an annual junketting; but I am only a repeater of the general opinion, as I said before, that was loudly expressed in most of the hotels in the city. But I was nearly forgetting one example of liberal hospitality. Any member, on the presentation of his ticket of membership, could have as much of the mineral water as he liked, and free baths *ad libitum*.

The Branch under whose auspices we met is called that of Bath and Bristol; but the Bristol men were conspicuous by their absence. Few indeed took part in the proceedings, though they gallantly came forward and offered the Association another *conversazione* in their new Colston Hall; but this was not altogether a success. The chief feature in it was a concert by a local choir, which certainly was excellent of its kind; but as this would not begin until everybody had sat down, and the local President had to make violent personal efforts to keep the door closed, the effect was somewhat marred when men and women, overpowered by heat, longed after ices or cups of refreshing drink—for there was no interval. It certainly was amusing to see gentlemen struggling back into the hall when the door was finally opened, bearing such-like refreshments, and encountering the full surge of the crowd charging for the supper-room. By the way, the only *morceau* encored during the concert was a new setting of Moore's mournful "Oft in the stilly night"—very pretty and very well sung. Musical amateurs will, perhaps, recognise in it certain features appertaining to the old "Phyllis brought me fairest flowers"; nevertheless, it was most effective. This constituted the *finale* of the meeting, if we except the excursions in various directions on Saturday—some for

the Wye, some for the Cheddar country, and some for the Marquis of Bath's at Longleat. Nor should we forget to mention the daily afternoon excursions, which, though not exactly rivalling in attraction those of the famous Plymouth meeting, where on one occasion there were neither hearers, readers, nor papers in one section, at least were most enjoyable. But it is time to turn to other features of the meeting.

Decidedly the most important paper, from a practical point of view, was that read by Jonathan Hutchinson as an introduction to a discussion on intestinal obstruction, with special reference to its surgical treatment. Curiously enough, this was read in the Medical Section, and attracted a large number of visitors. As so often happens on these occasions, the discussion which followed was very much a one-horse affair, but of the speakers the most notable was Dr. Clifford Allbutt, whose views and beliefs Mr. Hutchinson took occasion to review in a somewhat caustic manner when it came to his turn to reply on the whole. Perhaps we ought in due deference to have noted first of all Professor Grainger Stewart's address as President to the Section. It was of marked ability, and, unlike most of these addresses, when a man seems beating the air with generalities, he took for his subject one on which he is an undoubted authority, and where his words have weight—that of Bright's disease. This is not the place to criticise, as elsewhere that may be done with greater advantage.

Of the Addresses, decidedly the most popular was that in Surgery, by Mr. Wheelhouse, of Leeds, which was applauded to the echo. Of the two others, already published, you have expressed an opinion. I need only say that Dr. Falconer had for his subject the Bath Waters, which in one sense, at all events, if we are to take the several tablets in the Abbey as a testimony, "lay the dust." Professor Douglas Maclagan's did not appeal strongly to the English mind. It constituted a vindication, or rather apology (the word being used in its true sense), of the Scotch system of criminal investigation in contradistinction to that adopted in England. It was the question of Procurator-fiscal *versus* Coroner, and Dr. Maclagan held strongly, and not unjustly, as I believe, to the former.

But *the* feature of the meeting, and that by which it will be longest remembered, was the woman question. This came on on Thursday, in the shape of a new by-law to be adopted by the Association. The effect of this was that in future no female should be eligible for its membership. Already circulars and voting-papers had been sent round, and an overwhelming majority had recorded their votes against the women; but on the present occasion the question was narrowed. It was not a question whether female medical education should be encouraged or repressed, but simply whether female practitioners of medicine should be allowed to join the Association. Hitherto the articles of association have permitted the election by branches of "all duly-qualified medical practitioners" recommended by a certain number of members, and two lady practitioners—Mrs. Garrett-Anderson and Mrs. Dr. Hoggan—have been so elected. Dr. Wade, of Birmingham, moved as a new article of the Association that no female should be eligible for election, urging that if women became members of the profession of medicine or surgery it did not necessarily follow that they should become members of the Association, which, though an incorporated society, was, in fact, a movable, scientific, and social club, the members of which might not be disposed to discuss medical or surgical cases in the presence of women. Dr. A. P. Stewart seconded the adoption of the proposed new by-law, on the ground that medical men should not have forced upon them the presence of ladies at scientific meetings. Dr. Norman Kerr, of London, opposed the motion, and, maintaining the equal rights of members, he considered that, holding this opinion, he should be doing a mean, unmanly, and unjust act if he remained silent. There was no sex in art or science, and why should there be in medicine? In reply to the suggestion that some medical men objected to discuss questions with medical women, he urged that such men were inconsistent, inasmuch as they treated patients in the presence of a nurse, and made no scruple of modesty in other respects. Dr. Borchardt, of Manchester, also warmly advocated the continued admission of medical women to the Association, but specially contended that by refusing to accept the new by-law the Association should retain its freedom to elect whom it chose. Dr. Sissons, of Barton-on-Humber, supported the motion, on the ground that the admission of women to the Association would seem to imply that this Association was desirous of encouraging the women-practitioner question. Mr. Husband, of York, supported the motion. Mrs. Garrett-Anderson, who was warmly received, next proceeded to deliver a speech, carefully prepared. After the manner of an eminent special pleader, she dealt with the question from an impersonal point of view, and as a question of public medical policy. In the articles of association, the British Medical Association was stated to be founded with two objects—the promotion of medical science, and the promotion of the interests of the profession. With regard to the first object, no one could say that medical science would be promoted by excluding from the Association a body of honest and painstaking workers, who would bring to the study of many important problems some experience essentially different from that of male practitioners. For example, in that large and difficult class of ailments, the functional nervous diseases of women, reaching up to extreme hysteria, was it not likely that medical women would see a great deal of this group of ailments, and could form an opinion as to origin and treatment which it would be more for the advantage of medical science that it should be heard and discussed than suppressed? If the Association existed to promote science, it should be promoted generally, and not partially. If women were *bonâ fide* members of the profession, and really pursuing, not merely the trade, but the *cultus* of medicine, they had a right to claim that medical men should be no less solicitous about the advance of medical women than about their own. Every fresh wave of progress which resulted from the impulse of mind upon mind, from discussion, and contrasted experience, should be for the benefit of women practitioners as well as men. It could not help to promote medical science, to hinder any pursuing it from going so far as they might go if allowed the stimulus of professional or corporate life. Then with respect to the second object of the Association—the promotion of professional interests. Interpreting this to mean that the Association was to be a point of professional union and an articulate voice to guard its interests, she urged that these purposes applied to women practitioners as well as to men; and surely men practitioners would not want women to be placed so that they should be ready to do the largest amount of work for the smallest price! Yet, how could men look for a spirit of comradeship, or regard for the common professional weal. If the men refused women admission to the Association, there would be created in them the spirit of antagonism and self-assertion. She also spoke at length of the strength and vitality of the movement for the education of medical women, and urged the Association not to break off all its own best traditions by refusing fellowship to members of the profession, not in themselves unworthy of it.

One of the most telling points in the speech was the somewhat equivocal compliment to her medical sisters, that if professional men hated each other, their sisters did so with ten times the violence. Here it may be remarked that this, like all the speeches and addresses, was in some parts inaudible, for the Bath Assembly Rooms have certainly not been constructed with a view to acoustic excellence. Then came the

fight. The supporters of the women had mustered in full force, but, as it was soon determined by the President and by every unbiassed person, they were in a hopeless minority. The President declared beforehand that if, on a show of hands, neither party had the advantage, he would divide the members, but not otherwise. The women-men were quite content with this till they saw themselves hopelessly beaten, and then, with that noisy vigour which so distinguishes them, they demanded a new vote. The scene for a time was indescribable: some men, usually sober and sensible, not to say staid in their demeanour, shouted and bawled with the rest. Dr. Husband, of York, vainly attempted to make himself heard. Cries of "Chair! chair!" "Support the chair!" were mixed with "Divide! divide!" till at last Dr. Borchardt, of Manchester, who seemed to have some influence over the shouters, ascended the platform, and, whilst avowing himself a cordial supporter of the women, declared they had been fairly beaten, and advised peace for the moment, that they might the better prepare for a campaign against the new and obnoxious by-law. The room rapidly emptied. Mrs. Garrett-Anderson went quietly off with her husband to the York House for luncheon, and the rest of the business was conducted in peace.

But the women were not done with yet. Another move was in wait for them. At the general meeting on Friday another part of the business had to be attended to. According to the instructions of the lawyer employed by the Association, there had been a certain interregnum between one period of the existence of the Association and another. All members, therefore, who were elected during that period had to be formally re-elected to secure the validity of their membership. To this end it was proposed that all *males* elected during that period should be formally confirmed in their membership. Now, it so happened that during this period Mrs. Dr. Hoggan became (as it now appears, only in name) a member of the Association; and by the wording of the resolution which was carried she is left out in the cold. Thus it comes about that Mrs. Garrett-Anderson is now the only female member of the British Medical Association. Whether she will think it consistent with her position to remain thus alone, or resign the membership, we do not know; but it is tolerably certain she will have no fellow-members of the same sex.

These votes will undoubtedly form the most permanent memorial of the Bath Meeting of the British Medical Association.

Paresi's Hæmostatic Collodion.—Official collodion 100 grammes, carbolic acid 10, tannic acid 5, and benzoic acid 3 grammes. M.s.a.—*Union Méd.*, August 10.

Royal College of Surgeons.—The annual return of the receipts and expenditure of the College during the past collegiate year—*i.e.*, from Midsummer-day, 1877, to Midsummer-day last—has just been published, from which it appears that the income from all sources amounted to £15,486 9s. 5d., and the expenditure to £14,528 16s. 2d., leaving a balance to the good of £957 13s. 3d. The principal source of income was derived, as might be expected, from the fees paid on admission to membership, fellowship, etc., amounting to £12,028 5s.; dividends on stock, £1089 5s. 4d.; and rents from chambers adjoining the College produced £2550 12s. 10d.; elections (two) into the Council, £42. In the expenditure the largest amount was in fees paid to Council, courts, and boards of examiners, amounting to £5814 10s.; salaries and wages for the large and increasing staff in the three departments—college, museum, and library—do not appear extravagant at £3858 9s. 6d.; taxes, rates, and stamps required £1380 6s.; expenses in connexion with examinations, £319 0s. 10d.; alterations, repairs, and painting, £725 19s. 9d.; pensions £278 12s. (now reduced by the recent death of the widow of Mr. Belfour to £78 12s.). A subscription of £105 to the Harvey Statue Fund appears in the expenses, leaving, as already stated, the respectable balance at the bankers of £957 13s. 3d.

ON THE PROGRESS OF SURGERY.

(*From a Correspondent.*)

At the recent meeting of the British Medical Association held at Bath, Mr. Wheelhouse gave a very interesting retrospect of the progress which has been made in the domain of surgery during the period of his own professional lifetime. Roughly speaking, this includes about thirty years. Certainly it would have been difficult to have chosen a like period of years, during which so many great changes had been brought about, as during these just gone by. We cannot, however, quite accept the author's implied disparagement of our predecessors previous to the period of which he more specially speaks. He says, "I could hail with satisfaction the fact that, while in the earlier history of surgery, as of medicine, empiricism was, of necessity, the chief guide, men were content to follow, we are learning, as years roll on, to rely more and more on the guidance of strictly physiological principles." We know that it is a common mistake, which men of our day are apt to make, that they are being guided in their practice by a higher and more extensive knowledge of physiology than were their forefathers: but let us ask, is it really so? Does the practical surgeon of to-day busy himself with the endless details—constantly changing—of all that is going on in the different laboratories of practical physiology; and do they really help to make him a more practical surgeon? Is there one surgeon in ten, of the author's standing, who could even *summarise* what has been done in physiology during the last ten years? And even if he could, would it be found that his principles of practice had been changed in consequence of his physiological knowledge? Let us take inflammation as an instance. Virchow's doctrine of cellular pathology gave the death-blow to every other doctrine which had preceded it; and now Cohnheim's views have completely upset those of Virchow; and yet our treatment of inflammation is much the same as it was ten or twelve years ago: scarcely any two surgeons would view a case in exactly the same manner, and the chances are in favour of a totally different treatment being prescribed by them.

Again, we might ask whether physiology has helped us to explain the action of mercury or of iodide of potassium? Has it taught us the action of specific poisons? We fear not; and consequently our treatment in these cases is just as empirical as in olden times. It is true, we have learnt the value of vaccination—but was not the discovery of it due to accident rather than to physiology? and is not the gain, therefore, as far as science is concerned, empirical rather than physiological? Mr. Wheelhouse would have done well to have backed up his statement by a retrospect of what, according to his views, we will call physiological surgery. On the contrary, he confined himself almost entirely to the manipulative part of the art. We have no desire to be hypercritical, or to underrate the interest as well as the appropriateness of his Address; but we think, in the interests of surgery and of science generally, we should not shut our eyes to the fact that, in spite of all the advances we have made, there is yet much—very much—to accomplish. We fear that progress may be delayed by too much self-complacency; and it is on this account, and lest any feeling of "rest and be thankful" should take possession of us, that we venture to point out our own deficiencies and shortcomings.

To come to the Address itself, we agree with the author that surgery includes a more extended range than in former times, and that "operations which were considered to be wholly beyond the pale of legitimate surgery are now matters of everyday practice." No doubt, as the author said, anæsthetics have done much to lessen the horror of surgical operations. Chloroform and its allies must be thanked for much of the

progress which has been made during the period now under review. We, however, often think of the time when surgical operations had to be done without their aid; and we ask ourselves whether the older surgeons must not have been made of better stuff to have been able, in spite of the "agonised, uncontrollable resistance," to preserve the *sang froid* that enabled them to operate with the "dash" and "brilliancy" which, even yet, are matters of tradition and of emulation. Now all is changed—the patient as well as the surgeon; and anæsthetics are asked for and administered even in the most trivial cases. While congratulating ourselves, therefore, on the progress of our own time, let us bear this in mind; and, remembering that we cannot ever administer anæsthetics without *some* risk, let us ask—Is this really altogether progress?

The author next touched on Esmarch's bloodless surgery—a simple yet highly effective means of arresting hæmorrhage during an operation, and one which surgeons appreciate none the less because it has nothing to do with physiology. A reference to the ophthalmoscope and to the laryngoscope—two practical and valuable instruments which have been added to the surgeon's *armamentarium* within the last few years—was almost a necessity; nor could the use and value of the aspirator have been left out of consideration in such a retrospect as that now before us.

By far the most important subjects for congratulation are the advances that have been made in the surgery of the abdomen. "If we had nothing to show in proof of the advance of our art beyond the one modern operation of ovariotomy, that alone would entitle surgery to rank among the foremost of advancing sciences." We fully agree with Mr. Wheelhouse, although here again is another example, if not of empiricism, at least of material practice, rather than of physiological deduction. Not the least remarkable part of this subject is the fact, admitted by Mr. Wheelhouse, that this advance is all due to the work of two individual surgeons—Spencer Wells and Keith—a strong argument surely in favour of the specialism which Mr. Wheelhouse condemned! It was a decided omission to leave unmentioned the subject of cerebral topography, for here undoubtedly we have need of all our physiological knowledge, in order rightly to appreciate the grand possible outcome of the discovery of the cortical centres of the cerebrum. We hope that not after injuries only, but also in cases of disease, the disturbance of one or other function, the seat of which can be defined, will enable the surgeon to apply his trephine with a precision which was altogether impossible until Broca, Hughlings-Jackson, Hitzig, and Ferrier had taught us the great truths of cerebral localisation.

Another outcome of deductive science is the adoption of Lister's antiseptic method of dressing wounds. The practice is now almost universal; opposition to its introduction into hospitals has entirely ceased, and scepticism is fast melting away before the brilliant results which are constantly coming to light. On the Continent it has met with the most enthusiastic welcome; and many a patient lives to attest its value, who, without it, could scarcely have survived the septic influences of the majority of Continental hospitals. As part and parcel of the treatment, the drainage of wounds, to which Mr. Wheelhouse specially referred, must be mentioned. In the light of our actual experience of the last two or three years, we ask ourselves how it was that free and systematic drainage was not invented ages ago? Such, however, is the fact, that though Chassaignac invented the drainage-tube, it was reserved to Lister to teach us how to use it, and to appreciate its real value.

Mr. Wheelhouse referred to the re-union of divided nerves, and to the restoration of function which followed. Truly a remarkable thing; not the less so when we remember the structure of a nerve-trunk—how it is made up of a number of fibrils, each one presumably charged with a certain definite duty to fulfil. When a divided nerve is stitched together, do the corresponding fibrils always come into contact with each other, or is it a matter of indifference? If so, can the fibrils of a mixed nerve carry motor or sensory influences indifferently? We venture not to answer these points at present, happy in the knowledge that complete function can occasionally be established, even after months of suspension, as the result of an operation which is not only not dangerous to life, but so simple that, if unsuccessful, the patient is no worse off than before.

Want of space prevents our dwelling at greater length on this interesting Address. It was listened to by a large audience with marked attention, and the ringing cheers which greeted the author constituted a gratifying proof of its appropriateness to the occasion.

GENERAL CORRESPONDENCE.

THE SYPHON-TROCAR FOR TAPPING AND OVARIOTOMY.

LETTER FROM MR. T. SPENCER WELLS.

[To the Editor of the Medical Times and Gazette.]

SIR,—Dr. Fitch, of Halifax, Nova Scotia (formerly of Portland, in the United States), has called my attention to an omission in the report of one of my lectures at the College of Surgeons, published in your number of June 29. It is not stated in that report that the modification of my instrument which consists in making the outer tube cutting, and the inner canula blunt (instead of the inner tube having the cutting point, as I at first had it made), is not mine, but Dr. Fitch's. This is very clearly stated at page 336 of my work on "Diseases of the Ovaries," published in 1872; but I seem to have omitted to mention this at the College, and take the earliest opportunity of giving all due credit to Dr. Fitch.

I am, &c., T. SPENCER WELLS.

3, Upper Grosvenor-street, August 13.

NEW INVENTIONS AND IMPROVEMENTS.

GELATINE LAMELS, FOR THE USE OF TRAVELLERS.

THE Gelatine Lamels or Portable Medicines of Messrs. Savory and Moore, of New Bond-street, London, cannot, strictly speaking, be classed among new inventions; but we notice them now for the purpose of calling attention to the great convenience of the preparations for travellers. As is pretty generally known now, the lamels consist of thin, pliable sheets, of uniform thickness, impregnated with a great variety of drugs. Each sheet is subdivided into squares, each square containing one fixed dose of the medicine with which the gelatine sheet is impregnated. The exact dose required can therefore be very easily calculated, and when cut from the sheet may be taken as a lozenge, or floated on a little water and swallowed. The lamels will retain, it is said (and they have been thoroughly tested), "their virtues in any climate, and under any condition of heat, cold, damp or moisture." About sixty different kinds are made; they are so portable that a considerable number can be carried in a small pocket-book or letter case; and Messrs. Savory and Moore provide very elegant handy little pocket-cases for them. Medical men travelling with patients, or travellers for whom medicines have been prescribed, will find these lamels extremely convenient, as well as trustworthy. We may add that they may be used for hypodermic injection, and for ophthalmic purposes, as well as for internal administration.

APERIENT FRUIT LOZENGES.

IN the "Aperient Fruit Lozenges," prepared by Messrs. Baildon and Son, of Princes-street, Edinburgh, we have another instance of the efforts made nowadays to render medicine pleasant, and even attractive. These lozenges are

prepared from the *Rhamnus frangula*, and the effective material is mixed up with saccharine matter, as in an ordinary fruit lozenge. They are pretty and not unpleasant, and we should say, from some trial of them, they are laxative rather than "aperient." They are at any rate very mild, and will probably be found very useful for children (who will, we should think, take them readily) and delicate women. If any fault can be found with them, it is respecting their size—we think they are rather too large; and we offer this final criticism as a friendly suggestion to the ingenious manufacturers.

RHENS WATER.

From Messrs. Stein Brothers, of Idol-lane, London, we have received some samples of a new dietetic or table water, a natural mineral water from Rhens, near Coblentz. It is clear, bright, and sparkling, and very pleasant either alone or mixed with a light wine. It is said to contain, in 10,000 parts, about 11 of sodic chloride, 11 of sodic carbonate, nearly 5 of sodic sulphate, 4·5 of calcic sulphate, and 2·5 of magnesic carbonate. It might become, we think, a very acceptable and useful table-water; but, as at present delivered, it is so highly charged with carbonic acid gas that it is rather unmanageably explosive when a bottle is opened, and it quickly becomes flat and insipid after being opened.

BUCELLAS HOCK.

Messrs. Sandeman Sons, of St. Swithin's-lane, have introduced into the market a white wine, from the district of Bucellas, near Lisbon, to which they have given the name of "Bucellas Hock." It is a clean-tasting, pure, delicately tinted wine, in appearance like a hock; but both in flavour and bouquet it reminds one of sherry. It may be recommended as a sound wholesome wine, and is particularly pleasant mixed with aërated waters. Two other advantages it has also: it keeps well for two or three days after a bottle is opened; and it may be obtained of sound and pure quality, Messrs. Sandeman assure us, at the price of twenty-four shillings a dozen. It is likely to become a popular wine, we think, and is infinitely to be preferred to much of the sherry commonly met with; but it must not be looked upon as a *very* light wine. Like many hocks, it is deceptive in that respect. It looks and tastes like a light wine, but it contains nearly 26 per cent. of proof spirit.

Remarkable Fecundity.—A rare example of this is furnished from Lillers to the *Courrier du Pas-de-Calais*. Madame Zephirin, forty-four years of age, was delivered on July 25 of three infants, who, in the opinion of her medical attendant, exhibit every sign of living. On April 25, 1877, she gave birth to twins, as she did also in February, 1876—making seven infants in twenty-nine months! Adding these to ten single infants to whom she had already given birth, we have a total of seventeen.—*Union Méd.*, August 6.

Paucity of French Doctors in Alsace.—Prof. Schutzenberger, of the late Faculté de Médecine de Strasbourg, in an address delivered before the Association des Médecins du Bas Rhin, points out the difficulty which exists in keeping up the number of native practitioners in Alsace and Lorraine. After the French disasters, he endeavoured to form, with the tacit acquiescence of the German authorities, an independent school at Strasburg for this purpose, and succeeded in getting together seventy students. However, in face of the creation of the new German university, the enterprise failed. Yet, notwithstanding the lavish expenditure bestowed upon this, the admirable new buildings erected, and the famous corps of professors engaged, the body of seventy students of the Ecole handed over—almost all natives of Alsace and Lorraine, who wished to remain in the country—rapidly declined, so that by 1873 it amounted to only twenty-three. Since then the diminution has been progressive, so that in 1877-78 there were only inscriptions of seven Alsatians, while Lorrainers were entirely absent. This, Prof. Schutzenberger observes, is a very serious matter, for it will before long lead to the creation throughout Alsace of cantonal and other official medical functionaries paid by the German Government, and lead to a new era of "medical functionarism that is all that is most disastrous and antipathic to the spirit and genius of the medical profession."—*Gaz. Hebd.*, August 9.

MEDICAL NEWS.

University of London.—The following are the names of candidates who passed the recent First M.B. Examinations:—

ENTIRE EXAMINATION.

First Division.—Henry Thurston Bassett, Queen's College, Birmingham, and Guy's Hospital; Francis Bowe, St. Bartholomew's Hospital; Richard Bredin, Liverpool Royal Infirmary School of Medicine; Louis Alfred Cantin, St. Bartholomew's Hospital; William Chisholm, B.A. Sydney, University College; William Wriothesley Colborne, University College; Frederick Augustus Cox, St. Mary's Hospital; Edward Meade Cuffe, St. Bartholomew's Hospital; Donald Douglas Day, St. Bartholomew's Hospital; Thomas Vincent Dickinson, St. George's Hospital; Albert William Graham, St. Bartholomew's Hospital; Richard Honeyburne, Liverpool Royal Infirmary School of Medicine; Henry Hoole, Charing-cross Hospital; Victor Alexander Hayden Horsley, University College; Robert Jones, St. Bartholomew's Hospital; David Alexander King, St. Bartholomew's Hospital; Thomas Kirsopp, St. Bartholomew's Hospital; Denis McDonnell, King's College; Robert Maguire, Owens College; Henry Maudsley, University College; Frederick Walker Mott, University College; Hubert Montague Murray, University College; Arthur Newsholme, St. Thomas's Hospital; William Rushton Parker, University College; Louis Colton Parkes, University College; William Pasteur, University College; Arthur Edward Permewan, University College; Reginald Pratt, University College; Beaven Neave Rake, Guy's Hospital; John Shaw, St. Thomas's Hospital; Percy Edward Shearman, University College; Charles Alfred Weber, B.A., B.Sc, St. George's Hospital.

Second Division.—Anundrao Atmaram, B.Sc., University College; Charles Alfred Ballance, St. Thomas's Hospital; Henry Ambrose Grundy Brooke, B.A., Owens College; David Collingwood, Liverpool Royal Infirmary School of Medicine; William Job Collins, St. Bartholomew's Hospital; Andrew William Dallmeyer, University College; John Davidson, King's College; Denis William Donovon, University College; Henry Thomas Groom, St. Bartholomew's Hospital; Donald Templeton Hoskyn, University College; George Hurst, B.A. Sydney, University of Edinburgh; George Ryding Marsh, Guy's Hospital; Richard Rundell William Oram, Guy's Hospital; Edward Rice, St. Bartholomew's Hospital; Amand Jules McConnel Routh, University College; John Frederick William Silk, King's College; Henry Smith, St. Bartholomew's Hospital; John Edward Squire, University College; Harold Swale, St. Thomas's Hospital; William Ainley Sykes, St. Bartholomew's Hospital; Edward Sabine Tait, St Bartholomew's Hospital; Walter Duncan Thomas, St. Bartholomew's Hospital; Frederick Rufenacht Walters, St. Thomas's Hospital; Christopher James Watkins, University College; Charles Haydon White, St. Thomas's Hospital.

EXCLUDING PHYSIOLOGY.

First Division.—George Frederick Barnes, St. Bartholomew's Hospital; William Sellers, University of Edinburgh.

Second Division.—John Smith, Guy's Hospital; John Whiting, St. Bartholomew's Hospital.

PHYSIOLOGY ONLY.

Second Division.—Thomas Crisp, St. Thomas's Hospital; George Ernest Fooks, St. Bartholomew's Hospital; Richard Hughes, St. Bartholomew's Hospital; Waldemar Joseph Roeckel, St. Bartholomew's Hospital; Cornelius William Suckling, Birmingham School of Medicine.

Royal Colleges of Physicians and Surgeons, Edinburgh.—Double Qualification.—The following gentlemen passed their First Professional Examination during the July and August sittings of the examiners:—

Solomon Fernando, Ceylon; George Holt; Powell Hudsmith, Bolton; Sarkies Carapiet Sarkies, Dacca, Bengal; Edward George Geoghegan, Dublin; Stephen Frederick Rowan, St. John, New Brunswick; John Minchin Whitaker, Dublin; John Frederick Arlidge, London; Richard Fowler, Dublin; George Skirving, Dublin; Richard Woodward Isbell, Herefordshire; Frederick William John Cox, Edinburgh; William George Kynaston Barnes, London; William Cotton Cornwall, Ballygar; John Henry Lowry, County Down; Augustine William Sinclair, Edinburgh; Francis Edward Cane, Kilkenny; Arthur Nathaniel Davis, Newport, Mayo; Charles Armstrong, Tyrone; John Connal Wilson, Berwick-on-Tweed; Thomas Robert Horton, Melbourne; Reginald Latimer Wellington Greene, Antrim; Nathaniel Wheatcroft Holmes, Derbyshire; George Hill Healy, Dublin; Alexander Wallace, Ballymena; William Ring, Cork; William Clarkson Clarkson, Bradford; Owen Griffiths, Nevin; Charles John M'Farlane, County Tyrone; Jason Thomas Phillips, Carmarthenshire; James Alexander Mather, Fife; Thomas Bouser White, Sheffield.

And the following gentlemen passed their Final Examination, and were admitted L.R.C.P. Edin., and L.R.C.S. Edin.:—

Henry Charles Sloggett, Devonport; William Campbell, Caithness; Hubert Lindsay Miller, Tasmania; James Mackay, County Tyrone; William George Mawbey, Northampton; Robert Nesmith Paton, Manchester; Sarkies Carapiet Sarkies, Dacca, Bengal; John Francis Grayling, Sittingbourne; Henry Hugh Master, Norwich; James Thoburn M'Laren, Bedlington; Henry Croker Garde, County Cork; Solomon Fernando, Ceylon; John Lindsay, County Antrim; Patrick Francis Black, County Meath; Arthur Kyffin Crossfield, Carnarvonshire; John Brett Johnstone O'Meara, Dublin; John Farrar Roberts, Bangor; William Chalmers Cowan, Dundee; Harvey Robins, Portsmouth; James John Frederic Barnes, London; Duncan Simpson McDonald, Glasgow; Wm. Galbraith, Ayr; George Anthony O'Connor, Galway; William Cole Haime, Cornwall; Frederick Thomas Main, Blackburn; Jacob Hartman, Prussia; Henry Thomas Tomlinson, Coventry; James Arthur, Dundee; Henry Brewin Noble, Loughborough; Richardson Joseph Boustead, Wigton; Alfred Degardins, Calais; George Douglas Pidcock, Leicestershire; Peter Anderson, Perth; Walter Kent, Cheshire; John M'Kay, Canada; John M'Crimmon, Canada; John Purcell, County Clare; Peter M'Laren, Prince Edward Island; William Clarkson Clarkson, Bradford; Ebenezer Richard Evans, Cardigan; John Joseph Wade, Galway; John de Burgh Murray,

Dublin; John James Steel, Millport; Albert Vaughan Williamson, Middlesboro'-on-Tees; Ed. Parlane M'Farlane, Islay; John M'Arthur, Kenmore; Thomas Boyman Knight, Lincolnshire: William Cornfoot Philp, Kirkcaldy; Stephen Thomas Phillips, Bedfordshire.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—The following gentlemen passed their First Professional Examination during the July sittings of the examiners:—

John Edward Hanson, Huddersfield; Frederick William Clifton, Derby; Robert Owen Jones, Carnarvonshire.

And the following gentlemen passed their Final Examination, and were admitted L.R.C.S. Edinburgh:—

Kavasji Hormasji Mistri, Bombay; Edulji Manekji Damld, Bombay; John Cameron Dall, Bedlington; Mark Francis Ryan, County Galway; James Cossar Ewart, Penicuik; William Gillespie, Glasgow; James Herron, Glasgow.

APOTHECARIES' HALL, LONDON.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, August 8:—

Cary, Joseph, Paul, Cornwall.
Dunn, Walter, 42, Gordon-square.
Lavis, Henry James Johnston, Stalbridge, Dorset.
Powell, John James, Weybridge.

BIRTHS.

BARNES.—On August 6, at West Bromwich, Staffordshire, the wife of A. R. Barnes, M.B., of a daughter.

CLARK.—On August 9, at Cavendish-place, the wife of Andrew Clark, F.R.C.S., of a daughter.

CONOLLY.—On August 2, at Margate, the wife of Rowley Conolly, M.R.C.S., prematurely, of a daughter, stillborn.

FOURACRE.—On August 7, at 1, Albert-villas, Hornsey-road, N., the wife of R. P. Fouracre, M.R.C.S. Eng., of a daughter.

HAWARD.—On August 7, at 5, Montagu-street, Portman-square, the wife of Warrington Haward, F.R.C.S., of a son.

TODD.—On August 3, at 49, Iffley-road, Oxford, the wife of M. Stanley Todd, L.R.C.P. Edin., of a son.

MARRIAGES.

BREAKEY—HARRIS.—On August 10, at St. George's, Hanover-square, John Breakey, M.D., Fleet Surgeon H.M.S. *Excellent*, to Mrs. Jeanie Thomson Harris.

BUNCOMBE—EATON.—On July 11, at Rondebosch, near Cape Town, John Dobrick Buncombe, M.R.C.S. Eng., to Harriet Mary, daughter of the late Richard John Eaton, Esq.

COLLEDGE—INGLIS.—On August 7, at St. Stephen's Church, South Kensington, Captain John Colledge, 2nd Regiment Central India Horse, only surviving son of Thomas R. Colledge, M.D., F.R.S. Edin., to Jane Mackenzie, daughter of the late W. A. D. Inglis, H.E.I.C., Madras Civil Service.

FITZGERALD—BROWN.—On August 8, at Clapham, Dudley Loftus Fitzgerald, M.D.T.C.D., of Twerton-on-Avon, Bath, to Catherine Elizabeth, only daughter of the late David Brown, Esq., of Lauriston, Clapham, Surrey.

FLOWER—DARBY.—On August 13, at Brixton, George J. W. Flower, M.R.C.S.E., of Yeovil, eldest son of G. F. A. Flower, of West Stafford, Dorchester, to Eliza Jane, fourth daughter of Robt. F. Darby, Esq., of Cirencester.

PHILLIPS—NASH.—On August 8, at New Brighton, Edward J. Montagu Phillips, M.R.C.S., of Rodney-street, Liverpool, to Irma Howard, second daughter of James George Nash, F.R.C.S., formerly Colonial Surgeon of South Australia.

PYE-SMITH—TAUNTON.—On August 8, at Downton, Edward Foulger Pye-Smith, of 2, Belmont-park, Lee, youngest son of E. Pye-Smith, F.R.C.S., of Sevenoaks, to Gertrude, third daughter of William Taunton, of Redlynch, near Salisbury.

TURNER—GRAVES.—On August 6, at Hempstead, Gloucestershire, Alfred Moxon Sydney Turner, M.R.C.S. Eng., of College Green, Gloucester, to Mary Sophia, eldest daughter of Ryves W. Graves, F.R.C.S. Eng., of Gloucester.

DEATHS.

DORSEY, WILLIAM MCTAGGART, M.D., at Ipswich, Queensland, on May 16, aged 64.

HUNTER, CHARLES, M.R.C.S., only son of the late Dr. John Charles Hunter, of Wilton-place, Belgrave-square, at St. Andrew's Vicarage, Hastings, on August 8, aged 43.

JOHNSTON, WINGATE K., L.R.C.P. Lond., Surgeon H.M.S. *Pallas*, eldest son of Inspector-General J. Wingate Johnston, Royal Navy, on board H.M.S. *Himalaya*, on August 2, aged 24.

PIGOTT, MARGARET, daughter of G. W. Royston Pigott, M.D., F.R.S., of Hartley Court, Reading, and Ilkley, Yorks, on August 4, aged 3 months.

ROGERS, A. M., Surgeon-Major H.M.'s 21st Regiment, at Bombay, on July 15.

SEAMAN, CATHERINE ELLA, younger daughter of W. C. Seaman, M.D., Deputy Inspector-General A.M.D., at Ramsgate, on August 5, aged 12 months.

THORNE, THOMAS HENRY, M.R.C.S. Eng., L.S.A., formerly of Leamington, at Kimberley, Griqualand West, South Africa, on June 15, aged 38.

WHITCOMB, HENRY MORONY, M.R.C.S.L. (late of Melbourne), at Richmond, Surrey, of rapid consumption, on August 9.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

EASTERN DISPENSARY OF BATH.—Resident Medical Officer. Candidates must possess the diplomas of a Royal College of Surgeons and the Society of Apothecaries. Testimonials, post-paid, and marked "Eastern Dispensary," to Francis Savage, Esq., Honorary Secretary, 10, Beaufort-buildings East, on or before September 2.

ESSEX AND COLCHESTER HOSPITAL.—House-Surgeon and Apothecary. Candidates must be legally qualified to practise medicine and surgery, duly registered, and unmarried. Applications, with testimonials as to moral character, etc., to the Committee, at the Board-room, on or before September 12.

KENT AND CANTERBURY HOSPITAL.—Assistant House-Surgeon and Dispenser (one office). Candidates, who must produce proof of being registered under the Medical Act as legally qualified to practise, and of being accustomed to dispense medicines; must be unmarried and not more than fifty years of age. Qualifications and testimonials to the Secretary, on or before August 23.

MONTGOMERYSHIRE INFIRMARY, NEWTOWN.—Dispenser, who will be required to act as Assistant-Secretary. Salary £30 per annum, or £60 without board and lodging. Applications, with testimonials, to the House Committee, Infirmary, Newtown, before August 22.

STAFFORDSHIRE GENERAL INFIRMARY, STAFFORD.—House-Surgeon and Secretary. Candidates must bring unexceptionable testimonials of moral conduct, and possess a diploma or degree in surgery from the College of Surgeons in London, Edinburgh, or Dublin, or from one of the Universities; and a diploma, degree, or licence in medicine from a university or duly recognised licensing body of Great Britain or Ireland. Applications and testimonials to the Secretary, on or before August 22.

ST. PANCRAS, MIDDLESEX.—District Medical Officer. Candidates must possess the qualifications prescribed by the Local Government Board. Applications—which must be made on forms to be obtained at the Guardians' Offices,—accompanied by diplomas and other evidences of qualifications, to Daniel Fildew, Guardians' Offices, Vestry Hall, Pancras-road, N.W., not later than 10 a.m., August 26.

WEST HERTS INFIRMARY.—House-Surgeon and Dispenser. Candidates must be Members of the Royal College of Surgeons of London, Edinburgh, or Dublin, and Licentiates of the Royal College of Physicians of London, or Licentiates of the Apothecaries' Company, duly registered, and unmarried. Applications, with testimonials and certificate of registration, to the Secretary, on or before September 5.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population in computed according to the census of 1871.

RESIGNATIONS.

Alton Union.—Mr. W. G. Sheppard has resigned the Third District; area 15,601; population 3617; salary £100 per annum.

Linton Union.—The Linton District is vacant; area 15,631; population 4714; salary £72 per annum. Also the Workhouse; salary £20 per annum.

APPOINTMENTS.

Bakewell Union.—William Moxon, M.R.C.S. Eng., L.R.C.P. Edin., to the Matlock District.

Bodmin Union.—William E. Fulford, L.R.C.P. Edin., L.F.P. & S. Glasg., L.S.A. Lond., to the First District.

Eastry Union.—Thomas Horne, L.R.C.P. Edin., L.R.C.S. Edin., to the Sandwich District.

Lunesdale Union.—John Todd, M.R.C.S. Eng., L.S.A., to the Second District.

Weobley Union.—Daniel Wilson, M.D. and C.M. Queen's Univ. Ire., to the Dilwyn District.

Yeovil Union.—William H. Walter, M.R.C.S. Eng., L.S.A., to the Fifth District.

THE CONTAGIOUS DISEASES (ANIMALS) BILL.—The report of amendments upon this Bill as brought up from the House of Commons was considered by the House of Lords on Friday, the 9th inst., and agreed to without debate after a few verbal amendments had been made. Earl Fortescue, regretting that the Bill had been shorn of some of the principal clauses for compulsory slaughter of foreign stock, said that he confidently looked forward to the time when only dead meat would be imported from abroad.

THE ACTION OF PILOCARPIN ON THE UTERUS.—Dr. Felsenreich, assistant to Prof. Gustav Braun at the Vienna General Hospital, observes that Dr. Massman's statements (*Medical Times and Gazette*, July 13, p. 56) on the employment of pilocarpin in the induction of premature labour must lead to further inquiry into the action of this substance on the uterus. At Prof. Braun's request, he tried its efficacy in nine cases of ataxy of the uterus, with reference to its future employment in cases of hæmorrhage produced by this cause. In but three of the cases did the hypodermic injection take effect, and that only at the end of ten minutes; so that it cannot be regarded as a suitable means for combating active hæmorrhage, in which promptitude of action is so important a factor. As in these cases, too, there is no time to examine the action of the heart, another contra-indication arises, for, as Petrina has shown, whenever this action is in anywise abnormal, the greatest care is required in the

dministration of pilocarpin, for arhythmia or an arrest of its ction may be then easily induced. Indeed, as any consider- ble hæmorrhage does greatly disturb the action of this organ, his itself is a contra-indication. These considerations do not pply to the induction of premature labour, and additional rials of the power of pilocarpin for this purpose may be made ithout danger.—*Wien. Med. Woch.*, June 1.

TREATMENT OF CONGENITAL HYDROCELE.—Dr. Wagner, f Königshütte, recommends as preferable to the usual pro- edures the following plan. By means of a Pravaz veterinary yringe, which will hold about five grammes, the liquid of he hydrocele is to be completely aspired. When the syringe s filled, the needle having been removed, it is to be emptied nd reapplied as often as necessary, until every drop f the liquid has been removed. As soon as this has been ccomplished, from five centigrammes to a gramme of a 1 per cent. solution of carbolic acid is to be placed in the yringe (previously disinfected), and slowly injected into the ac of the hydrocele, manipulating this a little after the oint of the needle has been withdrawn. One *séance* should uffice, as the mothers are unwilling to allow a repetition; nd care should be taken to previously ascertain that the iquid of the hydrocele has ceased to have any communica- tion with the abdomen. Dr. Wagner has found the plan very successful.—*Deutsche Med. Woch.*, July 27.

THE MEETING OF THE GERMAN PHYSICIANS AND NATURALISTS.—Drs. B. Stilling and Gerland have issued the programme of the proceedings for the fifty-first meeting of this body, to be held at Cassell from September 18 to 24. They promise a very cordial reception on the part of the scientific and civic authorities, everything being provided for the convenience and comfort of their guests, among which is a diminution of all the railway fares. The meeting, however, is to be of a strictly scientific character, the jollifi- cations of some of the earlier meetings having given rise to some scandal. The managers console their correspondents for the loss of the festivities and entertainments by an- nouncing that the numerous beautiful spots to be visited near Cassell will supply the best and truest refreshment both of body and mind. Moreover, there are to be open-air concerts and illuminated waterfalls. Among those who are to give the principal addresses are—Profs. O. Schmidt (of Strasburg), Hüter (of Greiswald), Aeby (of Bern), De Bary (of Strasburg), Klebs (of Prague), Fick (of Würzburg), Henke (of Tübingen); and Dr. Baas, of Worms, will deliver an address on the "Life and Works of William Harvey."—*Berlin Klin. Woch.*, July 15.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Vindex.—There are several institutions in New York that grant degrees, so that it is difficult to estimate the value of a diploma stated simply to be "of New York."

Bibliopole.—The library and museum of the College of Surgeons are always closed during the month of September. With every disposition on the part of Mr. Chatto to oblige you and other readers, we are afraid the clouds of dust would prevent study during the dusting of the library.

Dr. Williams.—The preliminary examination in arts, etc., for the diplomas of fellow and member of the College will take place early in the ensuing month. If your son passes it, he can at once commence his professional studies. We never recommend hospitals. The Dean of St. Bartholomew's will send you a book of particulars.

Corrigendum.—In Dr. Goodridge's Address in Medicine at the recent meeting of the British Medical Association, reported in our last week's issue, at page 162, second column, twenty-three lines from the bottom, after the words "a marked diminution," *add* "of the oxidation pro- cesses."

Clinical Thermometer.—Yes. Sir Humphry Davy in his young days assisted Dr. Beddoes, who at that time was bent on curing all diseases by the inhalation of gases. It so happened that Davy was accustomed, before applying the inhaler, to ascertain the temperature by placing a ther- mometer under the tongue. While thus employed on a countryman, who fancied this was the wonderful process he had heard of, the man exclaimed that he already felt better. Davy took the hint, left the thermometer in its place some time, and re-applied it every morning. His patient improved in health, and ultimately got quite well, without any other treatment.

Staff-Surgeon, Plymouth.—Sir Astley Cooper Key, K.C.B., the commander- in-chief of the squadron reviewed by H.M. the Queen on Tuesday last, is the son of the late Mr. Key, Senior Surgeon to Guy's Hospital, and a godson of the late Sir Astley Paston Cooper, Bart., twice President of the Royal College of Surgeons.

Quack Salver.—Southey says:—"Man is a dupe-able animal. Quacks in medicine, quacks in religion, and quacks in politics know this, and act upon that knowledge. There is scarcely anyone who may not, like a trout, be taken by tickling." The bold and unblushing assertion of the empiric, of a never-failing remedy, constantly reiterated, no doubt inspires confidence in the invalid, and not infrequently tends, by its operation on the mind, to assist in the relief of disorder. The credulity of man is unfortunately too strong to resist the assertions of the quack. Hence the success of quackery.

Ostrich Pepsine.—Mons. Alfred Ebelot, in an article in the *Revue des Deux Mondes*, of December, 1877, on the means employed in the Argentine Republic to protect settlers in the Pampas from the Indians, gives the following statement with regard to ostrich pepsine:—The soldiers and others employed never could resist an ostrich hunt when they saw a male ostrich, as is the custom of that bird, taking out its young brood for food and exercise. The parent bird generally escaped, leaving its young in the hands of its enemies. When other food was scarce they ate the young ostriches. Some portions of the flesh of these birds when young and fat are reckoned dainty by the Indians. But it has a smack of rancid oil and a "*fumet sauvage*" which are not without originality, and remind one of the cuisine of a Spanish inn. This matches well the acridity of the red pepper which, made with salt into little tablets, is the favourite condiment of the gourmets of the Pampas. "Whilst eating the ostrich the Indians always carefully put aside the stomach in order to collect the pepsine which it contains. The stomach of the ostrich," says Mons. Ebelot, "is celebrated for its incredible powers of digestion. The abundance of pepsine, to which it owes this faculty, has created among the Indians a curious commercial fraud. They dry it and sell it literally for its weight in gold. It is used for the purpose of restoring worn-out stomachs." We think "ostrich pepsine" such a splendid name for business purposes that we wonder it has never been adopted. The pepsine of the pig would have no chance in com- petition with that of the ostrich, and no great City dinner or regimental mess would be complete without a supply of this infallible specific "*pour refaire les estomacs délabrés.*"

A Testimonial.—In grateful recognition of the nearly thirty years' service of Dr. Bell Fletcher, on his retirement from his position of Senior Physi- cian to the Birmingham General Hospital his friends determined to present him with a testimonial. Last week a piece of plate and two elegant candelabra were presented to him. In the board-room of the institution is also to be hung his portrait by Sir Daniel Macnee, F.R.S.A.

F.R.C.S.—Dr. John Louis Donnet, Inspector-General of Hospitals and Fleets, the recent recipient of the vacant good-service pension of £100 a year, served as Assistant-Surgeon of the *Vesuvius* during the opera- tions on the coast of Syria in 1840, including the bombardment of St. Jean d'Acre, and was Surgeon of the *Assistance* in the search after Sir John Franklin in 1850-51. He served from December, 1857, to December, 1867, in medical charge of the naval establishment at Lisbon, and was afterwards Deputy Inspector at Jamaica from 1867 to 1870. He has been awarded the Syrian and Arctic medals, and is an Honorary Surgeon to the Queen.

Gratis.—The Admiralty have pointed out to the Naval Medical Staff that all services given to the mercantile marine should be gratuitous. As navy doctors are not paid more liberally than most other Government *employés*, this seems a rather hard restriction.

Sophistication.—A woman, of Dartmouth-street, Westminster, has been fined £5 for adulterating milk 40 per cent., and 40s. for assaulting the inspector. The delinquent had been previously convicted, the adultera- tion then being 80 per cent.

Ambulance.—The system of hospital construction, known as "hut hos- pitals," was originated in the Crimea by our sanitary officers, with the aid of the late Mr. Brunel. This arrangement has been carried to great perfection by the Americans and Germans. In Germany, for sick porters and ambulance attendants, infantry men are trained for three months in every year, while doing duty with their regiments. In addi- tion to this, in every May the trained men are assembled at the head- quarters of their army corps, and are incorporated into a detachment, known as the "Sanitary Detachment." They are exercised with the surgeons in fetching and attending the wounded on a mock field of battle.

An Example.—The Guardians of the parish of St. Matthew, Bethnal-green, intend to sink an artesian well into the chalk basin for the water-supply to their workhouse establishment.

Colonial Census Returns.—In Victoria, at the end of March last the popu- lation was 863,370. The excess of males over females was about 100,000 New Zealand: The population returns give 414,171 as the number of inhabitants in the colony, exclusive of Maories. There are 4302 Chinese— the males number 230,198, and females 183,273. Within four years the population has increased by 114,657, or over 38 per cent.

P., Hampstead.—The mortality of the seasons in the seventeenth century was deduced from the weekly bills of mortality, and the absolute mortality from the annual deaths, and from an enumeration of the population of the City of London in 1631.

Open Spaces.—The Corporation of Winchester are about to purchase and fence the ground on St. Giles's-hill for a public park.

Inquirer.—The completed portion of the new children's hospital in connexion with the Coatham Convalescent Home has been opened. The cost has been £3000.

Benevolence.—A liberal gift of £1000 was deposited by an unknown donor in the offertory bag at St. Mary's Church, Chelmsford, on Sunday, the 28th ult., with directions that the amount be divided between the Chelmsford Dispensary and Infirmary. The sum has accordingly been handed over to the Honorary Secretary, Mr. F. T. Veley.

COMMUNICATIONS have been received from—

Mr. John Chatto, London; Dr. Thomas Barlow, London; Dr. Edward Sparks, Dorchester; Mr. B. R. Wheatley, London; Mr. J. Warrington Haward, London; Mr. Patrick J. Hayes, Dublin; Dr. F. Churchill, London; Mr. T. M. Stone, London; Dr. James Ross, Manchester; Dr. Davidson, Liverpool; "Vindex"; The Registrar of Apothecaries' Hall, London; Dr. MacNeill Whistler, London; Dr. Goyder, Bradford; Messrs. J. Richardson and Co., Leicester; The Director-General of the Army Medical Department; The Registrar of the University of London; The Secretary of the Hospital Saturday Fund, London; Mr. R. W. Parker, London; Mr. T. J. W. Bacot, Seaton; The Sanitary Commissioner, Punjaub; Dr. Kelly, London; The Military Secretary of the India Office; The Registrar-General of Edinburgh; Dr. H. F. A. Goodridge, Bath; Mr. T. Spencer Wells, London; Mr. Beecher, Leamington; The Secretary of the Medical Faculty of the University of Aberdeen; Dr. J. W. Moore, Dublin; Dr. Dunglison Philadelphia; Mr. J. E. Ingpen, London.

BOOKS AND PAMPHLETS RECEIVED—

Charles Henry Schaible, M.D., Ph.D., F.C.P., An Essay on the Systematic Training of the Body—Cornelius B. Fox, M.D., M.R.C.P. Lond., Sanitary Examinations of Water, Air, and Food – Guy's Hospital Reports, vol. xxiii.—Allan McLane Hamilton, M.D., Nervous Diseases, their Description and Treatment—Jonathan Hutchinson, F.R.C.S., Illustrations of Clinical Surgery, fasciculus xii.—James Patterson Cassells, M.D., M.R.C.S. Lond., On Teaching the Dumb to Speak—J. W. Rosebrugh, M.D., Remarks on Ovariotomy—Thomas Sympson, F.R.C.S.E., A Short Account of the Old, and of the New Lincoln County Hospitals.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médicale—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Nature—Medical Examiner—Centralblatt für die Medicinischen Wissenschaften—Sanitary Register—Indian Medical Gazette—Canada Lancet—Dublin Journal of Medical Science—Clinical Work—Cincinnati Lancet and Clinic—Boston Journal of Chemistry—American Supplement to the Obstetrical Journal of Great Britian—Gazette Hebdomadaire.

APPOINTMENTS FOR THE WEEK.

August 17. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

19. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m. Royal Westminster Ophthalmic, 1½ p.m.

20. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

21. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 1½ p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

22. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

23. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

Queekett Microscopical Club, 8 p.m. Ordinary Meeting.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 10, 1878.

BIRTHS.

Births of Boys, 1142; Girls, 1099; Total, 2241.
Average of 10 corresponding years 1868-77, 2198·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	890	804	1694
Average of the ten years 1868-77	791·5	730·8	1522·3
Average corrected to increased population ...	...	...	1629
Deaths of people aged 80 and upwards ...	...	...	40

Note.—The births and deaths registered last week may be compared with the average numbers in the corresponding weeks of the ten years 1868-77 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	1	4	5	1	14	...	4	1	52
North ...	751729	3	2	10	3	20	...	10	2	68
Central ...	334369	...	...	...	2	1	...	2	...	20
East	639111	1	2	3	1	10	...	2	...	73
South	967692	9	6	8	4	32	...	10	1	126
Total	3254260	14	14	26	11	77	...	28	4	339

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·693 in.
Mean temperature	65·9°
Highest point of thermometer	79·3°
Lowest point of thermometer	54·7°
Mean dew-point temperature	57·8°
General direction of wind	S.W.
Whole amount of rain in the week	2·22 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, August 10, 1878, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1878.*	Persons to an Acre. (1878.)	Births Registered during the week ending Aug. 10.	Deaths Registered during the week ending Aug. 10.	Temperature of Air (Fahr.): Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.): Weekly Mean of Mean Daily Values.	Rain Fall: In Inches.	In Centimetres.
London	3577304	47·5	2241	1694	79·3	54·7	65·9	18·83	2·22	5·64
Brighton	103923	44·1	50	62	74·5	54·5	63·8	17·67	0·64	1·63
Portsmouth ...	129461	28·9	70	57	...	...	...	...	...	...
Norwich	84620	11·3	47	57	...	...	...	...	...	...
Plymouth	73599	52·8	39	25	79·3	48·6	64·2	17·89	0·66	1·68
Bristol	206419	46·4	137	92	79·3	48·6	64·2	17·89	0·66	1·68
Wolverhampton ...	74240	21·9	60	36	74·5	50·6	60·6	15·90	1·67	4·24
Birmingham ...	383117	45·6	267	211	...	...	...	...	...	...
Leicester	121473	38·0	98	57	77·0	49·8	63·2	17·33	1·64	4·17
Nottingham ...	165267	16·6	110	87	76·4	49·0	62·0	16·67	1·89	4·80
Liverpool	532681	102·2	383	337	71·0	53·0	61·6	16·45	1·55	2·94
Manchester ...	360514	84·0	239	203	...	...	...	...	...	...
Salford	170251	32·9	102	101	74·4	50·2	61·6	16·45	1·81	4·60
Oldham	107366	23·0	79	53	...	...	...	...	...	...
Bradford	185088	25·6	126	81	72·7	53·0	60·5	15·84	2·48	6·30
Leeds	304948	14·1	222	193	73·0	51·0	61·7	16·50	1·94	4·93
Sheffield	289537	14·7	191	165	73·6	54·0	61·5	16·39	2·42	6·15
Hull	143139	39·4	110	124	73·0	55·0	61·7	16·50	1·50	3·81
Sunderland ...	112459	40·6	80	63	81·0	57·0	62·8	17·12	1·20	3·05
Newcastle-on-Tyne	144570	26·9	107	83	...	...	...	...	...	...
Edinburgh	222371	53·1	125	65	74·2	45·5	60·9	16·06	0·71	1·80
Glasgow	566940	94·0	345	235	76·0	49·0	63·1	17·28	0·41	1·04
Dublin	314666	31·3	173	159	75·7	49·5	62·7	17·06	0·89	2·26
Total of 23 Towns in United Kingdom	8373953	38·0	5401	4240	81·0	45·5	62·5	16·95	1·43	3·63

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·69 in. The highest reading was 28·98 in. on Thursday evening, and the lowest 29·48 in. at the end of the week.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1878 by the addition of seven years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. Nottingham, Salford, and Oldham, however, form exceptions to this rule, as the estimates for these three towns have been revised with the aid of local information as to the rate of increase of inhabited houses. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

THE LUMLEIAN LECTURES
ON
INSANITY IN ITS LEGAL RELATIONS.

Delivered at the Royal College of Physicians, London.

By J. C. BUCKNILL, M.D., F.R.C.P., F.R.S.,
Late Lord Chancellor's Visitor in Lunacy, and Medical Superintendent of Devon County Asylum.

Lecture III.—Part II.

The subject of *Ignorance* as a mental state produced by disease, and leading to the commission of offences against the law, is still more important, though not so new and interesting to us as physiologists as the one we have been discussing. The legal authorities have, as we know, made too ample use of this mental state in formulating their conditions of irresponsibility; for their terms, "does not know right from wrong," "does not know the nature of the act," are but other forms of expression for ignorance in its various phases. And that there are gradations in this state of mind is constantly recognised in the practice of the courts; although we may also, I think, very fairly divide the pathological ignorance which excuses from guilt not only into degrees but into kinds.

Firstly, there is the simple ignorance of the idiot, varying in degree from that mindlessness which places a human being below the intellectual level of the domestic animals, to that slight imbecility from which more than 2 per cent. of our convicted criminals are admitted by our prison authorities to suffer. The ignorance of the idiot is peculiar, and he alone may be said "not to know the nature of the act." Lord Justice Bramwell marked this point when he illustrated this condition of irresponsibility by the case of a man who was so idiotic that he did not know that to cut off a man's head, in order to see how the sufferer would look when he awoke, would kill him or hurt him: a state of utter and hopeless idiocy—an improbable case, says the judge, but I believe it was so,—a state which I would myself prefer to illustrate by the case which I know did happen, in which an idiot split a child's skull with his spade, and went on with his work, not knowing what he had done. Cases, of course, in which the question of irresponsibility is likely to be contested in courts are not of this pronounced character, but are more like the one I shall quote from Caspar, in which a girl was accused of child-murder. Witnesses proved her great ignorance. She could not count, and did not know the value of money. But who was she? The daughter of poor cottagers, who for a short time had enjoyed the very meagrest instruction in a village school, and as soon as her physical strength permitted was sent to herd cattle. But though she could not count sums she had never learned, still less practised, there was no proof that she lacked that faculty of discrimination which would indicate to the most stupid country girl that it is not lawful to kill anyone, even one's own child. For, says this judicious writer, whose opinions were weighted with the responsibilities of office as the Forensic Physician to the Berlin Courts of Judicature, "a low degree of intelligence, feebleness of the understanding, absolute stupidity, by no means prove irresponsibility; as always the relative facts ascertained in reference to the case in question must be examined and applied to the elucidation of the point." From Dr. David Nicholson's interesting papers on the Morbid Psychology of Criminals we learn that out of a convict population of 8425 men 200 were weak-minded, sometimes officially called imbeciles, and sometimes also classed as suffering from "other mental diseases than insanity"; being persons whom the author "would not think it right to relegate to an asylum." Imbeciles, as we know, frequently have strong passions, which they may be taught to control, not by the threat of some awful punishment which may overtake them six months hence, but by hourly training. The degree of imbecility, however, will be taken as the most available test of irresponsibility, without much regard being paid to the strength of idiot passion, since the one can be estimated and the other cannot be. Hoffbauer has created quite an elaborate scale of degrees of imbecility, with the corresponding diminution of responsibility for crime, which is, however, very inapplicable to practice, although doubtless some general notion has to be arrived at by courts, even if no definite rule can be fixed. Sir Matthew Hale did lay down such a rule in the dictum that a person is responsible "who hath ordinarily as great understanding as ordinarily a child of fourteen years hath." Another attempt of the same kind, to draw a line, is the one described by Dr. Alfred Taylor as "the rule suggested by Mr. Samuel Warren: that a person, in order to be acquitted on the ground of insanity, should be first proved to be as *unconscious* of his act *as a baby*." But, as Dr. Taylor truly says, "such a rule amounts to a *reductio ad absurdum*."

There can, however, be no just or practicable method of dealing with offenders of weak mind other than that of expediency, and to this class the principle of Lord Justice Bramwell seems to apply with exactitude. Find out the man whom you can deter from wrong-doing by threat, and you will find the man whom it is right to punish. But what threat, and what punishment? Herein lies the *crux* of the question. If a criminal of weak mind has clearly mind enough to be deterred by the remote punishment, or chance of punishment, threatened by the law, it would seem to be expedient that he should be punished by the law; but if he be an idiot, with no forethought beyond the hour, such punishment would be as cruel as it would be useless. To such a man the Cordova cap-maker's yard-measure applied to his back at the moment, in the fashion described in "Don Quixote," would be the utmost measure of correction which would not be cruel; and although he could not distinguish a spaniel from other dogs, it would teach him that to drop a heavy stone on any dog meant a painful sensation to be suffered by himself.

But there is another kind of insane ignorance with which the law is constantly brought into relation for which it is not easy to find the most appropriate name, although its character cannot fail to be understood by all who have had much practical acquaintance with the insane. It would be challenging the reproof of the lawyers to call it thoughtlessness, for they would naturally say that thoughtlessness is exactly the thing which it is their duty to prevent. I shall adopt the word *Incomprehension* to connote that state of a man's mind produced by disease, who, knowing the nature of an act, is quite unable to comprehend its relations and consequences. It is the most common of all mental states in chronic insanity. A demented or an incoherent lunatic—one who has once had his reason and has lost it—will never be capable of committing an offence against the law, because he does not know the nature of the act, for, if sunk so low in mental decay as such a condition would indicate, he would be incapable of any intentional conduct: he would be one of those crouching dements whose vegetative life has survived their animal activities. But the mental state of the mischievous and dangerous dement is not of this class. If you arouse his attention, and demand from him what the effect will be of any of the mischievous doings to which he is addicted, he will tell it you truly enough, and he will often also admit that he knows it to be wrong. But the disease under which he suffers prevents him from considering the wrongfulness of his conduct at the time he does it. He has lost that quality of reason which looks before and after, and, yielding to irregular desires which are as much the result of disease as his loss of reason, he commits an infinite variety of unconsidered and unreasoned actions, more or less mischievous or dangerous to others or to himself. By far the larger part of the strange and irregular conduct of the insane both in and out of asylums is due to incomprehension, or the want of forethought and appreciation of consequences, and it is exactly the same with their graver misdeeds in the legal offences they commit. A chronic dement may know perfectly well, and would tell you if you asked him, that to stab a keeper in the abdomen with a knife would kill him, and he would also tell you, if you asked, that such an act would be murder, and that men are hanged for murder; but, for all that, he might stab a keeper in the abdomen with a knife in order that he might have an explanation with the superintendent as to the portion of tobacco which has been given him, and when he hears that the keeper is dead he might say with perfect truth, "Oh dear! oh dear! I did not mean to kill him." The motive is insane, and the action is unreasoned, and the whole event is the result of dangerous lunacy, which has not been well enough guarded. Tell such a lunatic that he shall have no tobacco, and it is

very probable that he might refrain; tell him that he shall be tried and executed six months hence, and your words are as the idle wind. Such men are clearly more irresponsible than the higher grades of imbeciles whose reason does enable them to look before and after, though with feeble and dim mental sight. Such men, moreover, are liable to be under the dominion of furious passions, as much the result of disease as their loss of reason, so that the combination of this insane incomprehension with morbid emotional exaltation produces a degree of pathological uncontrol not exceeded in any other form of madness. We have already seen that epileptics sometimes commit offences automatically; more frequently they commit them under the influence of hallucination or delusion; but most frequently they commit them in this state of incomprehension combined with passion—the state of epileptic furor, as it is called. It may be suggested that the fierce passion of the epileptic is enough to explain his conduct; but I think it is not so, and that the fury is blind because the reason is obscured, and that to a great extent the epileptic rages because he does not comprehend what he is about; not that he is unconscious, but that he is unable to think. It may well be, also, that this fury is assisted by a diminution of physical sensibility, and especially by the loss of that muscular sense which measures effort. In the *status epilepticus* the patient does not only lose consciousness of the injuries inflicted upon his own person from diminution of common sensibility, but in the deprivation of that muscular sense which conveys to the mind information as to the amount of effort exerted he loses all guidance as to the degree of violence which he is inflicting on others. Thus, Drant beat the head of his victim with a wooden bar, so that the blows sounded like an empty cask being beaten, and he also said, no doubt with truth, "Oh, dear! I did not mean to kill him. I am very sorry." The epileptic overwhelms his victim, and thrice he slays the slain, and sometimes he kills several persons in his blind, inconsiderate fury. This is the mental state which Jules Falret describes in his important monograph on "L'Etat Mental des Epileptiques," as preceding and continuing during the violent act. "I do not absolutely deny," says he, "the existence of the instantaneous access of fury of short duration, but I maintain that such facts are happily most rare; and that almost always, if not always, the access of mental trouble is more prolonged and more intense. The attentive observer will, in fact, see that both before and during the violent conduct there is a notable obscuration of the intelligence and a general confusion of the ideas, during which the epileptic does not rightly appreciate either that which is passing within himself or around him. There exists, in a word, a group of symptoms, physical and moral, which enable one to assign to this transitory trouble of the intelligence the character of disease, independently of the act which is the especial object of the examination." But it is not to epileptics alone, but to all lunatics, excepting those who are influenced purely by delusion, that this explanation of the mental state under the term of incomprehension applies; and indeed it applies also to many lunatics who are to a certain extent under the influence of delusion; for I wish to be very explicit upon this point, that I disclaim any intention to offer a definite classification of the states of mind of insane offenders. I am too well aware of the constant intermingling of insane mental conditions to attempt such a hopeless task, and I shall be well content if I succeed only in unravelling some well-marked threads for guidance in the intricate mazes of our subject.

One source or phase of incomprehension is morbid inattention, the result of which is manifested in that well-known mental state which is called incoherence, the strict meaning of which is incoherence of language, the utterance of words and sentences which have no relation to each other, showing that the thoughts themselves do not follow each other in any intelligible sequence. The main factor of this interesting condition is no doubt the loss of the power of attention. The mind rambles in seeming inconsecutiveness, no impression of idea being deep enough to carry on the mental movement in the same tract, or at least in any tract which can be detected by an observer, for I think there is a necessary sequence even in the maddest thoughts. It is probable, according to my observation, that there are two distinct forms of incoherence, one which is allied to aphasia, and another simply due to the decay of the faculty of attention. The most incoherent patient I ever had under my care was a splendid chess-player. This gentleman's lunacy dated from a blow on the head, and it is very possible that injury of Broca's convolution may have been the cause of his incoherence—a view which seems to be supported by the fact that he has now been insane seventeen years without any marked deterioration from his early state, while the course of incoherence from dementia is progressive. But from whatever cause it may arise, incoherence marks a phase of incomprehension, and prevents the sufferer from using his reason so as to know the consequences of his conduct.

I am happy to be able to bring my pathological views regarding the nature of insane ignorance into relation with the law by a reference to a most able paper which I have met with while writing these pages. This paper, which was read by Sir Fitzjames Stephen before the Juridical Society in June, 1855, had for its title "The Policy of maintaining the Limits at present imposed by Law on the Criminal Responsibility of Madmen," and surely the present law was never defended with more force and acumen. We have seen how greatly the learned author has changed his opinions in the direction which medical science has indicated. But it has not been to point out this change which has induced me to refer to this remarkable essay. It is rather to point out the enlightened view which at that early date Sir Fitzjames Stephen took of the law as it stands, and to support my own opinions as to the ignorance of the insane by his authority. If the interpretation of the law which I am about to quote had been generally accepted by the judicature, there would perhaps have been little need for the attempt which I have been making to explain the modes and varieties of insane ignorance; but I have read many judicial charges in which the exposition of the law has been, I will not say opposed to, but certainly quite incommensurate with the facts I have endeavoured to explain and the principles of the juridical essayist, who says—"A distinction, I think, obtains between what is merely illegal and what is wrong. A man may be said to act illegally who does some act which violates the letter of the law. If he acts illegally, knowing but disregarding the reasons which induced the legislator to make the law, he does wrong. . . . Thus, if a man had just a sufficient glimmer of reason left to remember as a fact that people were hanged for murder, but not enough to know the circumstances connected with murder which make it criminal—namely, the distress and insecurity which it causes,—I think that he might well be said to be disabled by disease from knowing that murder was wrong. Upon any theory of morality whatever, the circumstances which surround an act give that act its moral character, and the ability to distinguish enough of these to be able to appreciate the reasons of the law in forbidding the act is surely a very different thing from [the vestiges of memory which would suggest that the act was forbidden. I should be inclined to think that the following would be very nearly equivalent to the ordinary question proposed to them (the jury):—Was the prisoner prevented by mental disease from appreciating the reasons for which the law has forbidden the crime of which he is accused, or from applying them to his own case?"

Another distinct pathological state of mind is *Hallucination and Delusion.* Hallucination alone, indeed, is not a state of the mind, but a state of a sense or senses. The seat of it may be in the external organ or in the sensory ganglion, for I have known a blind man have frightful hallucinations of vision. When, however, the false sense is believed to be true, a mental state arises which it is convenient to consider as delusional, although no doubt a distinction may fairly be drawn between delusions with and without hallucinations. In my first lecture I have referred to the difference of authoritative opinion as to the bearing of delusion on irresponsibility, and my own adhesion to the views of the Lord Chief Justice that "the mere existence of delusion ought not to affect the decision as to the power of self-control, unless the nature of the delusion were such as would legitimately lead to the inference that the power of self-control was wanting."

The arguments opposed to this opinion by the codifier in support of his proposal to shift the burden of proof as to responsibility when the existence of delusion has been established, seem to me inadequate. He says that if you have a specific definite delusion, such as that of a man thinking that his hand is made of glass, "it shows that the mind is so deeply disordered in all kinds of ways that you cannot

draw the inference that there was an intention to kill." The example seems unfortunate, for of all delusions these hypochondriacal ones appear least to affect the power of self-control, and the particular one selected, which comes from Van Swieten, is, curiously enough, an instance of the little hold which such delusions have upon the conduct. It was the man's legs, however, which he thought were made of glass. The maid-servant having thumped her master's legs with a log of wood, he jumped up from his seat in a passion, although he had not stood for a long time, from the fear of breaking his fragile supports. He was delighted to find that he could stand, and was cured. It is quite true that, in a large proportion of instances, "directly you get a definite delusion set up, the process of the mind is vitiated as well as the mere result"; but the difficulty must arise of determining which are these instances, for it certainly is not so in all cases of delusion and in all stages of their formation, for delusions are formed gradually and disappear gradually, so that degree is an element of delusional as of all other insane mental states.

The difficulty of applying the test of delusion was well illustrated in the much-debated case of Luigi Buranelli, who was executed for the murder of Joseph Latham in 1855. Buranelli had suffered from fistula in ano, which had been cured by operation, leaving, however, some little callus. The delusion was that the disease still existed, that it communicated with his bladder, and that his bed was soaked with urine. He, however, had said nothing about it to the people with whom he lived, nor to the woman with whom he cohabited, and Drs. Sutherland and Mayo could find no trace of it when they examined him. The undoubted motive of the murder was jealousy and anger excited by natural causes, but I do not see, if the burden of proof were shifted, by what means it could have been demonstrated that Buranelli did not retain his delusion, and that his "mental processes were not vitiated" thereby. I see many reasons for the opinion that it is unwise to rely much upon the proof of delusion as the test of insanity. Some great lawyers have done so, notably Erskine and Cockburn, but it was when they were acting as advocates and not as judges, and in cases in which they could well rely upon the staff which they had chosen to grasp, for in neither Hadfield nor in M'Naughten was there any doubt of the existence of delusion, nor that it had resulted in the offence. But, in the first place, delusion is the most difficult of all mental states to detect, and if the opinion should be accepted that it is the best test of insanity, those in whom it cannot be detected will be likely to meet with an unfair estimate of their mental condition. Many criminal lunatics have been acquitted whose delusions have not been discovered until after their trial, and I fear some have been condemned whose delusions have never been discovered at all. In the second place, delusion is more easily simulated than any other insane mental state. Dr. David Nicholson tells us that it is quite common for convicts to simulate delusion in prison, and I certainly know of no method by which it can be determined whether a murderer is telling the truth or not, if he says that a heavenly voice told him to do it, or that his victim had ruined or poisoned him, except by comparing his statement with his history and the presence or absence of other symptoms of insanity. And, thirdly, it must be remembered that, although many delusions have their character branded upon the front as it were, and are obviously either lies or delusions, there are many other delusions of quite a different colour. There are delusions of impossibilities, delusions of possibilities, and delusions of probabilities. How is anyone to recognise the last as delusions unless by comparing them with all the facts and history of the case? When such a delusion has led to a course of conduct insanely consistent with, and culminating in the overt act, and when its existence is supported by other evidence of the development and existence of mental disease, then its bearing upon irresponsibility is of the weightiest. It was only in this manner that I once succeeded in convincing Lord Wensleydale and a jury that a man had killed his wife under the delusion that she was unfaithful to him. This man was acquitted, and turned out to be an unmistakable lunatic with hallucinations of sight and hearing. But it has always seemed to me that the law as it stands was fortunately strained towards mercy in his case, as he certainly had not killed his wife in the act of adultery, which alone would have exonerated him if he had been sane and his delusion true. I have recently seen exactly parallel evidence to that given in this case, with the exception of the homicide, rejected by a special jury at an inquisition.

A fourth difficulty in applying the test of delusion to irresponsibility is the great variation which is found to exist in the degree of belief that is accorded by the sufferer to insane opinions. As a rule, delusions do not arise suddenly in the mind in their full strength. They increase gradually from small beginnings, until they abrogate all power of self-control; then, not unfrequently, they gradually decline. We see many lunatics changing their delusions frequently, so that the delusion which yesterday was strong, to-day is weak. This fact, of the most common experience, is confirmed by the expression of its opposite; for we say of a delusion which does not so change that it is a fixed delusion or a fixed idea. Other persons we find who believe, or do not believe, according to the state of the stomach or the liver, or the company they are in, or their temper,—the force of whose delusions is more variable than that of the wind.

Delusion, therefore, cannot rightly, I think, be considered as better or stronger evidence of irresponsibility than other mental states—than incomprehension, for instance; with which, however, its very frequent combination so greatly facilitates our task of diagnosis. And I can only repeat the doctrine, whose importance I desire to enforce by reiteration, that it is the state of the whole mind, judged by all its manifestations, upon which alone the possession or the loss of self-control, and the responsibility or the irresponsibility of the individual, ought to be decided.

In his most able treatise on the "Medical Jurisprudence of Insanity," Mr. Balfour Brown suggests that "delusion should be taken into consideration in reference to the question of malice and provocation, just as drunkenness, which is not a defence on a criminal charge, may be taken into account in considering the intention with which the act is done."(a) With this opinion I cannot concur, if it were only upon the ground that malice and provocation themselves are so often within the mind of a lunatic who is unquestionably irresponsible.

Passion, or desire passing into that form of wishing which is called will—that is to say, wishing combined with effort—is an essential element in all conduct which can least of all be ignored in that of the insane. It is the force which drives the machine, either in the ways of peace or to wreck and disaster. I could wish that I had time to dwell upon the manner and degree in which disease influences the affective faculties of mind, or rather upon the degree alone, for it appears to me that desire varies only in this, in the more or less of its intensity, and that its object is chosen by the intellectual and not the affective faculties. There is always a ground for passion, though there may be no reason for it; as Shylock says—

> "So I can give no reason, nor I will not,
> More than a lodged hate and a certain loathing."

That passion and desire are exalted and intensified by disease affecting the mind, is a fact which neither jurists nor physicians can afford to overlook, for it forms a most important element in the state of the whole mind upon which irresponsibility depends, which cannot be ignored without the risk, nay the certainty, of error and injustice. The fury of the epileptic is as unlike his normal and natural disposition as it is possible for two states of a man to be in health and disease. And if the abnormal state of passion and desire, the result of disease, be a most important factor in the whole state of mind which deprives a man of his self-control, how can we refuse to give it consideration and weight in estimating his responsibility? But I refuse to believe that a man can be mad from change of the affective faculties alone. I see no grounds for it in science, and no reason for it in philosophy; and although truth disregards consequences, I see every reason against it in the social mischief which would be wrought by such an admission.

Taking up the *Times* while I am writing, I observe a quotation from the *Nation* newspaper upon Lord Leitrim's murder, in which the writer says:—"There are such things as the fierce logic and the wild justice of revenge. The law puts some restraint upon the exercise of that wild justice, and religion forbids it; but *passion mounting up to madness* will sometimes overleap these barriers, and lead to terrible results." This is an example of the application to which the theory of passion mounting up to madness may be applied:

(a) Second edition, page 16.

and there is no crime, no cruelty, no social horror, which might not be thus vindicated if the common sense of mankind did not repudiate the foolish and wicked doctrine, and if the wholesome restraints of the law were removed.

FORTY-SIXTH MEETING
OF THE
BRITISH MEDICAL ASSOCIATION.

Held in Bath, August, 1878.

THE SECTION OF MEDICINE.

OPENING ADDRESS.

By T. GRAINGER STEWART, M.D., F.R.C.P.E., F.R.S.E.,
Professor of the Practice of Physic and of Clinical Medicine in the University of Edinburgh; President of the Section.

ON CERTAIN MORBID STATES OF THE KIDNEY.

Gentlemen,—My first word in rising to address you must be one of thanks to the Council, for the great honour they have done me in appointing me to preside on this occasion over the Medicine Section of the British Medical Association. I feel that it is an honour of no ordinary kind, when I consider the long line of eminent physicians that have preceded me, culminating in the distinguished President of last year, Sir William Jenner. It is also a gratification to me to be associated in office with my friends Dr. Foster and Dr. Clifford Allbutt, men known and esteemed wherever clinical medicine is zealously cultivated.

We may, I think, congratulate ourselves on the prospects of our meeting. We cannot look over the list of our papers without a feeling of gratification that communications on so many important and interesting subjects are to be brought before us by respected members of the profession; and I hope that, following upon those communications, we shall have a frank interchange of opinion and comparison of experiences. I beg you to notice that it has been arranged that, at one of our meetings, a discussion on the diagnosis and treatment of intestinal obstruction shall take the place of the ordinary reading of papers; and I congratulate you on the fact that that discussion is to be opened by Mr. Jonathan Hutchinson and Dr. Long Fox. I may be permitted to bespeak your attention also to the paper by Professor Rutherford, in which he embodies the outcome of his admirable researches into the action of cholagogue remedies on the dog. We in Edinburgh are proud of that research, as a piece of genuine scientific work, and especially as a valuable contribution to the relief of human suffering.

Gentlemen, I have formed the opinion that, while the President of the Association and the readers of the addresses in their several departments may appropriately deal with great general questions, the president of a section may, in his opening address, best fulfil his task by confining his remarks to some individual topic with which he is familiar. By adopting such a plan, he may give prominence to any lately discovered facts which he deems important; he may make known any changes in his opinions; he may attempt to remove misconceptions as to his statements previously published, and to vindicate the correctness of his views. In accordance with this conception of my duty, I venture to offer a few remarks upon some questions connected with diseases of the kidneys, which have lately attracted my attention. Even after thus limiting my range, I cannot pretend to consider all the topics which invite discussion. I dare not, for example, detain you during the time which would be required for the adequate consideration of the doctrine of arterio-capillary fibrosis, inviting though it may be.

The first subject to which I ask your attention is the disease known as glomerulo-nephritis, which was first described by Professor Klebs of Prague ("Handbuch der Pathologische Anatomie," Band i., s. 645), as occurring in some cases of post-scarlatinal dropsy. It is a form of interstitial nephritis, which affects only the interstitial tissue of the glomeruli. A normal Malpighian body consists, as you remember, of a group of vascular loops, surrounded by a capsule; between the capsule and the tuft there are epithelial cells; between the loops there is connective tissue. The affected kidneys present to the naked eye no abnormality beyond congestion of the tissues generally, and pallor and prominence of the Malpighian bodies. Under the microscope, one sees little or no change in the stroma or in the tubules, but marked alteration in the glomeruli. They appear prominent and opaque; but the opacity is not due to accumulation of epithelium between the layers of the capsules, but to an extraordinary hyperplastic growth of angular nuclei among granular substance within the tuft. This change leads to compression of the vascular loops, and consequent anæmia. It may be readily understood how this might induce great diminution or actual suppression of urine, and how it should lead to uræmia, and, in many cases, to speedy death. Of the correctness of Klebs' general description I have no doubt; for my friend Mr. David I. Hamilton, Pathologist to the Royal Infirmary, and Demonstrator of Morbid Anatomy in the University of Edinburgh, has afforded me ample opportunity of studying the pathological characteristics of the disease. On looking back, I am satisfied that I have met with examples of this lesion. I recollect that the peculiar appearance of pallor and prominence of the Malpighian tufts amid the congested tissues attracted attention, and that I concluded that an increase of the epithelium of the capsule accounted for the appearance. The admirable methods of preparing specimens now in use—methods which have been brought to great perfection in the pathological department of the University of Edinburgh—render it clear that this impression was erroneous; that the change is really in the fibrous tissue, glomeruli, and capsules. The discovery of this special form of lesion does not interfere with our acknowledgment of other changes which have been long recognised as associated with post-scarlatinal dropsy, and with which glomerulo-nephritis may be found associated in greater or less proportion. Its clinical history is believed to correspond to severe and rapidly fatal forms of post-scarlatinal dropsy.

The second new condition to which I wish to draw attention is the remarkable lesion described at the April meeting of the Medico-Chirurgical Society of Edinburgh, by Dr. Angus Macdonald (*Edinburgh Medical Journal*, April, 1878), as having been found by him and Mr. Hamilton in a case of fatal puerperal eclampsia. The kidney presented to the naked eye such an appearance as is ordinarily seen in the inflammatory affections of the tubes; but the microscope revealed a very different condition. The tubules did not appear opaque, nor the epithelium swollen and granular. These cells, on the contrary, were small, and their nuclei abnormally distinct. The capsule was normal. The most superficial convoluted tubes were wide; their epithelium was quite distinct. In many of them the lumen was blocked with a peculiar hyaline or colloid material. This material was very abundant in certain districts. In the medulla many of the tubules were completely occluded, and the observers were able to satisfy themselves that the material had flowed down the tubes, and, by occluding them, had led to secondary dilatation above. It appeared that, at many points, the epithelial periplast contained drops of this clear homogeneous substance, and the conjunction of numerous drops formed the mass. Mr. Hamilton tells me that he has met with this lesion in at least one other case of puerperal renal disease. By his kindness, I have had the opportunity of examining specimens, which satisfy me of the correctness of the description given. It is remarkable that, in Dr. Macdonald's case, the symptoms corresponded precisely with those met with in ordinary examples of puerperal eclampsia when associated with the usual inflammatory condition of the tubules.

The next particular to which I wish to refer is one which may appear of little importance—viz., as to the true nature of the cirrhotic process. I formerly was unable to satisfy myself of the inflammatory nature of this disease, but regarded it rather as a result of excessive growth of the renal connective tissue. My view was thus opposed to that of Dickinson and other eminent authorities; but an examination of microscopic specimens prepared by Mr. Hamilton has now satisfied me that the process, although so slow, must be regarded as inflammatory. The modern methods of staining render distinct the cell-proliferation, abundantly present where the disease is advancing; and this proliferation indicates the inflammatory character of the lesion. But, with this difference, there appears to be no reason for altering the opinions hitherto held as to the character, the progress,

and the result of the cirrhotic process. This, as I have said, may not seem a very important change, but it is one which has a bearing, not only upon the individual disease, cirrhosis, but upon other varieties of Bright's disease. I purpose, however, to retain the term cirrhotic kidney, because it is now well understood and in general use.

I now desire to draw your attention to the fact that a general consensus of opinion is beginning to exist as to the occurrence of three stages of transformation of the variety of Bright's disease which has as its main feature inflammatory affection of the tubules. The fact that fatty degeneration follows upon inflammation of the tubes, acute or chronic, has of course been long universally recognised; but the further truth, that atrophy results if the patient lives long enough and is not cured, was at one time doubted by many authorities. In what exact way the atrophy comes about is, however, open to question; some observers holding that it is a result of an interstitial inflammatory or cirrhotic process, superadded to the inflammation of tubes, others thinking that it is entirely a consequence of changes within the tubules. Here, as in all the other renal atrophies, there is at least a relative increase of fibrous tissue, but there is not, as a rule, that adherence of the capsule, nor that extraordinary increase of the stroma which occurs in cirrhosis; and there is evidence that the process occurs in those regions of the kidney in which the tubular changes are most marked, and in which blocked tubules may be seen in all stages of destruction. In illustration, however, of the atrophy, I may refer to one of Dr. Dickinson's cases, in which the patient lived for eleven years after an attack of post-scarlatinal dropsy, and after death the kidneys were found to be much atrophied. As another illustration, I may cite a case briefly described in the *St. Bartholomew's Hospital Reports*, by Dr. Moore, in which, within three years of the commencement of the symptoms, atrophy had occurred.

With regard to the stages of the waxy kidney, a similar consensus of opinion can scarcely be said to exist. German observers have not yet been satisfied with the accuracy of the description which has been given in this country. Dr. Litten (*Berliner Klinische Wochenschrift*, June 3, 1878) explicitly objects to this description, and recognises one form of waxy kidney in which that lesion has become superadded to other affections; another in which the waxy change is the primary, and other lesions are superadded to it. Professor Bartels (whose untimely death the profession has such cause to regret) again says ("Diseases of the Kidney," in Von Ziemssen's "Cyclopædia," page 518): "I do not indeed doubt that, under the influence of amyloid degeneration alone, an anæmic necrosis and destruction of the epithelium within the tubuli may take place, and in this way a considerable reduction may be effected in the size of the previously swollen organ; but, from all that I have hitherto seen myself, I must declare my adherence to the opinion entertained by Virchow and Klebs, that the cases thus described by Grainger Stewart were not simple cases of amyloid kidney, but were cases of amyloid degeneration, with simultaneous, or more likely with a previously existing contracting disease (the genuine or secondary contracting process). I, at least, have never seen a kidney that was smaller than normal, which was the seat of amyloid degeneration alone, and did not present at the same time distinct evidences of connective tissue hyperplasia."

On the other hand, it is satisfactory to notice that Dr. Dickinson indicates particularly in his last edition that he recognises something analogous to the three stages, for he says ("Diseases of the Kidney, etc.," page 432): "There are three steps in the disablement of the kidney by this disease —first, an alteration in the walls of the bloodvessels; second, an effusion through them into the tissues and cavities of the gland; third, consequent changes, both in the interstitial tissue and the tubes;" and Mr. Hamilton informs me that he has been able to trace the three conditions referred to in different examples of the disease, although he inclines to explain the series of changes in a way different from that which I suggested. To me it seems that the clinical evidence is strongly opposed to the explanation which Virchow, Klebs, and Bartels suggest regarding the extremely atrophic condition. Cases fitted to throw light upon such a point do not occur frequently in practice, but I may refer to two which afford strong evidence. In a very typical case, which was under my observation for more than nine years, the organs were found after death to weigh two ounces and a half each, the tubes were wasted, the Malpighian bodies were large and waxy, and closely grouped together, the fibrous tissue was certainly relatively for more abundant than in the healthy organ, but the capsules were at all points readily separable, and the organs did not present the appearances characteristic of cirrhosis. During the years in which I watched the case, the bulk of the liver underwent a diminution corresponding to that which I believe to have taken place in the kidney, but the liver showed no increase of fibrous tissue in its substance. Moreover, the clinical history of the case seems incompatible with either of the suggestions thrown out by the German authorities. If, on the one hand, we assume that cirrhosis became superadded to the waxy degeneration, it is singular that absolutely no change of symptoms was produced, but that the case went on, scarcely varying in its features till within a week or two of death. On the other hand, if we assume that the cirrhosis existed from the first with the waxy degeneration, the symptoms during all the years would be difficult to explain, nor could we have expected the course of the disease to be so prolonged as it was. Take again another instance. In a patient who was under observation for about four years, the organs were found somewhat contracted, the vessels markedly waxy, many of the tubules blocked with hyaline material. Such cases as these may be appealed to as evidence of the third stage—that of ultimate atrophy. In many cases, again, in which the symptoms have lasted a shorter time, the organ is found enlarged and pale, with smooth surface, and many of its tubules blocked with hyaline material—a material quite different from that which is seen in tubular inflammations. It is this condition which seems to warrant the description of the term, the second stage. In other cases, where the symptoms were only of recent origin, I have found no change beyond the vessels, the patient having died of some other disease before a further stage was reached. Cases of the kind seem to vindicate the first stage.

As to the diagnosis of the waxy disease, opinions are still discrepant; indeed, the most recent German writers on the subject seem to imply that in many cases it is impossible to establish a diagnosis. Dr. Litten (*loc. cit.*), for example, after describing four most remarkable cases of waxy degeneration without albuminuria, says that, among the complex group of symptoms associated with Bright's disease, none are more variable than those of the waxy degeneration, and that no lesion varies more than it in respect of the secretion, its quality, its chemical composition, the nature of the sediments deposited, and the presence and distribution of the dropsy. Such statements, gentlemen, by no means accord with my experience. How are we to explain this discrepancy?

The explanation seems to be that many physicians fail to distinguish cases of purely waxy degeneration from those in which that lesion is associated with inflammatory disease of the tubules or with other maladies. When the disease is simple and uncomplicated, I have invariably found the symptoms distinct and uniform, an absence complete, or almost complete, of dropsy throughout the whole course, the presence of polyuria from the beginning to the end of the case, the very rare absence of albumen, the scantiness of tube-casts, the history of wasting disease, and the absence, or comparative absence, of cardiac changes.

Now, with regard to dropsy, it is true that it is often met with in people suffering from waxy disease. I have seen it in cases in which probably the waxy degeneration became superadded to a chronic inflammatory affection of the tubules. I have frequently seen it persistent and very intractable in cases in which inflammatory disease had become superadded to the waxy degeneration; indeed, I have in my hospital practice been in the habit of drawing the attention of the students to this peculiarity—that, when in cases of chronic inflammatory disease under the influence of diuretics the quantity of urine has risen to the normal standard, or even higher, and yet the dropsy persists, there is strong reason to suspect the previous existence of waxy degeneration. I have, by inquiry in such cases, elicited the fact that, before dropsy had ever appeared, there had been polyuria, and repeated nocturnal calls to micturition, and have found on examination after death the old chronic waxy underlying the inflammatory disease. I have seen a patient much reduced with exhausting disease associated with simple waxy degeneration become dropsical during the last days or weeks of life; but that was due either to extreme anæmia and debility,

corresponding to what we see in so many cases of phthisis unattended by renal change, or to secondary and inflammatory changes in the renal tubules. In some cases, again, I have seen marked ascites associated with waxy degeneration, and no other or little other manifestation of dropsy, but that ascites was not due to renal disease, but to a waxy or a syphilitic affection of the liver, or, perhaps, partly to hepatic disease, partly to slight affections of the renal tubules. I have seen these cases go on to a fatal result (see *Medical Times and Gazette*), but also sometimes have witnessed great improvement, and have even seen the symptoms, both renal and hepatic, entirely disappear under persistent constitutional treatment and repeated tappings. We have thus certainly associated with waxy degeneration varieties and degrees of dropsy, but the dropsy is not due to the degeneration.

As to the quantity of urine, I have found it distinctly increased in the vast majority of true cases of waxy kidney. In one patient, whom I watched for nearly ten years, the urine continued copious throughout. When he first came under observation in February, 1860, his urine varied from 90 to 102 oz. per day; in 1861 it averaged about 120 oz.; in 1864 it was usually above that amount; in 1868 it was about 100 oz.; and in 1869, when he came into the infirmary to die, it was from 110 to 120 oz.; and within a few days of his death it was still markedly above the normal, 110, 102, and 70 oz. It is quite true that polyuria may be absent. If the degeneration of vessels becomes superadded to pre-existing inflammatory disease of the tubules, the polyuria can never become marked. If the inflammation become superadded to the degeneration, the polyuria must necessarily disappear. I have often known polyuria prevented by the existence of profuse diarrhœa, which is so common a symptom of waxy degeneration of the intestine; and sometimes its absence is accounted for by a combination of circumstances, as is illustrated by one of Dr. Litten's cases. A boy, aged seventeen, was admitted to hospital suffering from phthisis, enlarged liver and spleen, and some diarrhœa; he had no dropsy and no albuminuria, and he passed only 35 or 36 oz. of clear transparent urine daily, of specific gravity 1011 to 1015. With symptoms of hectic fever and intercurrent pleurisy, he gradually became weaker, the quantity of urine diminished, and became darker in colour. Post-mortem examination revealed, in addition to phthisis, pleurisy, and general miliary tuberculosis, waxy degeneration of the kidneys. With this group of symptoms, even in the absence of polyuria, one might have suspected the existence of renal degeneration, on account of the colour or specific gravity of the urine, taken along with the causal and concomitant complications. The absence of polyuria was explained by the diarrhœa and the fever, perhaps in some measure also by the renal tuberculosis. I am not positive that the last-named affection prevents the development of polyuria, but I have seen instances in which a syphilitic affection of the organ appeared to have the effect. The absence of albumen, in regard to which Dr. Litten's paper is so valuable, occurs sometimes, as he has shown, throughout the whole course of the case, and sometimes is not developed for a short period after the polyuria has appeared. The quantity of albumen varies greatly. As to urinary sediments in the cases of uncomplicated waxy kidney, there are scarcely any; tube-casts are by no means numerous. There sometimes occurs a deposit which resembles pus, but probably consists of wandered white corpuscles, which have made their way through the walls of the vessels, which are degenerated, and perhaps more permeable: red blood-corpuscles appear but very rarely. Whenever a deposit is found containing numerous epithelial, granular, and fatty casts, we may certainly conclude that we have no longer to do with an uncomplicated case of waxy disease, but that inflammation also exists. Attention to such considerations has often guided me in obscure and complicated cases. The importance of polyuria as an aid to diagnosis is well illustrated by a recent article in Virchow's *Archiv* (Band lxxxi.), by Dr. Fürbringer of Heidelberg, who describes four cases which occurred in the practice of Professor Friedreich. In each case waxy kidney was diagnosed, but in only one of the four did the necropsy justify the diagnosis. In all of them there was albuminuria associated with enlargement of the liver and spleen, and phthisis or other exhausting disease; but in three of them the quantity of the urine was not increased, and the specific gravity was never below the normal. With these conditions of the urine, the principles of diagnosis in which I have most confidence would have forbidden the expectation of waxy degeneration; whilst they would have led to the diagnosis in the remaining case, seeing that the urine, which had at first been scanty and dense, became, at the very end of life, more copious and of lower specific gravity.

I must apologise for the length to which these remarks have extended, and for the departure from the ordinary form of the sectional address. I trust that the importance of the subject which I have ventured to bring before you may be held not to have trespassed unduly upon your time.

THE SECTION OF OBSTETRIC MEDICINE.

OPENING ADDRESS.

By ALFRED H. McCLINTOCK, M.D., F.R.C.S.I., LL.D.,
President of the Section.

DEATH-RATES IN CHILDBED.

My first impulse and duty on taking this chair is to express a deep sense of the honour conferred upon me by the request that I should preside over the Obstetric Section of the Association on the present occasion; and I gladly seize this opportunity of thanking our President, Dr. Falconer, and the Committee of Council, for their selecting me for this office.

The compliment thus paid is greatly enhanced by the consideration that, among those who in past years filled this position, we find the honoured names of Locock, Farre, Duncan, Barnes, Beatty, Evory Kennedy, and Priestley—all men of eminent ability, who have earned enduring reputation by their varied and valuable contributions to this department of the healing art.

The entire number of these past Presidents is comparatively small, and the reason for this is worth mentioning, as it marks an epoch in the history of this great Association. Up to the year 1867, the work done at the annual meeting was not subdivided into sections as it now is; in that year, however, the thirty-fifth annual meeting took place—Dublin being the city where it was held—when a more profitable and systematic arrangement of the papers and discussions was effected, by classifying them under the appropriate heads of Medicine, Physiology, Surgery, and Midwifery—each section having its own president, vice-presidents, and secretary.

This division of labour, as might be expected, was found to work most satisfactorily, and, as you all know, is now carried out to the fullest extent, and with the greatest advantage. In fact, without a strict regard to this arrangement of subjects, such is the magnitude of the Association that there would be nothing but confusion and disorder at our meetings.

Of late years, the number of communications in the list of this Section has been so great that, even with the utmost economy of time, they could not all be read. This was notably the case last year at Manchester; and, when the session closed, a resolution was passed, voting that "they all be considered as having been read." In consequence of this pressure on the time of the Section, I shall not in these remarks exceed the limits permitted to an ordinary communication.

A question of very great interest and importance was started some years ago, and has been the subject of special investigation by Le Fort, Evory Kennedy, Matthews Duncan, myself, and others. This question is, "What should be regarded as the average mortality among women dying in parturition and the four weeks immediately succeeding?" In other words, what is the death-rate among women in childbed?

A variety of causes concur to keep up error and misconception on this point, most of which have been pointed out by Matthews Duncan and myself. But the worst of it is, the false standards which have been put forward, especially by Le Fort and Kennedy, are calculated to deter most men from publishing the actual results of their experience, and to disparage very materially the practice of lying-in hospitals by making the death-rate therein appear so inordinately high. For example, Le Fort takes 1 in 212 as the rate of

mortality among women attended at home by maternity charities, and forthwith assumes this to be the true standard of comparison. Dr. Kennedy took the mean mortality in three very small provincial lying-in hospitals—this mean being 1 death in 282 cases; and this is the standard he erects wherewith to test the practice of all such institutions. Is it any wonder if the application of such a standard should exhibit a death-rate of appalling magnitude?

So far back as May, 1869, I ventured to lay down, as the deduction from a large collection of cases treated in private practice by several men of character and eminence, that 1 death in childbed out of 125 patients was about the true average; and this, mind you, among patients in comfortable circumstances treated at their own homes by competent and highly skilled accoucheurs.

Matthews Duncan has investigated the question before us with that rigorous logic and careful discrimination of data which strongly characterise all his writings; and the following is the conclusion at which he arrived as the best approximation to the truth that he could make, viz., that "Not fewer than 1 in every 120 women delivered at or near the full time die within the four weeks of childbed."

In the nine years which have elapsed since the publication of my paper on this subject, I have collected some more data, the result of which tends not only to confirm my former statement, but to show that the actual rate of mortality is even higher than the one I then laid down, that 1 in 100 would, perhaps, more correctly represent the lethality among women in childbed.

Le Fort says that the published statistics of the private practice of several English accoucheurs show a rate of mortality not exceeding 2 or 3 in 1000; and Simpson has stated that the mortality of childbed is now 1 in 150 or 200. But these are mere empty assertions, and destitute of any real value. Before the stern logic of facts they utterly break down. I do not mean to weary you, gentlemen, with statistics, so I shall just briefly mention the sources of my additional data.

Dr. Campbell, out of 1500 private patients, attended by him in Paris, lost 13.

Simpson, in the only two years—and we suppose they were not the worst years—that he reported the results of his private practice, lost *four* patients out of 180.

Matthews Duncan, in the years of his practice of which he preserved records, had 8 deaths in 736 cases.

Out of 1000 consecutive patients in my own private obstetric practice, including 40 cases of abortions, I find from my register that 12 died within the month—viz., 2 of scarlatina, 1 of pertussis, 2 of hæmorrhage, 1 of convulsions, and 6 of metria.

Uvedale West—a most accurate observer and faithful reporter—has published the results of 3100 midwifery cases in his own private practice; and the deaths among these were 23 in number.

Dr. Thomas Hamilton's midwifery practice in a country district of Scotland gives the following result—viz., 7 deaths out of 402 cases.

Dr. Charles Egan reports 400 midwifery cases among Europeans in British Kaffraria, and among them were eight maternal deaths.

Dr. W. T. Greene has published an analysis of his private practice among the lower-middle and labouring classes of a London suburb; and the total number attended during a period of eight years, ending in 1877, was 1500, of whom 12 died.

Lastly, Dr. George Jones has reported 2000 consecutive midwifery cases, with a total of 16 deaths.

Now, when we sum up all these figures, what is the result? Simply this—that nine accoucheurs have reported 10,818 midwifery cases occurring in private practice; and that out of this number 103 women died, being a death-rate of 1 in 105 as nearly as possible. We may be perfectly certain that the above returns do not in any way exaggerate the number of deaths; nay, I feel sure that, if anything, they underrate their proportion. The omission of a death might easily occur, but the addition of one seems the next thing to an impossibility.

In contrast to the above figures, it may be urged that there have been published records of midwifery practice with only one death in every 300, 400, or even 500 cases. A splendid result, I freely admit, but so very exceptional that, in my judgment, its correctness should be rigidly tested before it be accepted as absolute fact; and the first question I would ask is this, "Has the result of every individual case been noted down in the register at the end of the puerperal month?" Where the facts and items are not so recorded, the data are wholly unreliable; and this specially holds good where the compiler or reporter was not himself the observer of the cases.

The omission of a death in private obstetric records may happen in different ways. A common one is this. Dr. A delivers a patient, and another practitioner, Dr. B, takes up the attendance sooner or later after delivery. Eventually, this patient happens to die. The death does not appear in Dr. A's register, as she did not die in his hands; and the case is not entered in Dr. B's register, for he did not deliver her; and so it comes to pass that the death is unrecorded. True it is, both Dr. A and Dr. B are in one sense correct, and we cannot blame them; yet their statistics yield a false result.

In the public registration of deaths, it is certain that, in all the cases of women dying in childbed of some apparently non-puerperal disease, this disease alone is entered as the cause of death. Now, I have elsewhere demonstrated that over one-fourth of all the women dying in childbed perish from some disease not essentially or properly puerperal in its nature. Hence, it follows that we must increase the number of registered deaths of childbed by one-third, in order to ascertain how many deaths actually took place in childbed. Let me illustrate this: 11,722 women were registered as dying of childbed in England in the years 1838 to 1841 inclusive, the rate of mortality being 1 death to every 168 women confined. But, on the principle just laid down, the number of deaths occurring in childbed within this same period should have been 15,629, which would make the death-rate 1 in 126, instead of 1 in 168—a very material difference, you perceive.

I am satisfied a great deal of discrepancy has arisen in the returns, public and private, of obstetric practice, from the distinction of deaths *in* childbed and *of* childbed not being attended to. Accuracy on this head should be carefully observed in order to make just comparisons. Whilst on this subject, let me mention two other sources of fallacy in obstetric mortality reports. One of these is abortion. By some reporters abortions are included in the general total, and by others they are not. But it should always be specified whether cases of abortion are comprehended in the report, and what their number is.

Again, consultation cases should be kept distinct and apart in all reports of private practice where the death-rate is shown. To include them without giving the result of the case would obviously be unfair; whilst to give the result would augment the death-rate to the prejudice—but most unjustly so—of the practitioner; for the higher a man's reputation stands, the greater will be the proportion of difficult and dangerous cases falling to him; and the same precisely holds good of hospital experience, so that, paradoxical though it may appear, it is yet quite true to assert with Dr. Bristowe and Mr. Holmes, "that a high death-rate indicates, as a rule, that a hospital fulfils efficiently the purposes for which it was designed; and that a low death-rate, on the other hand, indicates (*cæteris paribus*) comparative inefficiency."

I lately received from Professor Lusk, of New York, a most interesting and elaborate paper "On the Nature, Origin, and Prevention of Puerperal Fever." It contains one very striking fact which tends to support the estimate I have put forward as the true death-rate of women in childbed. This fact I now mention.

A careful analysis made by Dr. Lusk of the vital statistics of New York for the nine years ending 1875, shows that the total number of deaths to the total number of confinements would be, at least, in the proportion of 1 to 85, and the deaths from puerperal fever alone in the proportion of 1 to 146.

Most of the data used by me in this paper take in women of the upper or middle classes, and residing in cities. Now, the deteriorating influence of civilisation on the physical development and animal functions of females is undoubtedly greater in such women than in those of inferior rank and among a rural population; and, if so, the injurious effects of childbearing should be more apparent among the former. This, I say, would be a not unreasonable inference, and has, I think, some support from statistics. However, it is one of

those questions which yet remain to be worked out when the requisite amount of data have been accumulated.

Let me now, gentlemen, bring these cursory remarks to a conclusion. I really feel that some apology is due for having occupied any portion of your time with so dry a subject, when many papers of great interest and practical importance await your hearing.

ORIGINAL COMMUNICATIONS.

A CASE OF
UNILATERAL EPILEPTIC PARALYSIS.

By B. KELLY, M.D., L.K.Q.C.P.I., L.R.C.S. Edin.

As examples of hemiplegic epilepsy are sufficiently rare in private practice, and as at present considerable attention is directed to what is called the "localisation of cerebral disease," the notes of the following case may not be deemed unworthy of record, as illustrative of the subject, at least in a clinical point of view.

Mary Ann H., aged thirty-four years, married, the mother of five living children, sent for me in the afternoon of April 12, 1878. She had been suddenly seized with convulsions while in the act of making her bed, about nine o'clock a.m. of the same day. Her previous history, as I learned from her husband, was as follows:—Some six months previously she had had, for the first time in her life, an epileptic fit in sleep, which was so violent as to awake her husband, who was in bed with her at the time. Bloody foam, according to his account, was issuing from her mouth, and, to the best of his recollection, the convulsion had lasted for from three to five minutes. She has had regularly since then two or three fits of a similar character every month. She is at present, I may add, in the last stage of her sixth pregnancy. On examination, I found her affected with complete right hemiplegia, but without hemianæsthesia, however. Up to the present attack, I may add parenthetically, there had been no perceptible paralysis of any kind, if we except a slight hesitation or thickness of speech. The aphasia is now complete, although the patient herself is quite conscious and intelligent. Her pulse, 88, regular; respiration and heart-sounds normal; bowels confined; temperature, as taken in both axillæ, the same. The urine abounding in phosphates; specific gravity 1030; reaction intensely acid, but quite free from albumen. In order, first of all, to relieve the bowels, and thereby to obtain, if possible, a clearer view of the etiology of the case, I prescribed the following mixture:—Bicarbonate of soda, two drachms; sulphate of magnesia, two ounces; compound tincture of lavender, two drachms; water, to eight ounces: a sixth part to be taken every two hours.

April 13.—Found no material change in the patient's condition. She had had several copious alvine evacuations. Premising that hyperæmia and irritation of the cortex or grey substance of the left hemisphere of the brain had given rise to hemiplegia, and as the urine was highly acid, scant, and saturated with phosphates, I ordered—Bicarbonate of potash, two drachms; tincture of belladonna, two drachms; compound tincture of bark, half an ounce; water, to eight ounces: two tablespoonfuls to be taken every two hours.

14th.—The patient still quite conscious, but aphasic; takes nutriment freely in the form of soup, beef-tea, milk, etc.; is also able to move the right lower limb slightly, and is more cheerful and confident. The medicine to be continued.

15th.—Found the patient to-day, in most respects, much improved. Is able to sit up in bed, but still completely speechless; the tongue, when protruded, is twisted to the right side, and presents a large gap on the left margin, completely cicatrised—the result of bites during previous attacks. There is at present, I might say, simple brachio-facial paralysis of the right side, the lower limb being almost as movable and as strong as its fellow, and quite as sensible to external impressions. Pulse, temperature, and respiration the same; the urine still highly acid and phosphatic, specific gravity unchanged. The mixture to be repeated.

16th.—The patient still making steady progress. The paresis of the right lower extremity somewhat less, the woman being able to support herself on it for a short time; the paralysis of arm and face yet unaltered; pulse and temperature the same. The urine, strange to say, is still decidedly acid notwithstanding the large amount of alkali taken, and loaded with phosphates; specific gravity 1030; scant, scarcely measuring a quart in the twenty-four hours. Appetite good; tongue clean, but still protrudes to the right side; vision good (as it has, indeed, been from the outset); pupils normal, large and frequent doses of belladonna to the contrary notwithstanding. The patient sleeps well, and is very cheerful and rational, understanding everything said to her—nodding or shaking her head, as the case may be, by way of assent or negation to all questions addressed to her. The treatment to be continued.

17th.—Her condition the same in every respect as on the day previous.

18th.—The patient still progressing favourably. Stands firmly on both legs; sleeps and eats well. The urine more abundant (neutral), and contains decidedly less phosphates; specific gravity less, 1025; the pulse, however, accelerated, being 100. In answering questions she is yet barely able to articulate "Yes" and "No," and which are rather hissed out than distinctly spoken. She protrudes the tongue somewhat straighter. The brachio-facial paresis still, to all appearance, unchanged. The pupils as yet show no alteration; nor does the patient complain of dryness of the throat, as she shakes her head by way of dissent when interrogated on the point. As there was nothing special to contra-indicate it, I advised a repetition of the medicine, but the doses to be taken now every three hours.

19th.—Found the woman to-day sitting up out of bed. Is able to raise the paralysed arm slightly from the side, and to grasp faintly with the hand. When assisted to walk is seen to drag the right leg after her. The pupils are moderately dilated, but the vision is still unimpaired. Her stock of words is still confined to "Yes" and "No." The urine more abundant (about fifty ounces per diem), specific gravity 1018; reaction neutral; the phosphates steadily diminishing; chlorides abundant. Pulse 100; bowels regular. Having considered that the proper time had now arrived for a change of treatment, I prescribed the following:—Tincture of perchloride of iron, two drachms; simple syrup, four drachms; peppermint-water, to eight ounces, a sixth part to be taken every three hours.

The patient continued very much in the same state till Easter Monday, when I was hurriedly summoned to see her about two o'clock a.m. I found her sitting up on a chair in the centre of the room, loosely wrapped in some clothing hastily thrown around her. On asking the person who acted in the capacity of temporary nurse why I had been sent for (as the patient's position at first sight did not strike me at all unusual or strange), I was told that the child was already born, and under her! And, sure enough, it was; for, on removing the patient to bed, I found a full-grown, well-developed fœtus doubled up in a chamber-pot beneath the chair, and the placenta detached in front of it on the floor. The patient had herself got out of bed for the purpose, as it would seem, of using the night-stool, and had been delivered spontaneously in the act. The labour must have been extremely quick and energetic, for she had evinced no outward symptom of parturition an hour before I was called to her aid. I instinctively asked myself the questions: Had her paralysed condition blunted her sensibility to suffering? Or had the sympathetic nervous system vicariously assumed increased power from the partial paralysis of the cerebro-spinal? These questions I am unable to answer; and at present am not very likely to receive much light on the subject, at least as regards the nature of the labour-pains, from the patient herself. The child (a male), it is almost unnecessary to state, was quite dead.

Apart from this unexpected and somewhat startling episode, there was nothing in her condition very remarkable or worthy of special notice, further than that she continued to gradually improve till April 24, when I was again hurriedly called to see her about nine o'clock in the evening. She had just had a severe epileptic attack. Bloody foam was still issuing from her mouth, and she was quite unconscious. Not only was she insensible, but a stupor as profound as any to be met with in apoplexy had ensued. The respiration, however, was quite regular and free from stertor. The pulse was quick, irregular, and intermittent. The pupils were not examined, the only light available for the purpose being a miserable "tallow-dip." She continued in this comatose state about an hour.

The fact of the patient losing consciousness during, and for some considerable time after, the fit (the only one I had chance of witnessing, at least in part), would seem to indicate that the lesion of the motor area of the hemisphere upon which the convulsion and subsequent coma depended had its origin rather in constitutional or general influences than in causes or conditions of a local character. But, as neither the patient nor her husband (both simple, honest country people) exhibited the slightest trace or symptom of syphilitic taint, nor has there been, as far as I could learn, any hereditary predisposition; and as all their children are remarkably healthy and robust—all notion of taking syphilis into account as a factor in the further treatment of the case was entirely, and as I believe reasonably, discarded. Whatever the constitutional element or idiosyncrasy may be to explain away the unconsciousness during and after the fit, it cannot, I am convinced, be referred, either remotely or proximately, to the disease in question. Acting upon this theory or belief, and with a view of testing, if possible, the correctness of the judgment arrived at, the following mixture was given:—Bromide of potassium, two drachms; tincture of belladonna, three drachms; peppermint water, to four ounces: one tablespoonful to be taken every two hours.

April 25.—The medicine seemed to have an excellent effect, as she slept tranquilly after the second dose, and is much improved to-day. Can articulate more distinctly; and can raise herself up unaided in bed. The mixture to be continued; but the dose to be taken now every third hour.

April 26.—The patient's condition in every respect the same as yesterday. Ordered the dose of the medicine to be reduced to half the quantity.

April 27.—Is able to walk to-day, but rather unsteadily. Can move the right arm freely; but the forearm and hand are still heavy; and her power of grasping very feeble. All the intellectual faculties *apparently* healthy and unimpaired. The speech (if it may be called such) still thick, and confined to the words, "Yes," "Very well," and the like. The nutritive and excretory functions are normally performed. Pulse 94; regular. The patient sleeps well, and is quite free from pain or suffering of any kind. Thanks to the belladonna, she has had very little trouble on the score of lactation—the mammæ not having swollen to any degree, and being at present quite small and flaccid.

No alteration in the patient's treatment was necessary till the 29th, when, the effects of parturition having fully passed away, and a nerve-tonic being clearly indicated, I prescribed—Sulphate of quinine, sixteen grains; dilute sulphuric acid, one drachm; syrup of ginger, half an ounce; water, to eight ounces: two tablespoonfuls to be taken every two hours. Quinine, with or without the bromide of potassium, I may here add, I have found from long experience to be a most reliable remedy in all cerebral affections of an epileptic, or even an apoplectic character; as also in softening, and other disorders of function arising from undue tension or overwork.

The foregoing mixture had been used with very little modification, such as occasionally reducing the quantity of acid or entirely omitting it when found to disagree with the stomach, and the quinine latterly to be taken only three times a day, till the present date (May 25) to my entire satisfaction, the patient steadily gaining her powers of locomotion and general strength. She walks now pretty firmly, but with a slight halt. Grasps quite vigorously, but while doing so sinks the thumb-nail rather uncomfortably into the back of your hand. Her faculty of speech, however, I regret to say, is still sadly in abeyance, being thick, slow, and hesitating. During this interval she has also complained of worrying pain, at first in the wrist of the paralysed arm, which, after continuing about a week, subsided, or rather shifted to the palm of the hand; persisted in this position during another week or so, next visited the joints of the fingers, and is at present located in the thumb and index-finger, which it is to be hoped will not long afford it a resting-place. Although considerable muscular power has been obtained in the paralysed arm and hand, the woman seems yet incapable of using the latter for the purposes of feeding herself and for ordinary manipulations. But this, I am convinced, arises rather from diffidence on her part, or from the awkwardness naturally ensuing upon the long-continued disuse of the member.

P.S.—Since writing the above I have been informed by her husband that the patient had had some two years ago a severe attack of acute articular rheumatism, which lasted about three months. The knowledge of this fact suggests the possibility of softening of "Broca's region," consequent upon thrombosis or embolism of the left middle cerebral artery, the patient being neither ambidextrous nor left-handed. But as an accident of this kind would rather lead to a sudden catastrophe, or to a steadily increasing and permanent aphasia, the mystery of the heretofore frequently recurring attacks of epilepsy would not, I fear, derive much light from even the absolute certainty of such a lesion of the speech-centre.

Rotherhithe.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THE CENTRAL LONDON SICK ASYLUM, CLEVELAND-STREET.

TRANSITORY AMBLYOPIA FROM LEAD.

(Under the care of Dr. LEDIARD.)

H. H., aged twenty-seven, costermonger, formerly a painter, was admitted on July 11, 1878, complaining of pains in the abdomen, which had existed one week, and a return of weakness in his arms.

The patient has been under my care on several previous occasions since 1875, and has been treated for acute lead colic and well-marked drop-wrist, for which he has been galvanised here and elsewhere with great success. He has not done any painting for two years now. On examination the patient is healthy-looking and the body is well covered with fat. There is some abdominal tenderness. A semi-drooped condition of the wrists from deficient power of the extensors of forearms. The bowels are very much confined. Urine free from albumen. One grain of pil. opii every four hours, and poultices, ordered on admission.

July 12.—Opium discontinued as the colic is less. To have an enema and ten drops of chlorodyne three times a day.

13th.—Bowels have been relieved. Yesterday, after my visit, he became somewhat strange and restless. He was in bed; and after having some broth for dinner said he could not see, and then that he could, and again that he was blind. He fell out of bed at 10 p.m., seemed unconscious, blackened his left eye, but no fit was observed. He had a restless night, calling out, and passed his water under him.

14th.—This morning he is strange and wild; has been picking his nose, causing it to bleed. He calls out loudly for "Emma" (his wife), and says he is blind; he is thirsty, but not hot. There is no want of sensation anywhere. His pupils are equal and contracted; reaction to light not observed, for atropine was at once applied to enable the ophthalmoscope to be used. He protrudes his tongue mesially—it is moist but furred; speech distinct and unaffected. No paralysis of any limb noted. Patient was wrapped in a blanket and led into an adjoining room. A careful ophthalmoscope examination (indirect) was then made, but not without some trouble, for the patient was restless and uneasy, seemingly unable to give the assistance usually required, being decidedly dull, heavy, and stupid, although he had always been intelligent previously. The examination gave quite negative results. There was neither hæmorrhage, exudation, nor embolism, and the discs were quite natural in appearance. Strong light caused no pain to the eyes; and he could not find his way back to the ward alone or walk straight. I ordered a pill containing one drop of croton oil.

15th.—Bowels were well opened yesterday by the pill. He was again restless last night, but not so much so as the previous one; has called out "Emma," as before. The pupils are widely dilated (atropine). No pain anywhere; seems more sensible and better behaved than yesterday. His irritability and rough manner have abated somewhat. No sickness; less thirst. Says "he would be all right if he could see."

17th.—Sight began to return yesterday, and he was more himself. To-day he can see and count fingers. (Unfortunately the patient could not read, so that definite testing could not be carried out.) Can discern the colours on the

pictures on the opposite wall at twenty feet distant. Bowels are well open, but he has again some pain in the abdomen. Is quiet, rational, and well-behaved this morning. I examined him with the ophthalmoscope repeatedly, and found nothing more than on the first occasion. The yellow spots were carefully examined also, and found to present nothing unusual.

18th.—Is better. His mind is clearer, and, as far as can be determined, his sight is now normal; but he says a dimness comes over it occasionally. Is hungry; tongue is cleaning. States that he has not been drinking more than usual lately.

19th.—He has not been allowed up as yet. Sight still improved; bowels opened yesterday, and there is some slight pain in the abdomen. The pupils being now less dilated, it is possible to see that they contract well under the influence of light.

20th.—He does not recollect suddenly becoming blind the other day, but recollects he could not see. Complains of weakness in his hands, arms, and wrists. Ordered iodide of potassium mixture.

21st.—Was up this morning for half an hour, but felt weak. Says his sight is as good as ever. Pains in stomach of the same character that he has had from time to time during the last three years.

22nd.—He is up to-day. I applied a strong interrupted current to the extensors of forearms, which contracted, but not well. He cannot hold out his arms straight without the wrists drooping as on admission. There is still a blue line along the gums, but not strongly marked. Patient wishes to go out, feeling able to do something. He has, moreover, a wife and family to look after, and intends to go to a hospital and get the battery applied as he has done before.

Remarks.—This case is clear and complete enough, I think, to add to those instances of transitory amblyopia from lead which have been recorded by Ebert, Henoch, Leber, and others. My patient, no doubt, was an intemperate man, but somewhat young (twenty-seven) for alcoholic saturation; moreover, I doubt if he had the means for a continuous debauch. Excluding alcohol, then, as a factor in the production of the phenomena noted, I think that the colic, drop-wrists, blue lines on the gums, and the previous known history, taken together, render it tolerably certain that his complete amblyopia of some ninety-six hours may be ascribed to lead-poisoning. On reference to the register I find that H. H. was treated—1875, August 28 to September 6, for lead colic and urticaria; 1877, April 6 to May 4, for lead-poisoning; August 21 to September 13, for lead-poisoning; and on all occasions the faradic current was employed for the dropped condition of the wrists. I have said nothing of headache, for there was none; there was no drooping of eyelids, twitching of muscles, nor paralysis of any kind observed, and the most striking feature of the case, apart from the blindness, was his dull and irritable state of mind. It is to be noted that the fall he had out of bed and his seeming temporary unconsciousness occurred after he had complained of loss of vision, so that the black eye he received could not have been any part of a head injury causing amaurosis. It was surprising that he complained so little of his misfortune: this arose, no doubt, from the cloudy condition of his intellect, which cleared up in proportion as his sight returned; and when he left the building he was, as I had always known him to be, a somewhat rough, ignorant, ordinary labourer. There was no anæmia in this case; his face was full and florid, if anything, and the retinæ were of brilliant colour and the vessels full but not actually congested.

LIVERPOOL ROYAL INFIRMARY.

TUBERCULAR TUMOUR OF CEREBELLUM.

(Under the care of Dr. DAVIDSON.)

MARY S., aged fifteen, servant, admitted into the Liverpool Royal Infirmary, June 22, complaining of loss of vision and headache. She states that she was healthy till six months ago, when she began to suffer from severe attacks of headache. The headache recurred almost daily, but till her sight became affected she did not seek medical advice. Three weeks ago squinting of the left eye came on, but has passed off to some extent. About a week ago the vision of the left eye began to fail. She has never had fits, paralysis, or loss of consciousness. About a month ago she staggered in walking, and was observed continually to turn towards the left. She has often suffered from vomiting during the severe attacks of headache. Nothing noteworthy in family history.

State on Admission.—Pale, but not very unhealthy aspect. There is a moderate amount of strabismus of the left eye, due evidently to paralysis of the external rectus of that side. Her eyes were examined ophthalmoscopically by Mr. Edgar Browne, who reported mydriasis, but action of pupils not altogether lost; double optic neuritis; no exudation; no paralysis of any other nerve, nor loss of sensation. There is slight feebleness of gait, and tendency to staggering when she walks with her eyes closed, but no marked ataxia. Her intellect and memory are good, but she remains very quiet and somewhat apathetic; still suffers from headache; tongue rather coated, and bowels confined; urine normal; pulse 120; temperature 99° in morning, slightly over 100° in the evening; no cough or expectoration. At apex of right lung, in front, there is slight dulness, the respiratory murmur being a little harsh, and the expiration prolonged; slight dulness and crepitation at the extreme bases behind.

June 24.—For the last week before admission she has complained of occasional dimness of vision in the left eye, lasting only a few minutes, but never complete loss of sight. Last night, however, the sight of the left eye was completely lost, but to-day has so far returned that she can see various objects.

25th.—This morning she awoke with a severe headache, and found the vision of the left eye completely gone. With the right eye things are seen as through a mist. Potass. iod. gr. vii.ss. ordered thrice daily.

29th.—She has remained in bed since admission, and expresses herself better, having been free from headache and vomiting for several days. The sight, however, is not improved, the vision of the left eye being entirely gone, and that of the right eye almost as bad, since two days ago. Pulse 120; temperature 99·6°; sleeps well. Her diet was changed to-day from common diet to milk and pudding. Bowels regular. She walks now without any staggering.

July 3.—Sight of left eye much improved; right also better. The strabismus also slightly improved. Patient allowed to get up.

7th.—Sees much better with both eyes. Marked weakness of the legs is coming on; she moves them with considerable difficulty, and is unable to stand without support. Some pricking in the legs, and pain when they are touched. Rather drowsy.

11th.—Sight almost completely restored. About this time the ophthalmoscope was used, and there appeared to be some exudation on the discs. Marked paralysis of the legs; sensation not much lost. The urine had to be drawn off to-day; bowels confined; pulse 88; temperature 99°.

16th.—The paralysis of the legs has varied, on some days being less marked. Sight remains perfect. Her general condition is worse; she is paler, thinner, and weaker. She lies quiet, usually taking little notice of what is going on about her, but her intellect is quite clear. Pulse 110; temperature 100·4°, evening 102·4°.

On the 22nd severe vomiting commenced, and continued in spite of every treatment, and she rapidly became exhausted, and died on the 26th.

Post-mortem.—There was abundant tubercle of the peritoneum, the nodules being especially large in the neighbourhood of the stomach and liver, where also were extensive old adhesions, but no recent lymph or serous effusion. There was considerable tubercular disease of the bladder; and there was a slight amount of tubercle in the apex of both lungs. Both pleuræ were adherent, the adhesions being especially dense at apex of the right lung. Brain: There was some fluid in the ventricles and under the arachnoid, and the substance of the brain was rather soft and watery; no lymph or miliary tubercle. The left lobe of the cerebellum was strongly adherent to the dura mater at its anterior, inferior, external aspect over an area about an inch in diameter. This corresponded to the situation of the left lateral sinus, which was in consequence completely occluded. Adjoining this in the substance of the cerebellum were two or three large nodules of cheesy tubercle, surrounded by a zone of pink gelatinous tissue, the whole forming an irregularly spherical mass, having a diameter of about an

inch. There was no disease of any other part. All the cranial nerves, including the left sixth nerve, appeared perfectly healthy.

Remarks by Dr. Davidson.—In this case the symptoms evidently pointed to the presence of a cerebral tumour—the pain in the head, vomiting, and double optic neuritis. The vomiting, which was so incessant during the last few days of her life, may be explained best by the irritation of the abundant tubercles on the outer coat of the stomach, and the old adhesions which must have disturbed the function of the organ; but the earlier attacks of vomiting had all the characters of cerebral vomiting. The tubercular nature of the tumour was inferred from the age of the patient, and the slight signs of tubercle in the apex of the right lung. No certain opinion could be formed during life as to the situation of the tumour. The principal points aiding one to localise were the paresis of the lower limbs; the staggering gait; the tendency to turn to the left, observed before admission to hospital; the transient loss of vision, so variable and transient as scarcely to be explained by the optic neuritis; and the strabismus. With the exception of the last symptom, all these were felt to be consistent with the existence of a tumour in the cerebellum, and accordingly it was thought possible, if not probable, that the tumour was situated there.

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Medical Times and Gazette.

SATURDAY, AUGUST 24, 1878.

THE REGISTRAR-GENERAL'S THIRTY-NINTH ANNUAL REPORT: THE MONEY VALUE OF MEN.

In the Annual Reports of the Registrar-General we are accustomed to find, not merely facts and figures, but dissertations on the lessons to be drawn from statistics which have a peculiar charm for thoughtful persons, in addition to the eloquent enthusiasm which marks the style of the writer. The Thirty-ninth Report relates to the year 1876; it begins with an interesting *resumé* of the whole work of the office. During the thirty-nine years and a half that have passed since the commencement of the registration system, the population of the United Kingdom has increased by 7,619,759. *Great Britain* has increased by more than 10,000,000, but there has been a decrease of more than two and a half millions in Ireland.

Various attempts have been made, says the Registrar, to estimate the amount and the increase of the capital of the United Kingdom, but hitherto no determination has been made of the value of the most important part of the capital, that is to say, "the economic value of the population itself."

Population not only has the power of earning and producing, but it gives the value to all kinds of property. Without population, land, houses, railways, yield no profit; quarries, and mines, and factories owe their value to the men who work them. "Should the population of a country decay, the value of its capital might sink to the vanishing point."

In the thirty-nine years and a half during which the General Register Office has existed, 7,619,759 people have been added to the population of the United Kingdom; "who, valued as land is valued by the annual yield of net profit, constitute an addition of £1,212,000,000 to the wealth of the nation." The minimum value of the population of the United Kingdom, men, women, and children, is £159 a head; that is, the value inherent in them as a productive, money-earning race. It follows that the United Kingdom, as the hive whence the swarm of emigrants passes yearly to the English Colonies and the United States, is a source of untold wealth. Probably the money value of the 8,000,000 people that emigrated in the years 1837-76 was £35,000,000 a year. "The policy of the people of this country has thus been a policy of progress. Since 1837 they have added on an average 192,873 souls annually to the population at home, and sent 202,868 sons and daughters to seek their fortune abroad."

"But," continues the Registrar, "it may be contended that emigration is a loss to the mother country. It is like the export of precious goods, for which there is no return." But simultaneously there has been a prodigious increase of the capital of the country. The value of the labourer has risen, as proved by the rise of wages, which has been 20 per cent. in Norfolk, which is supposed to represent the average of all England; and the emigrants have supplied England with wheat, cotton, wool, and gold to the value of hundreds of millions.

But the economic value of a population depends on their command over the powers of nature which they acquire by education. As a proof of progress in this important particular the Registrar is now able to report that, whereas thirty-nine years ago not more than fifty-eight out of one hundred men and women were able to write their names in the marriage register, the percentage of persons who possess this degree of education is now eighty-one.

But the value of the working population depends on many other elements, moral and physical, foremost among which stand health and long life. Much has been done to render these more secure, and to rob of their terrors any future returns of those epidemics which have proved, and still prove, so fatal. Meanwhile there is one rather gloomy side of the prospect; population has been flocking into the towns, and many villages have become populous, so the population has become denser, which, by a definite law, tends to increase weakness, sickness, and mortality. In particular it renders the zymotic diseases more formidable, and with its want of pure air and sunlight tends to sap the vigour of the population in their cradles.

With regard to the year 1876, the number of emigrants from the United Kingdom was much lower than usual, especially of the Irish. The net gain of population was 349,876. Prices of meat were high in spite of large importations. Pauperism

palpably increased if measured by the number of indoor paupers. The marriages were 201,874, out of which number of women one-ninth were widows. The number of births registered during the year was 808,976, but the places of birth point to an emigration from the agricultural to the manufacturing districts; 4·7 of the births were illegitimate. During the year, 510,315 deaths were registered; giving a death-rate of 21 per 1000, which is the lowest during the last twenty years. But the death-rate in Lancashire was 26·1, whilst that in the extra-metropolitan county of Surrey was 16·2. The proportion of deaths of young children was lower than the average for all England, but high in Wolverhampton, Sheffield, Nottingham, Manchester, Leicester, and Liverpool.

Out of the total number of persons who died in London in that year, one out of nine died in a workhouse, one out of 1122 in a prison, one out of seventeen in a hospital, and one out of 176 in a lunatic asylum.

We must conclude this hasty notice of the Registrar-General's Report by expressing our satisfaction that, whilst enthusiastically hopeful, his hope is duly tempered with caution, and that he throws light on the dark and weak points in our civilisation.

PROFESSOR GRAINGER STEWART ON DISEASES OF THE KIDNEY.

Every man has his hobby, and to us the most interesting address at the British Medical Association was that delivered by Dr. Grainger Stewart, as President of the Medical Section. Nothing, we think, is more likely to raise the standard of these sectional addresses than the plan now generally adopted, that each man should take a special subject which he has made peculiarly his own. Though less general and less catholic, they are thus likely to do much more good than the set orations delivered to the whole body of the Association. Dr. Grainger Stewart chose the subject with which his name is most intimately associated—viz., that of diseases of the kidney, with which he dealt in a two-fold aspect.

In the first place, Dr. Grainger Stewart drew attention to what are called two new forms of kidney disease, but which have not yet passed the crucible of careful and extensive verification. The one has been described by Klebs, whose care and accuracy are well known, and the appearances have also been examined in Edinburgh. This is a post-scarlatinal form of kidney disease in which the very substance of the Malpighian tufts seems to be affected. There is to be found proliferation of the connective tissue binding together the various loops of vessels constituting the glomeruli, and consequently producing a kind of compression which must necessarily lead to a vastly diminished secretion of urine, even though the tubes are not affected. The other form alluded to was one found by Dr. Angus Macdonald in a case of puerperal convulsions, and carefully examined by Mr. Hamilton, the Pathologist at the Royal Infirmary. The nature of this case must still remain in doubt, but briefly the most important features were dilated (but not otherwise greatly altered) convoluted tubules, with a partial choking of the narrower tubules nearer the exit from the kidney by a kind of hyaloid substance. The case terminated at an early period; and most likely we have here a sample of the earliest changes which occur in certain forms of renal congestion.

Two other forms of kidney mischief were discussed by the speaker, both of exceeding great interest. The one related to the small contracted kidney, the other to the rarer form of amyloid disease. In this country it has usually been held that the change in the contracted kidney is essentially a degenerative process of primary character. Abroad, and especially in Germany, the small kidney has been looked upon as a sequel to a prior inflammatory change of a more or less acute character. Dr. Grainger Stewart does not exactly adopt the latter view, but he is now inclined to look upon the contractile process as inflammatory in its nature, though exceedingly slow. This view is, of course, entirely founded upon pathological appearances, and to our thinking is not quite exact. As we have understood the changes they seem to be twofold. There is a primary contracting process going on; but the causes which may have induced this are also, as a rule, powerfully operative in producing acute inflammatory change. Given a damaged kidney, influences which would not affect a healthy organ would readily set up acute changes in that which is already in a morbid condition, and this may occur again and again. Hence it is that in many, if not in most, specimens of contracted kidney, signs are to be found, in the shape of wandered leucocytes of recent activity, among the connective-tissue fibres constituting the intertubular material.

To many the part of Dr. Grainger Stewart's address relating to amyloid kidney will be most interesting. If we might be allowed to say so, the most prominent feature in it was the enforcement of a doctrine we have long held, and on which we have insisted above. A damaged organ is more liable to change than a sound one. You may have an amyloid kidney in a state of inflammation, subacute or chronic; and you may have a kidney, already in a damaged state from inflammation or otherwise, becoming amyloid. Nevertheless, we think that the diagnostic points as regards an amyloid condition of the kidney, laid down by Dr. Grainger Stewart, are those mainly to be considered. They are—pre-existing wasting disease; polyuria; low, but not very low, specific gravity, and dark colour of urine; little or no dropsy, and little or no hypertrophy of the heart. In our experience the quantity of albumen in these cases is very variable, never excessively small, but never in quantities seen in certain other forms of renal disease. The tube-casts are of little significance in the uncomplicated disorder. Dr. Grainger Stewart does well, too, to enforce the important fact that the urine may be scanty, albuminous, and of fair specific gravity even in amyloid kidney. This occurred not long ago in a patient under our charge who died of uncontrollable diarrhœa, dependent on amyloid disease of the bowel. Altogether a more thoughtful address or one more deserving attention has, to our mind, never been delivered on the subject selected, before such an assemblage.

THE OBSTETRIC SECTION OF THE BRITISH MEDICAL ASSOCIATION IN 1878.

The proceedings of the Obstetric Section do not this year call for much comment. Obstetrics did not on this occasion receive the dignity of being made the subject of one of the Addresses, for the place which it held in former years was in 1878 taken by Forensic Medicine. The Address on this topic was, as we have already said, a very valuable contribution, containing useful suggestions as to the better conduct of matters at present managed in an extremely unsatisfactory manner. But forensic medicine is a subject, not like obstetrics or ophthalmology—a branch of our art which, although connected with, and based upon, general medicine, is yet, in so far as it involves special modes of diagnosis and treatment, distinct from it. These are specialties in which practice makes perfect, and in which, although attention too closely concentrated in one field may make a man narrow in his views, and may unduly bias him in his diagnosis, and therefore in his treatment, yet, in what concerns the management of purely local disease, he will be more skilful than a man, albeit of wider knowledge and sounder judgment,

whose attention has been distributed over a larger area. But this is not so with forensic medicine. It is not a branch of investigation. It is the application of many kinds of knowledge to one particular use. A good forensic medicine expert should be a first-rate chemist, a sound physician, a skilful surgeon, an accomplished obstetrician; and should join to these qualifications a fair acquaintance with the collateral sciences, a little knowledge of law, much common sense, and a power of readily expressing technical matters in popular phraseology; and, in the present state of our law-courts, if he have a gift of incisive repartee, it will be an advantage. It is not a department in which experience conduces to perfection; on the contrary, a too special attention to what is required in a law-court is apt to make a man over dogmatic, and to incline him, like the lawyers, to take a side—and stick to it. It is very important that medical men should be prepared to use their knowledge for forensic purposes, and that they should be well informed upon those points on which legal issues are likely to turn. But advance in forensic medicine comes from the progress that is made in other branches; and such advances are made by those who work in these branches, and are then adapted to his purpose by the medical jurist.

The inaugural address of the President of the Obstetric Section this year is short and limited in scope. Dr. McClintock treated one subject in an admirably matter-of-fact way, and that was all. He set an excellent example to his section; and from a first glance at the list of papers to be read, we should think that a lesson of precise statement, of careful sifting of evidence, was not altogether superfluous. The subject of his address was Puerperal Mortality—a topic upon which much that is incorrect and misleading has been written. He shows, upon evidence of the best kind, that this mortality has been, by certain writers, in their eagerness to maintain a foregone conclusion, much underrated. We cannot here go into all, or any, of the issues that spring out of this controversy; but we think Dr. McClintock has made a contribution to its settlement which no subsequent writer will be able to overlook.

Had we nothing more to say, we should have been glad; but we cannot close these remarks without referring to the special subject chosen for discussion in the Obstetric Section. We cannot but think it a most ill-chosen one. The moral effects of the use of practices intended to act as checks to population, although a subject which concerns us all as citizens, is not a question which obstetricians, or even medical men, are specially called upon or qualified to judge. It is one for the political economist, the clergyman, or the sociologist. In a measure, of course, everything which concerns the well-being of humanity is the business of the physician; but it is only when this large view is taken that a subject like this can be included in the field of medicine. It is not among those subjects about which medical men only are competent to give an opinion. And the physical effects we know nothing about. Decency forbids, or rather has forbidden in this country, the subjecting of sexual matters to the minute experimental and clinical investigation by which we have attained our present degree of knowledge of the other bodily functions. We have heard it said, "Poor sexual excess! What has it *not* been blamed for?" It is one of those unproved and unprovable things that lend themselves readily to the purpose of the quack, and satisfy the minds of those who are not in the habit of verifying their own beliefs. Still, of this kind of disorder we know something, but of the minor perturbations of the sexual instinct in women our knowledge is conjectural only. From a public discussion of such ill-understood things, we do not see how good can come, and we do think it undesirable that unsavoury nonsense (for the subject is unsavoury, and words not based on knowledge are nonsense) should be talked under the auspices of the British Medical Association. We cannot tell but that some ignorant persons may take this kind of thing for scientific medicine. There is one consolation—the speeches have not yet appeared in print; and we hope we shall not see them. The one part of the subject is not our special business, and the other we know nothing about; therefore we are sorry it was put in the programme.

THE WEEK.

TOPICS OF THE DAY.

The most directly practical result of the ambulance movement, recently introduced by the Order of St. John, would appear to have been reached by the course of instruction which has been afforded to members of the police force. These men require to be specially conversant with all the details which the Order have taken such pains to disseminate, and it is therefore satisfactory to be able to record that recently certificates of proficiency have been awarded to members of the force at Scotland-yard who have been under the careful training of Surgeons-Major Shepherd and Falwasser. On behalf of the Chief Commissioner of Police, Captain Harris has thanked the Order and Surgeon-Major Shepherd for the exertions which have been made to impart such necessary knowledge to the force, and he further intimated that arrangements were being made for the formation next term of other police classes, which it may be hoped will prove as successful as the present one. But the good influences of the Order and of Dr. Shepherd have reached even farther. Sir E. Henderson has ordered that the old wooden stretchers hitherto employed at the police-stations throughout the metropolis shall be replaced by the "St. John ambulance wheeled litter." This conveyance has been altered so as to render it applicable to the requirements of the police, and well adapted for the removal of the sick or injured: it consists of a litter made of wood, canvas, and iron; the canvas is stretched between two side poles placed upon an iron frame from which the stretcher can be detached. The frame rests upon springs and iron legs, and the springs are supported on two wheels on which the litter moves. When fetching a patient from an upstairs room or carrying him into the wards of a hospital, the stretcher is easily detached from the iron frame. Nineteen of these litters have already been distributed to the several divisional police-stations. The cost of each is stated to be £15.

The town of Manchester is still determined to persevere in the efforts it has instituted for procuring an improved water-supply, and at a recent special meeting of the City Council it was decided by a vote of forty-two to two to continue the promotion of the scheme for bringing a supply of water to Manchester and the district from the Thirlmere lake.

The Hammersmith magistrates, though often applied to for the mitigation of nuisances, would appear to take rather a lenient view of such offences. Last week Mr. Paget had before him a batch of summonses issued at the instance of the Fulham Board of Works, the object being to abolish pig-keeping in the neighbourhood of Fulham-fields. One case was taken to decide the remainder. Several witnesses were called who complained of the smells from the piggeries, and the annoyance which was entailed by myriads of green flies which feed on decomposed matter. Dr. Forbes Winslow was also called, and deposed that the smell of the piggeries had been observed in the grounds belonging to him. Mr. Paget remarked that the whole question turned on the change of character of the neighbourhood. Pimlico and Hanover-square were formerly open fields, but

now they would not think of keeping pigs there; the same sort of thing was going on in the neighbourhood of Fulham. If pressed he must put the law in force, but he would make an order in this case, and adjourn the other summonses, and he hoped he should hear no more of any of them.

A short time since we commented on the subject of infant mortality in South Australia, and recently a paper upon excessive infant mortality in that country, prepared by the Victorian Government statist, Mr. Hayter, was read before the Philosophical Society of Australia, showing that the mortality amongst infants there is proportionately far greater than that of any other country, and that the annual average death-rate amounts to 175 to every 1000 births. The principal causes are said to be defective drainage, high temperature, contagious diseases, premature births, early marriages, improper feeding, and the intemperance of parents.

At the fortnightly meeting of the Foleshill, Nuneaton, Board of Guardians the Medical Officer of Health reported that two girls had died at Bedworth from typhoid fever, and, on his visiting the house of the mother of one of them, he found seven persons taking tea in the same room as the corpse, and amongst the party was a woman with a new-born baby.

The British Pharmaceutical Conference was this year held in Dublin, and took place last week, under the presidency of Mr. Schacht, of Clifton. Among those present were many representatives from America and from various British towns. An invitation was received to hold the next year's conference in Sheffield. Mr. Schacht expressed an opinion that the Dublin meeting would tend to promote scientific pharmacy, and the cultivation of mutual respect and cordiality amongst those who practise it. He also dwelt on the exactitude and care, and the dexterity and neatness, essential to a modern pharmacist.

At a meeting of the West Derby (Liverpool) Guardians, held last week, the Chairman called attention to the fact that small-pox had been imported into the workhouse by the arrival of families from Dublin, where the disease is at present epidemic. The sufferers came by steamer, but were subject to no quarantine examination, as they would be if they came from a foreign port where the disease prevailed. He thought it was very unfair that Liverpool should suffer in this way. The remarks of the Chairman were subsequently endorsed by the Board, and it was resolved to direct the attention of the port medical officer of health to the matter.

The Liverpool Town Council has just decided to spend £10,500 in providing the necessary pipes and works to allow of the hard Bootle water being mixed with the soft water supplied to the town from Rivington Pike, near Bolton. It will be remembered that the borough of Liverpool derives its water-supply from wells sunk into the local red sandstone, and also from catchment reservoirs in the Rivington Pike, producing water of the softest description. There is much dissatisfaction amongst those who are condemned to the hard-water supply, since, from the scientific evidence adduced, it was shown that the consumption of hard water entails a considerable loss on the consumers. The originators of the admixture scheme brought forward the statement of Dr. Lyon Playfair, in his evidence before the Royal Commission on Water-Supply, to the effect that, assuming the cost of a dozen shirts to be 72s., the amount that a washerwoman will receive in three years for washing them will be 117s. After much discussion, the sum required was voted by a large majority.

By latest accounts it would appear that the health of the British troops in Cyprus was improving. The prevalent form of sickness is a sun fever of a light kind, in many cases turning to ague. The cases are not dangerous, but can scarcely be wondered at when it is considered that the troops are under bell tents, and that the heat during the day has in several instances reached 110°, the thermometer falling in the night to 67°. As soon as possible, however, sites for permanent barracks will be selected, and the necessary cantonments erected.

The water-supply of large towns is undoubtedly a momentous question. The increase of population is so rapid that the demand increases in a manner with which it is almost impossible to keep pace, and, worst of all, nearly every effort to remedy the deficiency is met with hostility from some section of the community. Some time since we announced that the Liverpool Corporation had entertained a project for supplying the town with water from the river Verniew, in Montgomeryshire, one of the head waters of the Severn, by damming up the river into a lake, and conveying the water by conduit to Liverpool, a distance of about sixty miles. It is now announced that the Committee of the Severn Navigation Company have sent a deputation to the locality to meet a similar deputation from Liverpool, and have issued a report to the Commissioners on the subject, in which they notice that the quantity of water proposed to be taken from the Verniew amounts to 52,000,000 gallons a day. The abstraction of this quantity of water from the Severn watershed is deemed by the Commission and engineer to be fraught with momentous consequences to the navigation of the river, and accordingly a determined opposition to the scheme is suggested. The engineer describes the scheme as "a most unwarrantable interference with the regimen of the river, and of the economy which nature has adopted for the regulation of its channel." Thus, neither Liverpool nor Manchester have succeeded in their first efforts to improve the water-supply of their respective towns.

The Improved Industrial Dwellings Company recently held their half-yearly general meeting at the Mansion House, under the presidency of Sir S. H. Waterlow, Bart., M.P. It was announced that the buildings of the Company at the foot of Chelsea Suspension-bridge were just completed, and would prove as healthy and as attractive as others. At the Bethnal-green estate eighty new dwellings had been completed and were being let. Other works were progressing satisfactorily, and it was hoped would be completed during the current year. The number of buildings now in occupation was stated to be 2369, accommodating about 12,000 persons, and the number in course of erection, and for which plans had been approved, was 831, which would provide increased accommodation for about 4000 persons, or 16,000 in all. In conclusion, the Chairman assured the meeting that the Society never took land at a price which would not produce a reasonable return upon the money invested, because if they did so they would forfeit the confidence of the public, which they now possessed, in a scheme which insured the comfort and welfare of the poorer portion of the community.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

On Saturday, the 10th inst, the new buildings recently added to the Royal College of Surgeons in Stephen's-green, Dublin, were formally opened by his Grace the Duke of Marlborough, Lord-Lieutenant of Ireland, in the presence of a large assemblage, including the Duchess of Marlborough and the Lord Mayor and Lady Mayoress of Dublin. The new wing contains a large apartment on the ground floor for a library, and one of the same dimensions above it for a museum. The foundation-stone was laid in 1876 by the Duke of Abercorn, who was then Lord-Lieutenant. The new wing extends parallel to

York-street. The library is seventy feet long by thirty-six in width, and is built as an extension of the old library, which was twenty feet in length, a wall of which has been replaced by pillars; and a descent of two steps leads from the one chamber to the other. Both are well lighted. Around the walls run cases of varnished pine. Nearly all the books, including the collection known as the Jacob Library, are in their places. There is a librarian's room at one end. The museum overhead is extremely spacious and handsome. The woodwork is of varnished pine. There is a handsomely designed wooden roof, glazed at the top, and the side walls are pierced by a sufficient number of windows. There is a gallery at a height of about twelve feet from the ground, with an iron railing of appropriate design. On each side below are projecting glass cases, the frames of which serve as supports to the gallery in lieu of pillars, while light is obtained laterally through the glazed sides of the case. The result of these arrangements is that ample light is secured for the contents of the glass cases and of the museum generally. There is a hot water apparatus for heating the room in winter. This museum is connected with the old museum and the board-room, and is devoted to the reception of between 4000 and 5000 pathological specimens, and also of the valuable collection of wax anatomical models presented to the College in 1830 by the Duke of Northumberland, then Lord Lieutenant of Ireland. There is also a room for the curator. The new buildings have cost nearly £10,000. The interior of the College has all been repainted and decorated. The President of the College, Dr. Philip Crampton Smyly, in the course of his address, alluded to the Medical Bill lately before Parliament, saying that the College had given the Government every assistance in their power to pass the Bill. With regard to the admission of ladies to the profession, he stated that the College was at present considering the advisability of admitting them to examination for the diploma in the same way that the King and Queen's College of Physicians had done. The Lord Lieutenant, in declaring the buildings to be now open, expressed his gratification in fulfilling so pleasant a task. He thanked the President for the flattering terms in which he had spoken of the efforts of the Government to secure an improved system of examination for medical students; and he returned the compliment by expressing his high sense of the value and opportuneness of the advice and help so promptly rendered to the Government by the Royal College of Surgeons and the Royal College of Physicians (of Ireland) in connexion with the Bill. This legislation had not been perfected in the present session; but he believed that a commencement had been made, and principles of future legislation laid down, which, he trusted, with the amendments that were assured, would have the effect of averting all danger for the future, and be of the greatest possible benefit to the medical profession. The proceedings then terminated.

DR. FARR ON DEATH IN CHILDBIRTH.

In the Appendix to Dr. Farr's report, we find, as usual, a letter to the Registrar-General, containing an analysis and commentary on the chief causes of death in England in 1876. In this there are two leading points—one treating of alcoholism and temperance; the other treating of the causes of death in childbirth, which is apparently suggested by a most touching and heartrending account of the death of a lady of twenty-nine years of age in her first confinement. A young woman of unusual accomplishments seems to have been allowed to bleed to death after her first confinement, without any attempt to remove the placenta or to produce contraction of the womb. As the lady must be well known, we forbear from making any comment in the absence of a medical statement of the facts of the whole case. There seems just the chance that thrombosis, and not mere hæmorrhage, may have been the cause of death.

In the thirty years, 1847 to 1876, 106,565 mothers died in childbirth; that is, five to every 1000, or one to every 200 children born alive.

Dr. Farr quotes from the records of the Royal Maternity Charity, to show that their mortality was at the rate of 2·33 to 1000 deliveries.

At the Birmingham Lying-in Charity there were 2·32 deaths to 1000 deliveries. These patients are attended by midwives, who call physicians into consultation in case of danger. In the practice of Mr. Rigden, of Canterbury, the deaths were 9 in 4390 deliveries, or 2·05 per 1000. But in England and Wales, in the five years 1872-76 the actual deaths registered in childbirth were 4610 out of 863,827 deliveries; this is more than double the rate of the London and Birmingham Charities, "so that 2601 mothers perish annually through the want of such an amount of care and skill as the midwives acting under the consulting physicians of the two Charities bring to bear in their attendance." So says Dr. Farr.

On looking through the causes of death we cannot fail to see how many are preventable in the true sense of the word: more than half are due to puerperal fever, and flooding is the next largest figure; the former of which ought to be rendered impossible by *Listerism*, and the latter by taking care to insure contraction of the uterus after delivery. Certainly improved education of midwives is a good measure, but we fear the day is far distant when practitioners of either sex will be exempt from mistake, carelessness, and ignorance.

SANITARY PROGRESS AND THE TOWN OF CAMBRIDGE.

In his third annual report on the health of the town of Cambridge for the year 1877, Dr. Bushell Anderson, M.A., the Medical Officer of Health, reports that there is little to relate in regard to sanitary progress; and no public works have been undertaken during the period under notice. It is true that the authorities have proceeded so far as to purchase a disinfecting oven, but, as the want of a convenient site and financial difficulties have hindered its erection, the town can scarcely be said to have benefited by the acquisition. This circumstance, Dr. Anderson observes, is the more to be regretted as some zymotic diseases, especially scarlet fever, would seem to be endemic, and are productive of constant anxiety. A small hospital for infectious diseases, with a mortuary, are also much needed, and as several of the urban and rural sanitary authorities in the immediate neighbourhood have provided accommodation of this description, it seems singular that the financial position of a large town like Cambridge will not admit of such evident sanitary necessities being at once erected. The one improvement recorded in the report is an improved system of street scavenging—not a very great result to have arrived at when so much is required. It may be from circumstances over which the authorities have no control, but it is a significant fact that the number of deaths registered in Cambridge during the past year was 617, as against 540 in 1876. It can only be added that a local board which refuses to listen to the advice of its medical officer of health is likely, sooner or later, to repent its want of action.

NEWCASTLE-UPON-TYNE LUNATIC ASYLUM.

The thirteenth annual report on the Newcastle-upon-Tyne Borough Lunatic Asylum, for the year 1877, is principally noticeable from the fact that it contains no complaints of insufficient accommodation, or hints that an extension of premises will shortly be necessary. The total

number of patients remaining on the books on the 31st of December last was 236, being an increase of twelve as compared with the preceding year. It is announced that the Committee have accommodation for private patients, for whom a charge of one guinea each per week is made, and they are also willing to receive pauper lunatics, on payment, from unions which cannot find room within their own districts; so that at present, at least, there is no fear of overcrowding. The Medical Superintendent, Mr. Wickham, reports that amongst the admissions for the year 1877 there was a larger proportion than usual of hopeless cases, and many of these were, in addition, in a debilitated physical condition. Of many of these it may be said that an earlier removal to the Asylum would have added to the chances of their recovery, certainly to the prolongation of their lives. The discharges during the year, however, were twenty-nine, of whom twenty were recovered, and five relieved. The number of recoveries gives a percentage of 34·4 on the admissions. The death-rate of this Asylum continues very low, being only 7·4 per cent. of the average number resident, and 6 per cent. of the total number under treatment. The average weekly cost of each patient during the year has been twelve shillings.

DRAINAGE OF SEASIDE TOWNS.

Last week we gave the Registrar-General's returns for the chief watering-places of England and Wales, in which Torquay occupied a respectable, though by no means a leading, position in point of salubrity, as judged by the death-rate. We are now glad to learn that measures have just been completed which are calculated to improve the sanitary condition of this summer resort, by new means for the disposal of the sewage. The frequent occurrence of typhoid fever and other zymotic diseases in seaside towns has often been attributed to the fact that, owing to their low levels, the drains are carried out for short distances under the sea, where, in certain states of the tide, the outflow of sewage is entirely checked, and the sewer-gases are driven out by the rising tide at the higher end of the drainage system. Torquay determined a few years ago to do away with any suspicion of these evils, and at the same time to deposit the sewage at such a point as to enable the strong current of the channel to carry it away without the risk of its polluting the beautiful waters of Torbay. This has been at last effected at a great outlay of money and engineering skill, and now, by a series of tunnels under the various hills on which Torquay is built, the new main drain collects all the branches as they descend towards the sea, and carries the sewage into the Channel, two miles from the town, at the extreme eastern point of Torbay, at such a height above sea-level that the tide does not interfere with the perpetual flow of its contents. There are very few seaside towns, if any, which can point to so effective a system of finally disposing of its sewage as Torquay now possesses.

THE FIFTY-FIRST MEETING OF THE GERMAN PHYSICIANS AND NATURALISTS AT CASSELL.

We have been requested, in a circular issued by Drs. Stilling and Gerland, to announce in "fat letters"—*i.e.*, italics—that this meeting is to be held eight days earlier than has been advertised—viz., September 11 to 18 in place of September 18 to 24. This has arisen from the fact that, owing to the attack on the Emperor, the military manœuvres have been so delayed that they will not be held until the time originally fixed for the scientific meeting. As during their existence no accommodation could be secured, the period has had to be anticipated.

MEDICAL PARLIAMENTARY AFFAIRS.

Health of the Troops at Cyprus.—In the House of Commons, on Thursday, August 15, Colonel Stanley, in reply to Mr. M. Lloyd, said that the sickness among the troops in Cyprus was about 6 per cent. in hospital, the cases being mostly of fever of a very mild type. Owing to the great heat in which the men had worked, the fever had been complicated by symptoms of sunstroke. He had only heard of three deaths since the troops landed in Cyprus. On the earliest indication of any increase in the sickness among the troops, six doctors had been directed to hold themselves in readiness to be sent out, and they would start at once for the island.

Coroners Bill.—Mr. Cross moved for the discharge of the order for the second reading of this Bill. He proposed to reintroduce the measure next year, and he suggested that a Select Committee should consider the question of the election of coroners.

DUBLIN MEETING OF THE BRITISH ASSOCIATION.

Dublin, August.

The President's Address—Meeting of the Sections—Garden Party at the Vice-Regal Lodge—Conversazione at the Royal Dublin Society—Public Lecture by Professor Romanes on "Animal Intelligence"—Conversazione at the Catholic University—Excursions.

The forty-eighth annual meeting of the British Association for the Advancement of Science, which is being held in Dublin, was most successfully inaugurated on the evening of Wednesday, the 14th inst., by an address from the President, Mr. William Spottiswoode, D.C.L., F.R.S. The meeting was held in the Exhibition Palace, Earlsfort-terrace, and was attended by some 2000 members and associates. The outgoing President, Professor Allen Thomson, M.D., took the chair in the first instance, but, after a short address, he vacated it in favour of Mr. Spottiswoode.

After some introductory passages, the President proceeded to inquire whether there be not points of contact in method or in subject-matter between Mathematics and the outer world which have been frequently overlooked; whether its lines do not in some cases run parallel to those of other occupations and purposes of life; and lastly, whether we may not hope for some change in the attitude too often assumed towards it by the representatives of other branches of knowledge and of mental activity. He sketched the relations of mathematics to natural knowledge, the arts, and the measurement of minute quantities. He further selected for examination three methods in respect of which mathematicians are often thought to have exceeded all reasonable limits of speculation, and to have adopted for unknown purposes an unknown tongue. And he successfully endeavoured to show not only that in these very cases the science has not outstepped its own legitimate range, but that even Art and Literature have unconsciously employed methods similar in principle. The three methods in question are—first, that of imaginary quantities; secondly, that of manifold space; and thirdly, that of geometry not according to Euclid.

Speaking of mechanical appliances, he observed that Professor James Thomson had recently constructed a machine which, by means of the mere friction of a disc, a cylinder, and a ball, is capable of affecting a variety of the complicated calculations which occur in the highest application of mathematics to physical problems. By its aid, it seems that an unskilled labourer may, in a given time, perform the work of ten skilled arithmeticians. The machine is applicable alike to the calculation of tidal, of magnetic, of meteorological, and perhaps also of all other periodic phenomena. It will solve differential equations of the second and perhaps of even higher orders. And through the same invention the problem of finding the free motions of any number of mutually attracting particles, unrestricted by any of the approximate suppositions required in the treatment of the lunar and planetary theories, is reduced to the simple process of turning a handle.

In the course of his address he alluded to one all-important instance of the application of the statistical method. Without its aid, social life, or the history of life and death, could not

be conceived at all, or only in the most superficial manner. Without it, we could never attain to any clear ideas of the condition of the poor, we could never hope for any solid amelioration of their condition or prospects. Without its aid, sanitary measures, and even medicine, would be powerless. Without it, the politician and the philanthropist would alike be wandering over a trackless desert.

In the peroration to a singularly able discourse, the President said:—"Conterminous with space and coeval with time is the kingdom of mathematics. Within this range her dominion is supreme; otherwise than according to her order nothing can exist; in contradiction to her laws nothing takes place. . . . But so strictly limited are her promises and powers —about so much that we might wish to know does she offer no information whatever,—that at other moments we are fain to call her results but a vain thing, and to reject them as a stone when we had asked for bread. If one aspect of the subject encourages our hopes, so does the other tend to chasten our desires; and he is perhaps the wisest, and in the long run the happiest among his fellows, who has learnt not only this science, but also the larger lesson which it indirectly teaches—namely, to temper our aspirations to that which is possible, to moderate our desires to that which is attainable, to restrict our hopes to that of which accomplishment, if not immediately practicable, is at least distinctly within the range of conception. That which is at present beyond our ken may, at some period and in some manner as yet unknown to us, fall within our grasp; but our science teaches us, while ever yearning with Goethe for 'Light—more light,' to concentrate our attention upon that of which our powers are capable, and contentedly to leave for future experience the solution of problems to which we can at present say neither yea nor nay. It is within the region thus indicated that knowledge in the true sense of the word is to be sought. Other modes of influence there are in society and in individual life, other forms of energy besides that of intellect. There is the potential energy of sympathy, the actual energy of work; there are the vicissitudes of life, the diversity of circumstance, health and disease, and all the perplexing issues, whether for good or for evil, of impulse and of passion."

A vote of thanks to the President for his address was proposed by the Lord Mayor of Dublin, seconded by the Rev. Humphry Lloyd, Provost of Trinity College, and adopted by acclamation. The proceedings then terminated.

On Thursday the Section met for the first time in Trinity College. Each sectional meeting was opened by an address from the President of the Section. The Rev. Professor Haughton presided, in the absence of the Rev. Professor Salmon, D.D., in the Mathematical and Physical Science Section; Professor Maxwell Simpson in that of Chemical Science; Mr. J. Evans, F.R.S., in that of Geology; Professor W. H. Flower, F.R.S., in that of Biology, including Zoology and Botany; Sir Wyville Thomson, F.R.S., in the Geographical Section; Professor J. K. Ingram in that of Economic Science; and Mr. Edward Easton, C.E., in that of Mechanical Science.

Amongst the papers read on Thursday was one by Professors G. Johnstone Stoney and J. Emerson Reynolds on the Spectrum of the Chloro-Chromic Anhydride. Gases were composed of an almost infinite number of minute particles constantly moving in various directions amongst themselves. They had, however, other regular motions in lines. Those motions indicated harmonic or quasi-harmonic vibrations. It was not possible to say which. Some idea might be formed of the rapidity and minuteness of these vibrations from the fact that in one gas 80,000,000,000, and in another 22,800,000,000,000 occurred in the course of a single second. In illustration of this marvellous statement, Mr. Stoney exhibited in a diagram the spectra obtained in the case of chloro-chromic anhydride. In the Chemical Section, Dr. Edmund W. Davy, Professor of Forensic Medicine in the Royal College of Surgeons, read a paper on the "Action of Chlorine on Nitro-prussides"; Mr. W. Chandler Roberts, F.R.S., read the report of the committee appointed to investigate some of the less known alkaloids, especially veratria and beberia; and Dr. Wills read a paper by Mr. Ernest H. Cook, B.Sc., Lecturer on Experimental Physics at the Bristol Trade and Mining School, on "The Adulteration Act, in so far as it relates to the Prosecution of Milk Sellers."

The subject of Professor Flower's address in the Biological Section was "A Century's Progress in Zoological Knowledge." He said: On January 10, 1778, died the great Swedish naturalist, Charles Linne, more commonly known as Linnæus, a name which will ever be mentioned with respect and regard in an assembly devoted to the cultivation of the sciences of zoology and botany, as, whatever may be the future progress of those sciences, the numerous writings of Linnæus, and especially the publication of the "Systema Naturæ," can never cease to be looked upon as marking an era in their development. That work contained a systematic exposition of all that was known on these subjects, expressed in language the most terse and precise.

The accumulated knowledge of all the workers at Zoology, Botany, and Mineralogy since the world began, was here collected together by patient industry, and welded into a complete and harmonious whole by penetrating genius. The last edition of the "Systema Naturæ," revised by the author, was published in 1766.

The knowledge of Linnæus far surpassed that of any of his contemporaries; but yet of what we now know he knew but an infinitesimal amount. Much that he thought he knew we now deem false. Nevertheless, some of the oldest words to be found in all his writings contain sentiments which still claim a response in the hearts of many. Although we are less accustomed to see such words in works of science, that is no proof that their significance has been impaired by the marvellous progress of knowledge. With the words which Linnæus selected to place at the head of his great work he would conclude—

"O Jehova,
Quam ampla sunt tua opera
Quam sapienter ea fecisti!
Quam plena est terra possessione tuâ."

Among the communications to the Section of Economic Science was one by Sir James Watson on "How to Meet the Requirements of Population displaced by the Artisans' Dwellings Act." A sufficient answer had, he thought, been given to this question by the proceedings which took place at Glasgow, where the Corporation obtained an Act in 1866 for the same purposes as that for which the Artisans' Dwellings Act was many years afterwards procured. This Act led to large purchases of property by the Corporation, under the name of City Improvement Trustees. As soon as it became known that these large purchases of blocks of houses had been made for the purpose of clearing them away, and that there would consequently be a great demand for house accommodation, builders immediately commenced the erection of workmen's houses; and to such an extent has this been carried, that at December last, while no less than 31,057 persons had been displaced by the removal of old buildings during the ten years the Improvement Trust had been in operation, houses had been erected, not only sufficient to accommodate those displaced, but greatly beyond it.

On Thursday afternoon there was a garden party at the Vice-Regal Lodge, Phœnix-park, the success of which was somewhat marred by a thunderstorm; and in the evening a splendid *conversazione* took place in the rooms of the Royal Dublin Society.

On Friday the Sub-sections of Anthropology and of Anatomy and Physiology were opened by addresses from their respective Vice-Presidents, Professor Huxley and Dr. R. McDonnell. The latter delivered a brilliant panegyric on the late M. Claude Bernard, in which he described his researches on the sympathetic nervous system, and on the glycogenic function of the liver. In the Chemical Section, Dr. Louis Siebold, F.C.S. (Manchester), read a paper on "A New Method of Alkalimetry." The plan recommended consisted in the reverse application of Liebig's process for estimating hydrocyanic acid, and was based on the fact that the volumetric determination of an alkaline cyanide by means of silver nitrate was in nowise affected by the presence of free hydrocyanic acid. From the volume of silver solution used the quantity of alkali might be as readily calculated as that of the cyanogen.

There were some other interesting communications to this Section by Professors Edmund Davy and Emerson Reynolds. The most interesting paper of the day was, perhaps, one in the Zoological Section by Sir John Lubbock, F.R.S., on "The Habits of Ants." In the evening, Professor J. G. Romanes, M.A., F.L.S., gave a public lecture in the Exhibition Palace on "Animal Intelligence," and there was a *conversazione* at the Catholic University, Stephen's-green. On Saturday only the Geological Section met, the day being chiefly devoted to excursions into the beautiful environs of Dublin. Unfortunately the weather was unfavourable, being blustering and showery.

MEDICAL AFFAIRS IN PARLIAMENT: A RETROSPECT OF THE SESSION.

At the close of a session memorable not so much for its achievements (which have been indeed few and meagre), but for its enunciation of difficult and decisive questions of foreign policy, it is needful that we should, as is our custom, revert to some of the measures which have received the support and sanction of Parliament. Not only was there much time lost in pushing forward matters of domestic legislation, but also of that which is of greater interest to our readers—viz., medical legislation. The Government have not hesitated to cast overboard a measure of some little importance on sanitary grounds, to which they had pledged themselves in the Speech from the Throne—to wit, the County Government Bill. There are also measures which the Government undertook to foster and mature so soon as the "backers" (to use a horsey term for those who had put their names on the back of the Bill) had proved their utility from a national point of view—to wit, the Habitual Drunkards Bill and the Medical Acts' Amendment Bill. These also have been put aside for another session. The members of the Government seem to have been well trained by their chief in the art of circumlocution, by surrounding their good intentions with the damning aphorism of Mr. Disraeli, "*Quieta non movere.*"

The solitary exception to the otherwise fruitless conceptions of the Government *protégés*, and one of importance as a sanitary measure, is the Contagious Diseases (Animals) Act. The local authorities having shown themselves unable to cope with a dangerous outbreak of cattle plague in 1877, the provisions for giving more power to the Privy Council were generally approved. Lord Ripon and Mr. Forster carried their points in objecting to the slaughtering of all imported animals at the ports of debarkation. It must not be supposed, as might be inferred from the amendments of Mr. Forster and others, that this Bill simply proposes to deal effectually with the importation of foreign cattle and the dead meat trade by forbidding the transit of cattle from countries infected with contagious disease. It goes much further than this; and, in the spirit of much that we have urged of late years, the management and inspection of dairies and milk-shops is provided for in the same way as for slaughter-houses and offensive trades. One of the best clauses in this Act gives power to the Lords of the Privy Council to frame such regulations as they may deem fit, subject to the powers of this Act—first, for the due registration of all persons engaged in the business of cowkeeper or as purveyors of milk; secondly, for the inspection of cowsheds, dairies, and all places used for the sale of milk, and to require proper arrangements for the lighting, cleansing, drainage, and water-supply of such premises; thirdly, for securing that all cowkeepers have sufficient space for quarantine arrangements, and for securing the milk from the chance of pollution or the possibility of conveying infection. The Act in question will be put in force on September 30 next. The *London Gazette* of Tuesday, the 20th inst., gives in detail the regulations consequent upon such legislation.

We turn now to the consideration of the Public Health Bill for Ireland, which was introduced to the House of Commons so early as January 24, by Sir M. Hicks-Beach, when it was read a second time without debate. Exactly five months elapsed between the second and the third reading of this Bill, which was taken as late as June 24, although the opposition was very slight, and the clauses not obstructively debated. The Bill passed quickly through the House of Lords.

The Public Health Act of 1875 has also been improved by the passing of the Amendment Bill. Under the provisions of this Act, owners of land will not be allowed to erect cottages in situations where a proper supply of water does not exist. Owners of existing cottages will also be required to provide a suitable supply of potable water for domestic purposes.

The next in importance among Medical Acts which have received the Royal assent during the past session is the Dental Practitioners Bill. Under the provisions of this Act the General Medical Council will be required to frame regulations for the education, examination, and registration of dental practitioners, and, in fact, to take the general ethical control of this department of the healing art, much in the same way as they have been accustomed to do for practitioners of medicine and surgery. We can only hope that they will not be called upon to grapple with the insuperable difficulty of putting "a quietus" upon any women aspirants to fame in dentistry. It is evident that this being essentially a muscular art, women are hopelessly debarred from competing with men with any chance of success.

From this we turn to the break-down of the Medical Act (1858) Amendment Bill, which, though seriously taken in hand by the Government, with the evident intention of squeezing it through Parliament, was shipwrecked in consequence of the persistent and unreasonable demands of the advocates of women's rights to professional honours. The points of most importance in this Bill, which we hope will form the framework of a Bill next session, were—first, the establishment of a conjoint board for each of the three divisions of the United Kingdom; second, the registration of degrees and diplomas together with the qualifying certificates, neither being allowed to be registered singly; and, third, the effectual settlement of the vexed question of women candidates and the providing of separate examinations both for registration and for university and collegiate diplomas. We have already very fully discussed the details of this Bill at every stage of its progress in the House of Commons. It suffices to add that the proverbial inflexibility of the one side and the divided counsels of the examining bodies effectually destroyed any chance of the measure becoming law this past session.

As early as the month of May the Bill for the Compulsory Purchase of the Metropolitan Waterworks was shelved at the request of Sir J. McGarel Hogg, Chairman of the Metropolitan Board of Works, in consequence of the opposition which the proposal encountered. We regret this decision, as no doubt the delay will give the water companies time to recruit their forces, and proportionally to increase the value of their shares and working property, thus raising considerably the estimated amount to be paid by the Government according to valuation.

The Factories and Workshops Bill was framed to provide more efficient sanitary supervision of the sheds and houses where textile fabrics are manufactured, and to include within the operation of the measure some control over the smaller and private workshops where only a few hands are employed, as also to limit the hours for employing children, and to provide for their education.

The Metropolitan Management and Buildings Act Amendment Bill is of some considerable sanitary importance. It forbids the builders from removing gravel from the foundations of houses with a view of substituting decaying refuse and the contents of ashpits on which to build dwelling-houses, as also to secure that the waste-pipes of baths, cisterns, and other house-drainage shall be entirely disconnected from all closet traps and other arrangements for the possible in-draught of sewer-gas to the interior of houses.

THE INNERVATION OF THE HEART.

An exceedingly important question, in connexion with the distribution of the two vagi nerves to the heart, is whether the inhibiting apparatus in which the nerves end is single; or whether it is not double, either half of the apparatus corresponding to one vagus nerve. In other words, and from a physiological point of view, it has been a question whether stimulation of one vagus brings into action the whole, or only the half, of the inhibiting apparatus in the heart. Attempts have been made to solve this problem by faradising one of the vagi until the phenomena of stimulation cardiac inhibition, or stand-still of the heart) begin to, (give way to paralysis (returning ventricular contraction) and immediately thereupon galvanising the other vagus. If no fresh effect of stimulation (cardiac inhibition or fresh stand-still of the heart) be produced, it is evident that the

whole cardiac inhibiting apparatus has been exhausted, and that this apparatus is a single apparatus with which both vagi are in connexion. This result was obtained by M. Tarchanoff in 1875, in experiments upon rabbits and dogs; and the conclusion was drawn by him—which indeed represented the prevalent view—that there is a single and not a double inhibiting apparatus in the cardiac walls, which is equally in connexion with the two vagi nerves.

In 1876, M. Tarchanoff announced that fresh experiments of the same nature upon the frog pointed to a different arrangement of the cardiac inhibiting apparatus in that animal; that each vagus falls into a separate inhibiting apparatus. He found in the frog that after exhaustion of inhibition by faradising one vagus, fresh and complete inhibition (stand-still) could be obtained by faradising the other vagus. But it is evident that a fallacy occurs in the reasoning that leads from this result to the preceding conclusion. It does not follow that there are two different inhibiting apparatus because, when inhibition has been paralysed by faradisation of the one, it may be restored by faradisation of the other. The paralysis of inhibition may have been due to paralysis of the *trunk of the vagus* first faradised, and not to paralysis of the inhibiting apparatus in the heart.

Prof. Arthur Gamgee and Mr. Priestley have appreciated this flaw in M. Tarchanoff's reasoning, and have repeated his experiments (*Journal of Physiology*, vol. i., page 39), with the following results:—1. That M. Tarchanoff's facts respecting the vagi in *mammals* are not confirmed, but that, on the contrary, "continued stimulation of one vagus never annulled or even prejudiced the inhibiting powers of the other, unless the inhibiting apparatus had been recently kept under stimulation for some time;" it being possible to inhibit the sinus venosus by direct application of the electrodes to its wall after complete exhaustion of the vagus-trunk. 2. That this being the case, there is no need to have recourse to M. Tarchanoff's conclusions with respect to the double inhibiting apparatus in the *frog*.

Beyond the fact that the results obtained at Manchester confirm the older view respecting the nature of the intracardiac inhibiting apparatus, they demonstrate the exceedingly important point that the enduring power of the "intermediate" inhibiting apparatus in the heart is incomparably higher than that of the vagi, which it will tire out "relay after relay."

FROM ABROAD.

Conjunctivitis.

From a clinical lecture delivered by Prof. D. B. St. John Roosa, at the University Medical College, New York (*New York Med. Record*, July 6), we select the following observations:—

Under favourable circumstances, he observes, *catarrhal conjunctivitis* is a self-limited disease, as much so as measles, scarlatina, or pneumonia. It is not attended with great lachrymation or photophobia. There is no sluggishness of pupil nor deep-seated pain. Its characteristics are a general vascularity and an increased secretion. The enlargement of the bloodvessels causes a sensation of roughness, while the vision is blurred through the presence of mucus and tears on the cornea. In many cases all that is wanted here is to keep the eyes clean by means of cold water, the patient also wearing a pair of protecting-glasses, not goggles, to keep away dust and other irritants. But even simple catarrhal conjunctivitis, occurring in delicate persons, especially children, amidst bad hygienic conditions, and among persons defective in cleanliness, may go on to phlyctenular conjunctivitis almost before we are aware of it. At its onset this requires a local anodyne, atropia, and a great deal of general care. Catarrhal conjunctivitis also occurs in persons exposed to depressing influences, or who are obliged to work in places where they are exposed to mechanical irritants, and then it may go on to chronic catarrhal conjunctivitis or to blenorrhœa. It is best treated by a mild astringent, as alum or zinc about two grains to the ounce, cold water being freely applied to the closed lids, and the patient placed under favourable hygienic influences. It is, however, to be remembered that this disease, like many others, has a marked tendency to get well, and that there is no occasion to attack it with blisters or nitrate of silver, or to place the patient in a dark room, as though it were a case calling for heroic procedures.

But in the next stage, *blenorrhœal conjunctivitis*, we have to do with more than mere hyperæmia. A decided increase of the natural secretion of mucus is mingled with more or less pus, especially at the corners of the eyes. There is also slight engorgement of the lids, engorgement of their papillæ, and perhaps also swelling around the margin of the cornea. This condition requires much more active and persistent treatment, mere rules relating to cleanliness and hygiene not here sufficing. Astringents and even caustic astringents may here be required, nitrate of silver and sulphate of copper being the best of these last. Almost the only guide to the use of these will be the effects they produce on the patient. If he suffer for more than half an hour from the increased severity of the symptoms caused by the astringent, it is pretty good evidence that this has been employed too strong, and that either a weaker solution or a milder astringent is required—or perhaps that the astringent should be given up for a few hours or a day or two. If symptoms of corneal or deeper-seated inflammation arise, a solution of sulphate of atropia, two grains to the ounce, should be used three times a day.

"When a patient suffering from acute catarrhal conjunctivitis is pursuing an employment that of itself is likely to expose the eyes to injurious influences, very much will be accomplished by simply putting him under proper conditions of life until the attack is over. If this be not done, although there may be no advance to a higher form of disease, there may be a gradual sliding into a trachoma. When trachoma is reached we have come to a very obstinate and sometimes incurable condition. For there is thickening and warping of the cartilages of the eyelids, the eyelashes may be constantly brushing on the conjunctiva, and the patient has a sensation as if ten thousand grains of sand were in the eye. As a result of this constant irritation, the delicate structure of the cornea is very much injured. Its epithelium and deeper layers are involved in disease, and the case may become one of pannus, and perhaps one of ulceration. Then add to this condition of affairs, eversion of the lids, so that the tears, instead of passing away through the natural channel, flow over the cheek and keep the face in a more or less state of excoriation—and you have one of the most distressing of conditions. It is a condition that cannot be permanently and thoroughly remedied by any operation or course of treatment, although susceptible of relief. Eversion and inversion of the lids may be corrected for a year or two by an operation, but the relief is usually only temporary, and the condition returns: for the state of the parts is such that it is impossible to restore the lids to their complete functions. To recapitulate: granular lids, trachoma, opacities, vascularities, and often perforation of the cornea, entropion, and ectropion—all consequences of blenorrhœa; and many of them incurable conditions which can only be alleviated, but never thoroughly cured. Hence it is that conjunctivitis, in its early stages, has its importance for the general practitioner."

The most important form of all is *purulent conjunctivitis*. As seen in infants, the conjunctiva is engorged with blood, and the lids are so swollen that it is impossible for the child to open its eyes, pus welling up through the palpebral fissure. If the disease has been fostered by the application of a poultice, which is frequently the case, it extends, and within forty-eight hours the eyesight is destroyed. Pus, too, in the adult may be transmitted from the urethra to the eye, and within a few hours all the acute inflammatory symptoms are present which usher in an attack of purulent conjunctivitis. It has a malignity of its own, and that whether arising in the new-born infant, from urethral contagion, or as an advanced stage of catarrhal blenorrhœa. It may also occur epidemically, especially in hospitals, workshops, and armies, or in overcrowded, badly ventilated rooms. In this disease we must not stand with folded arms, and content ourselves with giving directions. The first thing to do is to wash out the pus, and this may have to be done perhaps every half-hour; and for this to be done effectually, we must personally instruct the person in attendance, so that we may feel secure that this primary point will be attended to. This

can be done by syringing out the eye with tepid water, or perhaps better by wiping it out with a piece of soft sponge or bits of soft cloth dipped in tepid water. In the early stage, when the swelling is great and the temperature increased, bits of cloth should be dipped in ice-cold water and applied to the lids, changing them every two minutes if required, day and night, until the temperature and hyperæmia are reduced. When this has been accomplished, astringents should be employed, and for children a two-grain solution of alum may be passed between the lids twice a day, which is safer for them than the nitrate. If alum is not efficient for adults, a ten-grain solution of nitrate may be used, neutralising any excess by a solution of chloride of sodium, or the mitigated stick (nitrate of silver and nitrate of potash) may be used. If the tension of the lids is very great, the external canthus may be divided by scissors, cutting through the conjunctiva, muscle, and integument at the same time. Until the acute inflammatory symptoms have subsided, only mild astringents, not caustics, are required; and after the use of these last has been commenced, it may be necessary to discontinue them in consequence of the inflammatory reaction which they may produce.

Gastric Vertigo.

In a clinical lecture upon a case of this affection, delivered by Dr. Da Costa, Professor of Medicine at the Jefferson Medical College (*Boston Medical Journal*, June 6), he made the following observations on its diagnosis and treatment. The subject of the case was a widow forty-six years of age, who two months prior to her admission had a severe attack of giddiness, during which she vomited greenish matters and felt intense pain in the stomach, back, and eyes. After admission the giddiness continued intense, so that she was giddy most of the day and night, but particularly the former. She was frequently aroused from sleep by attacks of vertigo, although it was most severe when in the erect posture. At times she could not walk at all, but staggered and fell when attempting to do so. Her vertigo was essentially objective. Her bed and all outside objects seemed to be constantly swaying to and fro, but her own body never seemed to move. As the case went on, nausea and vomiting were very troublesome, and she suffered very much from protracted morning headache.

In determining that this was a case of *gastric* vertigo, Prof. Da Costa was much influenced by the fact that nausea, vomiting, and coated tongue were prominent symptoms; for in gastric disturbance due to cerebral disease the tongue is seldom coated; and she frequently had painful digestion, which is also rarely found in brain disease. Gastric vertigo, again, is almost always relieved, as it was in this case, by assuming the recumbent position, while the vertigo also was an objective vertigo. And the vertigo linked to brain disease is usually more or less persistent, while gastric vertigo is rarely continuous, generally occurring in seizures, which indeed in some cases are distinctly paroxysmal. Another peculiarity of these affections is, that when the patient is surprised by an attack while walking about, if he can only seize any object, however slight, the vertigo becomes temporarily arrested—a procedure which could not have such effect in vertigo from organic disease of the brain. The absence of persistent headache, motor palsy, and of sensory disturbance is always a strong point in favour of the gastric origin of the disease. The ophthalmoscope, too, up to a certain point will aid us, as incipient choking of the discs or marked retinal hyperæmia would indicate the cerebral origin of the symptom. In gastric vertigo the fundus of the eye looks quite natural, indicating perhaps only a slight state of cerebral anæmia or venous turgescence. It must not, however, be concluded that, because the fundus is healthy, the vertigo is beyond all doubt gastric in its nature. It is only a presumption that such is the case.

"Before dropping the discussion of the symptomatology of the disease, I wish to speak to you of the curious dread which professional men with gastric vertigo very generally have. I have frequently had physicians from a distance come to see me when troubled with this strange malady, and the first question which they have asked me has been, 'Am I going to be an epileptic?' In very many instances it has been difficult to make them believe that their symptoms were of purely gastric origin, and that they could in time almost certainly be cured. To men who by daily experience know the character of the initial vertigo of epilepsy, their own symptoms seemed only too much of the same nature."

Prof. Da Costa, as the result of a large experience in treating these cases, expresses a very favourable prognosis in vertigo of truly gastric origin. The recovery may not take place for weeks, or perhaps for months, but still it is ultimately effected. It is very often necessary for the patient to make an entire change in his habits and surroundings—*e.g.*, to take a sea-voyage or a trip of some duration. After due regulation of the diet, he thinks that the best treatment consists in the administration of bitters and alkalies, the bitters being given before meals, and alkaline waters, etc., after meals. Later on, when the way has been well paved by the regular administration of these, iron, combined with a thirtieth of a grain of strychnia, given three times a day, is to be preferred. Another plan consists in the administration of small doses of corrosive sublimate, while paying strict attention to the bowels and diet. This exerts a most happy influence upon the gastric and cerebral phenomena. Iron should not be given early in the case, when it may not be well digested, and may cause constipation. As to the hypodermic use of iron, Prof. Da Costa has met with very varying effects, especially with regard to its local effect. "I have found that of two bottles of dialysed iron, even be they both from the same maker, and purchased at the same time, the contents of one bottle will irritate, and those of the other will not. The reason of this evidently is, all bottles of the preparation are not perfectly neutral—nay, from the same bottle I have had the most excellent effects for a few days, and then the iron began to irritate, which shows that even of the same bottle one half may be bland and the other become irritating. Notwithstanding all this, I have not given up using iron hypodermically in appropriate cases. I have lately been experimenting with some other forms, and have found the ammonio-citrate reliable. In a number of cases I have injected from two and a half to five grains in fifteen minims of water, without any bad effect, local or general."

Foreign Bodies in the Ear.

Prof. Voltolini, of Breslau, in a paper read on this subject to the Silesian Society (*Deutsche Med. Woch.*, May 25), demonstrated, by means of preparations and plates, why foreign bodies, unless very small, which have entered the ear, cannot of themselves fall out again. The cartilaginous portion of the meatus at the entrance forms an acute angle directed forwards, so that the direction of the meatus is first from behind forwards, and then from before backwards prior to passing inwards, the meatus being narrowed at its entrance, and after the bend becoming wider. A foreign body obtaining admission into it is like a cork that has fallen into a bottle, and cannot be withdrawn. No examination of the ear or syringing it will suffice for this if the bend be not first made straight. This is effected by drawing the muscles of the ear outwards, upwards, and backwards. But in this point of view the lining of the meatus is of great importance; for, while the cutis as long as it covers the cartilaginous part of the meatus is 1·5 millimetre in thickness, as soon as it passes on to the bony part of the organ it becomes suddenly only 0·1 millimetre, or fifteen times less thick. And so intimately and firmly is it here united to the periosteum, that it comes away with the periosteum from the bone rather than admit of being separated from the periosteum, so that the important result occurs that every inflammation of the cutis of the meatus is also a periostitis, and the covering of the meatus may be easily injured by means of an instrument, leaving the bone bare. We should, therefore, never blindly pass an instrument into the ear, but only introduce it as far as we can follow its point with the eye.

With respect to foreign bodies in the ear, two points have to be especially borne in mind—first, patients may entertain the belief that these are present when they are not, a sensation being often produced in acute inflammation of the membrana tympani as if an animal were moving to and fro in the ear; secondly, it still oftener happens that persons may have foreign bodies in their ears for very long periods, without being aware of it, and without knowing how they could have gained access. From all this it is evident how necessary is an exact examination of the ear in every case. Any insect may enter the ear, although the earwig has

unjustly got the reputation of being especially inclined to do so. In Breslau, where beetles abound, these animals not infrequently creep into the ear during the night, and if they are very large and unable to turn round, press forwards towards the membrana, especially as the patient naturally forces his finger into the ear; and in this way great suffering may be caused. Bluebottles also may, during the night, lay their ova amidst the abundant secretion in the meatus, which in a short time may be filled with maggots, which thrive there apace. Inanimate bodies of every possible kind may gain admission to the ears of adults or children, these latter stuffing into their ears whatever they find. Those which are liable to swell are especially dreaded, such as beans, peas, etc.; although this circumstance is not so bad as it seems, as the body after swelling to a certain size dies, sometimes having sprouted first in so favourable a hotbed.

For the removal of living foreign bodies from the ear, we have first merely to pour into the ear the best liquid we have at hand, such as water, milk, coffee, tea, spirits, or oil, and thus kill them—oil serving best to obstruct the tracheæ of insects. Pliny has already counselled us, *Si animal ingrediatur aurem, juvat inspuere auribus.* After this, we are not to be in a hurry, but let the dead animal remain quietly in the ear for a time. The removal of other foreign bodies is frequently no insignificant operation, and requires special instruments and practice, and for non-specialists some general rules may be lay down. Every practitioner can allow a foreign body to remain quiet in the ear, where it will cause infinitely less mischief than is produced by ill-conducted attempts at extraction, which have cost many patients their lives. What should be done under all circumstances, and that immediately, is to syringe out the ear with cold or tepid water, always remembering to convert the meatus into a straight canal by traction on the muscles of the ear. Without this the syringe is of little or no use. By powerful syringing we are generally able to remove the most different kinds of bodies from the ear, only those that are of great specific weight, such as shot, stones, etc., not being carried out by the stream. Even these heavy bodies may be removed by means of syringing, if a procedure be adopted by which the membrana tympani is so utilised that the foreign body rolls down along its oblique surface. For this purpose the patient should be laid in a horizontal position, with his head hanging over behind (as on a sofa, table, etc.); and if while he is in this position syringing be practised, care being taken to draw the muscles of the ear backwards, the shot, etc., rolls out of the ear with the stream of water. When a foreign body by swelling up becomes entirely wedged into the ear, the attempt at removal has usually been considered extremely dangerous, in consequence of the great pain likely to be caused by coming in contact with the inflamed and swollen parts. Prof. Voltolini, however, has been for a long time in the habit of using the galvano-caustic in these cases with the best effect. Employing the finest points, he gradually burns a hole in the foreign body, which, breaking up, is then easily removed. If there is no battery available, the tumefied foreign body should be left quietly in the ear, cold injections and external applications being made. Prof. König agrees with him in condemning the practice of removing foreign bodies from the ear immediately *à tout prix*, believing that a child is far more likely to suffer from many of the attempts made than from the body being allowed to remain quietly in the ear.

REVIEWS.

Headaches: their Nature, Causes, and Treatment. By. W. H. Day, M.D., Physician to the Samaritan Hospital for Women and Children, etc. Second Edition. London: J. and A. Churchill. 1878.

We regret not to have noticed the first edition of this work, which has evidently met a public want, or it would not have so quickly reached a second edition. Headaches are some of the commonest torments of humanity, and there will be many books written about them yet before we can master either their nature, their causes, or their treatment, although Dr. Day has made a fair attempt to lay the foundations of the future structure. We think, however, he would do well not to be too eager to enlist in his service the latest so-called discoveries in physiology, because facts which admit of various interpretations are apt to be perilous foundations for new theories. It is not everyone who will admit that Hitzig, Fritsch, and Ferrier "have demonstrated that the different portions of each convolution possess special functions," or that "the vast additions made to our previous knowledge by Dr. Ferrier's experimental researches justify us in drawing certain definite conclusions, etc." (page xi.). They may eventually, but do they as yet?

Dr. Day introduces us to two groups of headaches—(*a*), those due to causes *within* the brain, intra-cranial [? *intra-cerebral*] headaches; and (*b*), those depending on causes external to the brain. Of class (*a*) he makes eleven subdivisions, which we may briefly summarise as follows:—Anæmic, hyperæmic, sympathetic, dyspeptic or bilious, congestive and plethoric, nervous, nervo-hyperæmic, arthritic or gouty, toxæmic, organic or structural, and lastly, senile headache. Of class (*b*) he makes four species: rheumatic, periosteal (*cephalalgia periosteosa*), and neuralgic headache, and—O! shades of Whateley and Mill!—headaches of childhood and early life. Though we have called attention to this last error, for the headaches of childhood include several of the subdivisions of group (*a*), we feel sure that this "cross-division" is only the result of a slip, easily remedied, and that, as in chapter xvi., these headaches were meant to be formed into a group by themselves.

Objection may, however, be taken to other instances of cross-division in groups (*a*) and (*b*). Thus, why separate hyperæmic and congestive headaches from one another, and from nervo-hyperæmic headache? Why place sympathetic headache, "in which irritation proceeds at a distance from the sensorium, as in the case of decayed teeth, faulty or arrested digestion, and ovarian excitement," in a separate chapter from dyspeptic or bilious headache, in which one of these factors ("faulty or arrested digestion") is certainly present? Lastly, why not group arthritic or gouty headache, where the poison is in part uric acid circulating in the blood, with toxæmic headache, where carbonic acid, urea, or some one or more chemical products of diseased nutrition, are at the bottom of the mischief; and why not include organic or structural headache within the skull, with periosteal headache outside?

This last question prompts us to ask another, namely, are there any really *cerebral* headaches? Dr. Day speaks in his general introduction of "the aching cerebral mass shut up in its bony cavity," as if the brain itself really ached. Of course, all sensations of pain are only felt as such somewhere in the grey matter of the hemispheres; but the question is, Is not the mischief which causes the pain always extra-cerebral—that is to say, in the membranes, the periosteal nerves, or the extra-cranial nerves?

Dr. Day (page 234) quotes Dr. Moxon's statement that "the organic causes of great headache are never diseases of the proper nervous tissue, but always diseases of its enveloping structures"; but, though he considers this view open to question, he does not seriously attempt to demolish it. Moreover, when speaking of sympathetic headache (at page 104), which, be it remembered, belongs to his intra-cranial (? intra-cerebral) group of headaches, he writes as follows:—"Now, I am of opinion that, when the occiput is the seat of pain in headache, it may be considered to arise from an affection of the cervical nerves and their occipital branches, if the pain is superficial and the nervous sensibility is increased; but pain in the back of the head can over and over again be ascribed to no other cause than a hyperæmic state of the vessels at the posterior or under surface of the brain, where the veins and sinuses are also too full of blood, and the nervous matter is deranged in consequence." Here Dr. Day, in the first part of the sentence, distinctly admits that what he classes as an intra-cranial headache depends on disease of the extra-cranial nerves: will he not admit that over-distension of the veins and sinuses of the brain with blood is more likely to act by pressure on the nerves distributed to the membranes with which they are so intimately connected, than by direct action on the insensitive surface of the grey matter of the hemispheres? The whole question is too large for discussion here, but all the evidence from various organic diseases of the cerebrum—abscess, tumours, syphilitic growths—is in favour of our view, and not of Dr. Day's. In his next edition we hope he will devote a little space to the arguments *pro* and *con*.

The clinical descriptions of the various forms of head-

ache are very well done. Neuralgic headache, for example (chapter xv.), is well worth reading; while chapter viii., on nervous headache, gives a most graphic, though not encouraging, account of the symptoms and treatment of this obstinate form of ailment. We are rather disappointed, on the whole, with the parts of the book devoted to therapeutics. In a special work like this we expect to get some new hints, and especially to have decided opinions about new drugs. We hear of cholagogue purgatives, by which Dr. Day understands calomel (in one-grain doses), whose cholagogue action we thought Röhrig and Rutherford and others had utterly disproved; and sulphate of magnesia, which is said "to drain the portal system," though on what grounds is not stated; but croton- or butyl-chloral is passed over unnoticed, though it is the only drug which does any good to some sick headaches. Gelsemium gets but a half-hearted mention, and guarana has "failed" with Dr. Day, though we would rather take Dr. Wilks's opinion on this subject, in his "Lectures" on the Nervous System, for our guide, knowing that if he, in some respects a therapeutical sceptic, believes in a remedy, there must be something in it. We are inclined to think that practitioners would find more useful hints on the treatment of headache in that museum of empiricism, Professor Ringer's "Handbook of Therapeutics," than here. Some expressions used by Dr. Day are a little loose. Thus we have "to enumerate blood corpuscles" instead of "to count" them (page 25); "to liberate carbonic acid *from* the stomach" (page 252), for "*in* the stomach"; and "the gases generated by the stomach . . . . are nitrogen, etc.," as if the stomach could create elementary gases; while it is rather hard to speak of men "of stout configuration," as if you were describing some newly discovered country, or the interior of the island of Cyprus. Classical compounds come hardly off with Dr. Day. How "plexus myenteric*um*" and "œdema arsenica*lis*" would shock even a youth just through his little-go! and what shall we say to "cephalalgia periosteo*sa*," where an adjective of Greek origin is saddled with a Latin termination? The pharmaceutical names of drugs are not always correct. There is no Ammoniæ *sesqui*carbonas in the British Pharmacopœia, and calomel is now called Hydrargyri subchloridum, and not chloridum, though both these adjectives were used in the old London Pharmacopœia. An unwary druggist might easily make a serious, if not fatal, mistake by making up formula (79) as it is written.

We have already exceeded our limits, so, though we had marked several other points for notice, we must hasten to say that, in spite of defects which more careful revision will remedy another time, Dr. Day's work has great merits and well deserves the attention of our readers.

The Mechanical System of Uterine Pathology. By Graily Hewitt, M.D. Lond., F.R.C.P., President of the Harveian Society, Professor of Midwifery and Diseases of Women, University College, and Obstetric Physician to the Hospital, etc. London: Longmans, Green, and Co. 1878. Pp. 97.

This book, as will be seen from its title, is an exposition of the theory of uterine disease with which its author's name is associated. Dr. Hewitt has observed the extreme frequency with which alterations in the shape and position of the uterus are found together with morbid changes and functional disturbances of that organ; and therefore he concludes that the displacements and distortions are the causes of the diseased conditions. If this theory were pushed to its logical termination, it would follow that all treatment not directed to the radical source of the evil (in other words, not aiming at the restoration of the uterus to its normal position and shape) can be but temporising. But Dr. Hewitt, being a cautious man, does not carry out his theory to its full length in this direction. He trusts more to nature, aided by rest, and less to pessaries, than do some of his followers.

To give any detailed account of the application of this theory to the explanation of different morbid phenomena, would be impossible in the space at our disposal; and equally impossible would it be, here to set forth adequately our reasons for accepting or not accepting any part of it. But speaking generally, we may be permitted to say, that we think Dr. Hewitt has taken a condition to be a constant cause of disease, which is really a cause but seldom, is sometimes an effect, but still more often is merely a coincidence. That in a great number of women with uterine disease, so-called flexions and versions of the uterus are present, is undeniable; but we think that in a still greater number of cases they exist along with perfect health.

Although his theory may not, in Dr. Hewitt's judicious hands, lead to any very bad results, yet we think that, adapted and applied by men imperfectly educated and not careful in ascertaining results, it has led to much unnecessary and dangerous meddling. We notice that Dr. Hewitt says that stem pessaries are "of great service in certain cases," and that "various operations for the cure of distortion are occasionally properly practised." Incision of the internal os, he says, does not, "except in a few exceptional instances, appear to be a satisfactory procedure; but as an aid to the cure of certain severe distortions, this mode of treatment may occasionally be called for." We should like him to have described more definitely the cases in which he thinks it justifiable to submit patients to the risk attending these methods of treatment. There are many other points on which we might comment, but space forbids. Those who wish to understand the mechanical theory of uterine pathology, will find it stated, in its least extravagant form, in this volume.

Elements of Chemistry, Theoretical and Practical. By William Allen Miller, M.D., LL.D., late Professor of Chemistry in King's College, London. Revised by Charles E. Groves, Secretary to the Institute of Chemistry of Great Britain and Ireland, F.C.S., etc. Part II. Inorganic Chemistry. Sixth edition. London: Longmans. Pp. 1005.

Those who are yet young among us will remember the "Miller" of their student days. Now they would hardly recognise it. Within a period of, comparatively speaking, a few years, chemistry has undergone a great if not exactly a silent revolution. This is well exemplified in the edition of Miller's work now before us. In the olden days oxygen was always taken first—its knowledge formed the basis of our chemistry. This is so no longer. Hydrogen usurps its place in point of importance, and now comes foremost; next in this volume come chlorine, and the important compound of the two, hydrochloric acid. Only after these comes oxygen, and its most important compound, water; for hydrogen is now the standard of reference for atomic weights, and is the measure of the atomicity of the other elements, whilst oxygen is a dyad. From these hints it will be plain that the present edition of "Miller's Chemistry" has been much altered, but it has been well and carefully revised, and is likely to continue to be the useful text-book we knew it in years gone by.

The Provincial Medical Schools in France.—A few years since a great disposition prevailed in France for the formation of new universities or, at all events, medical faculties; and the Clerical party, indeed, obtained an Act which allows of their forming these, providing they find the funds. At the same time it was proposed to found several new faculties of medicine by the State, but at present only one of these—that of Lyons—has really been set on foot, while the Clerical party have a new university at Lille. It soon began to be perceived, however, that this multiplication of medical faculties was a mistake, and—we suppose as some satisfaction for hopes raised and not likely to be realised—some of the preparatory schools of medicine were declared by decree to be *écoles de plein exercise*, that is to say, they were authorised, as in our own provincial schools, to give the whole of the medical education, the students only having to go to one of the faculties for the examination conferring the diploma. This was received with much satisfaction by the provincial bodies, and the municipalities went to considerable expense in new buildings and new professorships. The Conséil d'Etat has, however, recently decided that this decree contravening one of the Napoleon laws on medical education is illegal, and consequently another one has recently been published, requiring all students to repair to a faculty for examination at the end of the third year as well as finally. This has raised a storm of indignation in these new schools of *plein exercise*, which feel pretty sure that if their students go to the faculties they are not likely to return to them. That troublesome body, the Marseilles Municipality, is up in arms about the "breach of faith," as they regard it; and that of Toulouse, fearful of the rivalry of the Clericals, is scarcely less indignant.

GENERAL CORRESPONDENCE.

HOW TO REMEDY ACCIDENTS TO THERMOMETERS.

LETTER FROM DR. J. MCCRAITH.

[To the Editor of the Medical Times and Gazette.]

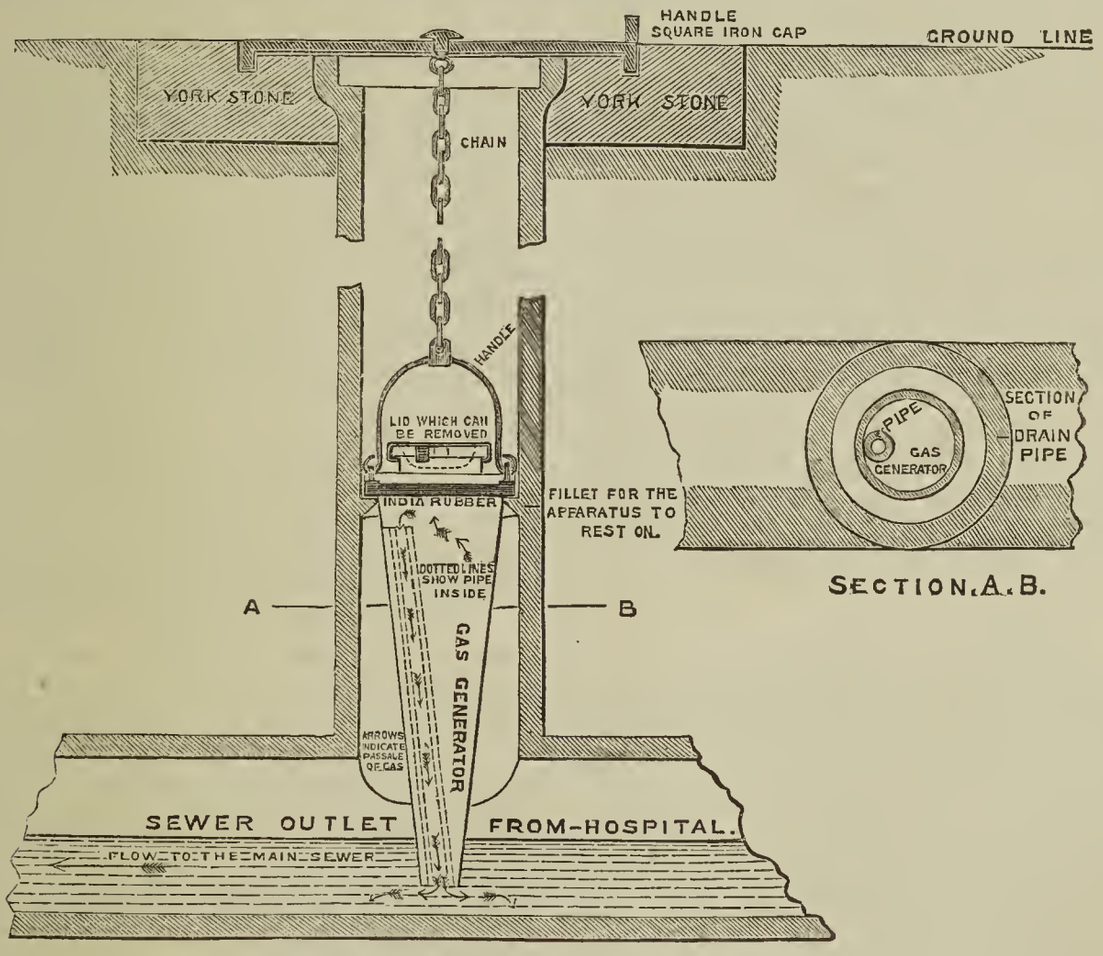
SIR,—The index having descended into the bulb of one of my clinical thermometers, and the other being broken, I, living in this "out-of-the-way" corner of Asia Minor, where the supplying of such articles requires time, was obliged to endeavour to remedy the accident if possible; and having succeeded, it may be useful to others similarly circumstanced to know by what means they may put to rights a similar accident. I cooled down the mercury in the bulb by application of ether, and then, turning it upside down, I shook the mercury into the column until this last was quite filled. The object of cooling the mercury was to give me as much space as possible in which to act by the contraction of the mercury. Then reversing the position (that is, the bulb downwards), by a sudden violent shake the mercury was shaken into the bulb, the column in the stem was divided, but a considerable part still remained in the stem at its upper part: it was evidently much too considerable to act as an index. I shook this into the centre of the stem, so as to leave a vacant space above and below it. I then applied the small flame of a spirit-lamp to the spot which left above the length of mercury necessary for an index, and turning the tube in the flame, that extent was, of course, driven up, and the remainder driven down into the bulb. I then put it by for twenty-four hours, in order that a certain polarity might be established between the part to serve as an index and that remaining in the bulb, as I suppose this to be the power by which the ascending column in the stem forces on before it the small part acting as an index. I know of no other power capable of acting in this way under such circumstances, except the polarity of one repelling the other. This is only a supposition of mine, which may not be the right theory, but at all events I succeeded in making my thermometer as useful as ever.

I am, &c.,
J. MCCRAITH, M.D.,
Smyrna, July 25. Surgeon B.S. Hospital, Smyrna.

NEW INVENTIONS AND IMPROVEMENTS.

NEW DRAIN DISINFECTOR.

THE accompanying diagram will explain the working of a new disinfecting apparatus called the "Hospital Drain Disinfector." It is the invention of Mr. William Soper, a member of the profession, and is intended to prevent the dissemination of contagious diseases by means of sewers connected with hospitals or other centres of infection. Its fundamental principle is the slow and constant evolution, in immediate contact with the suspected sewage, of chlorine gas generated from a properly proportioned mixture of black oxide of manganese, chloride of sodium, and dilute sulphuric acid placed in the generating reservoir of the apparatus. The advantages of chlorine gas, as evolved from the apparatus, over other sewage-disinfectants already in use, are that it is not expensive, it can never obstruct the drains, it is uniformly disseminated throughout the mass of liquid, and in particular that it acts not only on the liquid itself, but also on the gases in the upper level of the drain-pipe. The apparatus, which is registered, has been found on trial to work satisfactorily, and is being adopted at some of our fever hospitals. It is manufactured by James Stiff and Sons, London Pottery, Lambeth.



PROFESSOR VULPIAN.—Professor Vulpian, Dean of the Paris Faculty of Medicine, has just been promoted to the grade of *Officier* in the Order of the Legion of Honour.—*Gaz. Méd.*, August 17.

THE Russian Government have lately sanctioned the proposal for founding a new university in Siberia. Tomsk is the town chosen for it. Donations for the establishment at present amount to 430,000 roubles.

OBITUARY.

ACHILLE FOVILLE.

This distinguished alienist physician has just died at Toulouse in the seventy-ninth year of his age. During his internat at Salpétrière he had the remarkable good fortune to serve successively under chiefs of such celebrity as Pariset, Rostan, Fervus, and Esquirol; and even before he quitted that hospice he had done some good work in the anatomy and physiology of the nervous system, and especially with regard to cerebral localisation. This is shown in his publication in collaboration with Pinel-Grandchamp, "Recherches sur le Siège spécial de differentes Fonctions des Système Nerveux," and in his *thèse* produced in 1824, on Clinical Observations relating to Insanity. In 1825, on the recommendation of his master Esquirol, he was appointed Medical Superintendent of the Saint-You Asylum, Rouen, which was then first opened. He soon placed his establishment in the first rank among asylums for the insane, and acquired a great reputation by his clinical capabilities and by the articles on the Brain and Diseases of the Nervous System which he contributed to the "Dictionnaire de Médecine et de Chirurgie Pratique." In a short time he was appointed Professor of Physiology at the Ecole de Médecine at Rouen. His health giving way eventually under hard work, he resigned his appointment at Saint-You in 1833, and for some years passed his time in travelling. On his return to Paris, after a voyage to Africa and America, he resumed his investigations on the brain; and when Esquirol died, in 1840, the high honour was conferred upon him of appointing him the successor of his great master as the principal medical officer at Charenton. In 1844 he published his great work and atlas, "Traité de l'Anatomie du Système Nerveux Cérébro-Spinal," which he dedicated to the illustrious Ducrotay de Blainville—certainly the most complete and thorough work on the subject which had appeared prior to the application of the microscope, and consulted with profit even at the present time. In the historical introduction, characterised by solid learning, he analyses the works of his predecessors with great care, and submits them to a competent critical appreciation. Foville was the first to establish that the intellectual operations of the brain are effected by the agency of the cortical substance. This was the last of his publications, for, having been deprived of his post at Charenton at the Revolution of 1848, while still in all the vigour of age and talent, he resorted to private practice. During twenty years he occupied in Paris one of the highest positions as an alienist physician; and during the latter part of his life lived at Toulouse, as the consulting physician of a *maison de santé*. He leaves three sons, one of whom, Dr. Achille Foville, Medical Superintendent of the Quatre-Mares Asylum at Rouen, is well known for some important works on mental alienation.

HERMANN LEBERT.

Professor Hermann Lebert, as well known in French as in German medical history, died at Bex, in Switzerland, on August 1. Born in 1813, and studying first at Berlin and then at Zurich, he took his doctor's degree at the latter university in 1834. He then repaired to Paris in order to improve his knowledge, and in 1836, on the invitation of some friends, he settled as a practitioner at Bex. After some time he was appointed physician to the baths at Lavey, the efficacy of which he much improved by his ameliorations. Here, too, he employed his leisure in producing some of those works which afterwards became so numerous, and some of them so famous. One of the most remarkable of these was his "Physiologie Pathologique," published with an atlas in 1845, and rewarded with a prize by the Académie des Sciences in 1848. At the invitation of the French Government, he undertook with Prof. Charles Robin the making anatomical preparations for a new museum then set on foot, and for this purpose established himself at Paris. Here he exhibited the greatest activity and industry, having acquired a large practice, and continuing on a large scale his literary labours. Among the results of these appeared, in 1849, his "Traité Pratique des Maladies Scrofuleuses et Tuberculeuses," which obtained the Portal Prize of the Académie de Médecine, and in 1851 his "Traité Pratique des Maladies Cancereuses," also rewarded by a prize. The first volume of his great work, "Traité d'Anatomie Pathologique Générale et Spéciale," appeared in 1854, but the work was not completed until 1862, forming then two magnificent folio volumes of text, and two of atlas; and although much difference of opinion may exist as to the value of the microscopic details, almost all must admit its importance, nothing like it having, in fact, appeared since Cruveilhier's Atlas. The Monthyon Prize and Cross of the Legion of Honour were conferred on its author. In 1853 he was appointed Professor of Clinical Medicine and Chief Physician to the Hospital at Zurich, and in 1866 he received a call to the clinical chair at Breslau, which he held until 1874. After resigning his chair, he followed consultation practice, first at Vevey, and afterwards at Nice, and was staying at Bex, where he settled on commencing life, when death overtook him. His publications, besides those which we have enumerated, are astonishingly numerous, all of them of a practical character, and many exhibiting great power of observation and sagacity. Those of later years were written in the German language, several of them detailing the results of his clinical observations at Zurich and Breslau. The most recent of these were his "Handbuch der Allgemeinen Pathologie und Therapie," second edition, 1875; and "Die Krankheiten des Magens," 1878.

WILLIAM WESTBROOKE SQUIRES, M.D. Edin., M.R.C.S. Eng.

We regret having to record the death, at the early age of thirty-seven, of Dr. W. Westbrooke Squires, of Hardy-street, Nelson, New Zealand. Born at St. Germain-en-Saye, near Paris, in 1840, Mr. Squires received his professional education at Liverpool, Edinburgh, and Pisa. He was a Member of the Royal College of Surgeons, England, and graduated as M.D. Edinburgh in 1864. In 1863 he had hæmoptysis, and his health continuing delicate he went out to New Zealand, and was induced to settle in the practice of his profession at Nelson. Not long after his arrival he was appointed Coroner, and subsequently Health Officer, Port Nelson, and Consulting Physician to the Nelson Hospital and Lunatic Asylum. After his arrival in New Zealand his health much improved, and he continued in good health, till in April last he had suddenly a severe attack of hæmoptysis; and this was followed by congestion of the lungs, and death after an illness of twelve days. Mr. Squires was a skilful practitioner, a useful citizen, a warm friend, and a good Mason, and his death will long be deeply mourned in Nelson.

MEDICAL NEWS.

University of London.—The following are lists of candidates who have passed the recent Examinations:—

First M.B. Examination for Honours.

ANATOMY.

First Class.—John Shaw (Exhibition and Gold Medal), St. Thomas's Hospital; Victor Alexander Haden Horsley (Gold Medal), University College.

Third Class.—Percy Edward Shearman, University College.

HISTOLOGY AND PHYSIOLOGY.

First Class.—Richard Bredin (Gold Medal), Liverpool Royal Infirmary School of Medicine; Charles Alfred Weber, B.A., B.Sc. (Gold Medal), St. George's Hospital; Robert Maguire, Owens College; David Alexander King, St. Bartholomew's Hospital; Victor Alexander Haden Horsley, University College; Percy Edward Shearman, University College; John Shaw, St. Thomas's Hospital.

Second Class.—Louis Alfred Cantin, St. Bartholomew's Hospital, and Arthur Edward Permewan, University College, *equal;* Denis McDonnell, King's College, and Beaven Neave Rake, Guy's Hospital, *equal;* Louis Coltman Parkes, University College; Thomas Kirsopp, St. Bartholomew's Hospital, and William Rushton Parker, University College, *equal.*

Third Class.—Henry Thurstan Basset, Queen's College, Birmingham, and Guy's Hospital; Walter Duncan Thomas, St. Bartholomew's Hospital; Henry Hoole, Charing-cross Hospital; Thomas Vincent Dickinson, St. George's Hospital.

ORGANIC CHEMISTRY.

First Class.—Richard Bredin (Exhibition and Gold Medal), Liverpool Royal Infirmary School of Medicine; Beaven Neave Rake, Guy's Hospital; Robert Maguire, Owens College.

MATERIA MEDICA AND PHARMACEUTICAL CHEMISTRY.

First Class.—Percy Edward Shearman (Exhibition and Gold Medal), University College; John Shaw, St. Thomas's Hospital (obtained the number of marks qualifying for the Exhibition); Henry Maudsley, University College.

Second Class.—Arthur Edward Permewan, University College; Arthur Newsholme, St. Thomas's Hospital, and Beaven Neave Rake, Guy's Hospital, *equal.*

FIRST B.A. ONLY.

ENGLISH.

First Class.—Dugald Sutherland MacColl (Exhibition), University.

Second Class.—John Chambers, Liverpool Institute and private study.

Third Class.—Ellis Jones Griffith, University College of Wales; John Pawley Bate, private study; Arthur Wier Mason, Kingswood and Woodhouse-grove and New College, Eastbourne; John Willott, Owens College.

LATIN.

First Class.—Alfred Boyce Shaw (Exhibition), private study; Matthew Aloysius Power, Stonyhurst College, and William Stevenson Meyer, University College, *equal* (both obtained the number of marks qualifying for the Exhibition or for the Prize); Francis Chew, St. Francis Xavier's College, Liverpool; George Washington Kilner, University College; Arthur Wier Mason, Kingswood and Woodhouse-grove and New College, Eastbourne, and Louis Napoleon Eugene Payne, Stonyhurst College, *equal;* Ernest William Halifax, University College; Arthur Algernon Whitehead, Owens College.

Second Class.—Thomas Joseph Cunningham, private study; William Morley Smith, New College, Eastbourne; Frederick William Ensor, The Leys School, Cambridge; Rupert Mason, Owens College.

Third Class.—Seymour Boyer Relton, private study; Samuel Edward Lamb, private study; Robert Harley Lord, Owens College.

FRENCH.

First Class.—Charles Raymond-Barker (Prize), Stonyhurst College; Theodore Michael Zarifi, private study and tuition (obtained the number of marks qualifying for the Exhibition or for the Prize); Raymond Crawford, Stonyhurst College and private study (obtained the number of marks qualifying for the Exhibition or for the Prize).

Second Class.—William Stevenson Meyer, University College; Thomas Crossley Eastwood, Owens College; Herman Joseph Cohen, Jews' College; Alban Henry Wright, St. Mark's College, Chelsea; Matthew Aloysius Power, Stonyhurst College; Alfred John Wyatt, private study.

Third Class.—John Wilkins, University College; William Morley Smith, New College, Eastbourne; Arthur Johnson Evans, University College and private study; Arthur Algernon Whitehead, Owens College; Frederick William Ensor, The Leys School, Cambridge; Samuel Edward Lamb, private study; John Pawley Bate, private study; Thomas Farendon Kerry, Regent's-park College.

GERMAN.

Third Class.—Arthur Wier Mason, Kingswood and Woodhouse-grove and New College, Eastbourne.

FIRST B.A. AND FIRST B.Sc. CONJOINTLY.

MATHEMATICS.

First Class.—Robert S. Heath (First B.Sc.—Exhibition), Trinity College, Cambridge; Robert Alfred Herman (First B.A.—obtained the number of marks qualifying for the Exhibition or for the Prize), King Edward's School, Bath.

Second Class.—Theodore Beck (First B.Sc.), University College.

Third Class.—Maurice W. Richmond (First B.Sc.), University College; John Coulson Tregarthen (First B.A.), private study.

FIRST B.Sc. AND PRELIMINARY M.B. CONJOINTLY.

CHEMISTRY.

Second Class.—Frank Litherland Teed (First B.Sc.), University College and private study; Thomas Walter Williams (First B.Sc.), University College and Royal College of Chemistry.

Third Class.—Edwin James Onions (Prel. Sci.), private study; George Bernard Hoffmeister (Prel. Sci.), Caius College and St. Bartholomew's Hospital, and Edward Henry Rennie (First B.Sc.), University College and Royal School of Mines, *equal;* Samuel Lavington Hart (First B.Sc.), St. John's College, Cambridge.

EXPERIMENTAL PHYSICS.

First Class.—J. W. W. Waghorn (First B.Sc.—disqualified by age for Arnott Exhibition and Medal), private study; Samuel Lavington Hart (First B.Sc.—Arnott Medal), St. John's College, Cambridge.

Second Class.—Gavin James Burns (First B.Sc.), Birkbeck Institution and private study; Samuel Charles Hill, B.A. (First B.Sc.), University College; Daniel West Samways (Prel. Sci.), St. Bartholomew's Hospital; S. George Herbert Barfield (First B.Sc.), private study; Augustus Felix Laloë, B.A. (First B.Sc.), private study; James Harvey Hichens (Prel. Sci.), Epsom College; Edwin James Onions (Prel. Sci.), private study.

Third Class.—Ben Hall (Prel. Sci.), St. Bartholomew's Hospital.

BOTANY.

First Class.—Arthur King (Prel. Sci.—Exhibition), University of Edinburgh.

Second Class.—Charles Ed. Stuart (First B.Sc.), University College and private study.

Third Class.—Wm. Dobinson Halliburton (Prel. Sci.), University College; John Howard Champ (Prel. Sci.), Guy's Hospital.

ZOOLOGY.

First Class.—Walker Overend (Prel. Sci.—Exhibition), Royal School of Mines and St. Bartholomew's Hospital; Percy Faraday Frankland (Prel. Sci.—obtained the number of marks qualifying for the Exhibition or for the Prize), Royal School of Mines and University College; Alfred Gibbs Bourne (Prel. Sci.), University College, Joseph James Fletcher (Prel. Sci.), University College and Royal School of Mines, James Rocheid Forrest (Prel. Sci.), University College, Wm. Dobinson Halliburton (Prel. Sci.), University College, and Ed. Waldemar von Tunzelman (Prel. Sci.), University College, *equal.*

Second Class.—Maurice Parry-Jones (Prel. Sci.), University College, Edwin Radford (First B.Sc.), University College, John Henry Steele (First B.Sc.), private study, and Walter Frederick Raphael Weldon (Prel. Sci.), St. John's College, Cambridge, *equal.*

Third Class.—James Berry (Prel. Sci.), St. Bartholomew's Hospital, and Edward Roberts (Prel. Sci.), Guy's Hospital and Epsom College, *equal.*

UNIVERSITY OF ABERDEEN.—During the past year the following candidates, after the usual examinations, received degrees in Medicine and Surgery:—

THE DEGREE OF M.D.

Robert Reid Alexander, M.B., C.M., Hanwell Lunatic Asylum; Alexander Anderson, M.B., C.M., Banchory-Ternan; John Alfred Austin, M.B., C.M., Tongue, Sutherlandshire; Alexander Baird, M.B., C.M., Perth; Robert Sydenham F. Barnes, M.B., C.M., London; Adam Blackhall, M.B., C.M., Crimond, Aberdeenshire; David Bower, M.B., C.M., Murray-field, Edinburgh; Robert William Burnet, M.B., C.M., London; James Cameron, M.B., C.M., Hendon, Middlesex; Charles Creighton, M.B., C.M., Cambridge; James Trigue Crowden, M.B., C.M., Wisbeach, Cambridgeshire; Charles Davidson, M.B., C.M., Coventry; David Peter Duirs, M.B., C.M., Dipton, Newcastle-on-Tyne; Edward Owen Giblin, M.B., C.M., Hobart Town, Tasmania; Robert Turner Hales, M.B., C.M., Holt, Norfolk; Edward John Wm. Hicks, M.B., C.M., London; Herbert James Ilott, M.B., C.M., Bromley, Kent; Frederick William Jackson, M.B., Broadstairs, Kent; Walter Culver James, M.B., C.M., Brixton, London; Frederick Henry Kyngdon, M.B., C.M., Sydney, New South Wales; Alexander Macpherson, M.B., C.M., Haslingden, near Manchester; John Munro Moir, M.B., C.M., Kirriemuir, Forfarshire: Robert James Morice, M.B., C.M., Palmerston, South Australia; William Morrish, M.B., C.M., Peckham, London; Alex. Disney Leith Napier, M.B., C.M., Fraserburgh: Charles Frederick Newcombe, M.B., C.M., County Asylum, Rainhill, Prescot; David Aikman Patterson, M.B., C.M., Aden; John Caie Pearson, M.B., C.M., Stockenstrom, Cape Colony; James Miller Gordon Pirrie, M.B., C.M., Aberdeen; Malcolm Poignand, M.B., Islington, London; James Rodger, M.B., C.M., Aberdeen; James Ross, M.B., C.M., Lairg, Sutherlandshire; William Thomas Sheppard, M.B., C.M., Liverpool; James Simpson, M.B., C.M., Aberdeen; James Herbert Simpson, M.B., C.M., Rugby; Henry Barton Liddell Smith, M.B., C.M., London; Patrick Blaikie Smith, M.B., C.M., Aberdeen; Alfred Felix Stevens, M.B., C.M., London; Alfred Claude Taylor, M.B., C.M., Nottingham; George Abraham Walker, M.B., C.M., Aldborough, Darlington; Henry Watson, M.B., C.M., Norwich; Robert Wharry, M.B., C.M., London; Edward Arthur White, M.B., C.M., Malmesbury, Wilts; William White, M.B., C.M., Hadfield, Manchester; Alexander Williams, M.B., C.M., Tarland; John Osbert Wilson, M.B., C.M., Huntly.

THE DEGREE OF M.B.

Andrew Aiken, M.A., Aberdeen; William Montague Ball, London; William Barron, Marnoch, Banffshire; James Walker Beattie, Huntly; Colin M'Iver Campbell, M.A., Aberdeen; Christian Francis Castor, Madras; Andrew Richard Cowell, Fermanagh; Harry Edward Dixey, Great Malvern; Edwin Francis Horatio Dobson, Rangoon, Burmah; Benjamin Evers, Seoni, Central Provinces, India; Charles Theodore Ewart, St. Andrew's, Jamaica; Solomon Fernando, Morottoo, Ceylon; Andrew Fowler, Skene; Skene Gordon, Tarland; David Hardie, Elgin; William Henry, Echt; Samuel Patton Impey, Cape Colony; Richard Janz, Kandy, Ceylon; Donald S. M'Donald, Melvich, Sutherlandshire; Alexander Macgregor, Fearn, Ross-shire; John MacMunn, Wolverhampton; Henry Gray M'Robert; Douglas Dent Malpas, Sevenoaks, Kent; David Maver, Aberdeen; Adam Frederick John Mickle, Kirklington, Ripon; Andrew Norrie, Cairnhill, Turriff; James Murray Park, Saint Fergus, Peterhead; Robert F. Scott Proctor, Towie, Aberdeenshire; Donald Stuart, Kemnay; Octavius Todd, Landour, North-West Provinces, India; Herbert Redwood Vachell, Llandaff, Cardiff; Augustus Desiré Waller, Paris; Joseph Watt, Kintore; William Robert White, London.

THE DEGREE OF C.M.

Andrew Aiken, William Montague Ball, William Barron, James Walker Beattie, Colin M'Iver Campbell, Christian Francis Castor, Andrew Richard Cowell, Harry Edward Dixey, Edwin Francis H. Dobson, Benjamin Evers, Charles Theodore Ewart, Solomon Fernando, Andrew Fowler, Skene Gordon, David Hardie, William Henry, Samuel Patton Impey, Richard Janz, Donald S. M'Donald, Alexander Macgregor, John MacMunn, Henry Gray M'Robert, Douglas Dent Malpas, David Maver, Adam F. J. Mickle, Andrew Norrie, James Murray Park, Robert F. Scott Proctor, Donald Stuart, Octavius Todd, Herbert R. Vachell, Augustus D. Waller, Joseph Watt, William Robert White.

Of the above-mentioned candidates, William Henry, Samuel P. Impey, Alexander Macgregor, and Andrew Norrie received their degrees in Medicine and Surgery with honourable distinction. The John Murray Medal and Scholarship was awarded to Alexander Milne Henderson, as the most distinguished graduate of his year; and the following are now declared to have passed part of their examinations:—

Lewis D. Alexander, John H. Anderson, Adam Argo, Alexander T. Arthur, Andrew Baird, George A. Batchelor, Alfred G. Bateman, Thomas W. F. Bell, William H. Brodie, Walter Brown, John Kerr Butter, William Clark, Thomas J. Compton, Morgan Davies, Alexander Dey, Alexander D. Diack, George P. Doyle, Alexander Duncan, John Durno, William B. Fergusson, Ernest Field, Donald M. Fraser, William Fraser, Arthur H. Fretz, William H. Fretz, Charles S. Gibbons, Charles Glass, Henry C. Gordon, Herbert Goude, John Gregory, Gerald S. Harper, Joseph W. Hodgson, Ho Kai, Fife Jamieson, Edward Knowles, Alfred Leach, Frederick W. Lerew, Coll Reginald Macdonald, Donald McLeod, John Alex. McWilliam, Charles M. Maxwell, Alexander Milne, Alexander C. Milne, Satish C. Mukhopadhyay, Joseph Needham, Arthur Purkiss, John Ramage, John Moysey Rattray, Archibald Reid, Donald Reid, William Reid, Charles B. Richardson, Hermann Rogers-Tillstone, Frank N. O. Rorison, Peter Rough, John Frederick S. Royle, Benjamin Scott, George J. Shand, Donald Simpson, Ernest B. Smith, James Murray Smith, George Snell, Robert Soutar, John S. Spence, Frederick H. Spooner, William Stericker, Alexander Struthers, George Taylor, Charles William Thiele, Winckworth Tonge-Smith, Herbert William Tolver-Crow, George J. K. Turner, John L. Van Geyzel, Robert Walford, William Wilfrid Webb, Charles H. Welford, John H. Wilson, John Dover Woodman, Martensz J. Wright.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At special examinations for the licences of the College, held on Monday, Tuesday, and Wednesday, August 12, 13, and 14, the following candidates were successful. For the licence to practise Medicine:—

Nichols, John Moore. | Stoker, George.

APOTHECARIES' HALL, LONDON.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, August 15 :—

Groome, William Wollaston, Monk Soham, Suffolk.
Ladell, William John Simpson, Knockholt Lodge, Greenhithe.
Neale, John Edward, 60, Boundary-road, N.W.

The following gentlemen also on the same day passed their Primary Professional Examination : —

Pryn, William Wenmoth, Guy's Hospital.
Woollett, Sidney Winslow, King's College.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to our Publishing-office, as early as possible, information as to all new Appointments that take place.

FISHER, FREDERICK R., F.R.C.S.—Surgeon to the Surgical Aid Society.

NAVAL, MILITARY, &c., APPOINTMENTS.

WAR OFFICE.—MEDICAL DEPARTMENT.—Surgeon-Major William Armstrong retires on half-pay; Surgeon Stephen Flood, M.B., half-pay, resigns his commission; Surgeon-Major Edwin Granville Ley, M.D., half-pay, Surgeon-Major William Armstrong, upon retiring on half-pay, and Surgeon-Major Francis Leverson Gower Gunn, on retirement on half-pay, to have the honorary rank of Deputy Surgeons-Generals.

BIRTHS.

HETT.—On August 14, at 1, Ledbury-road, Bayswater, the wife of Geoffrey Hett, M.D., of a son.

HOLMAN.—On August 10, at Keighley, Yorks, the wife of R. Colgate Holman, M.R.C.S.E., of a daughter.

KELLY.—On August 20, at 12, Plough-road, London, the wife of Bernard Kelly, M.D., of a son.

POIGNAND.—On August 13, at 234, Upper-street, N., the wife of Malcolm Poignand, M.D., of a son.

MARRIAGES.

BASTABLE—AYLWIN.—On August 15, at Whitstable, Kent, J. B. L. Bastable, L.R.C.P.E. and L.R.C.S.E., of Blackburn, to Mary Anne, only daughter of Herbert Aylwin, Esq., Bushey, Herts.

COOKE—HARLE.—On August 14, at St. John's, Hackney, David Frederick Cooke, of Pennis, Fawkam, Kent, to Jane Helen, second daughter of Ezra Harle, M.R.C.S., of Darnley-road, Hackney.

HARNETT—HOUSLEY.—On August 15, at Paddington, William John Harnett, L.R.C.P. Ed., of Tudor House, Barnet, to Constance Fanny, youngest daughter of the late George Housley, of 38, Sutherland-gardens, W.

HAWKSLEY—BARBER.—On August 17, at Croudell Church, Hampshire, Thomas Hawksley, M.D., of London, to Diana, widow of the late Henry Howard Barber, 17th Lancers, and daughter of the late John Eyre, Esq., of Eyre Court Castle, county Galway.

JONES—STUART.—On August 14, at Woolwich, the Rev. Thomas Jones, of Rectory-place, Woolwich, to Margaret, youngest daughter of William Stuart, M.D., of Woolwich.

OGILVY—HARLE.—On August 14, at Newcastle-on-Tyne, George Livington Ogilvy, M.D., of Newton Mill, Forfarshire, to Annie, youngest daughter of the late William Lockey Harle, of Newcastle-on-Tyne.

WHITE—KANE.—On August 20, at Norbiton, Surrey, Charles Augustin White, Commander in the Peninsular and Oriental Company's service, to Elizabeth Catherine, eldest daughter of Mathew Kane, M.D., of Kingston-hill, Deputy Inspector-General of Hospitals of H.M.'s Indian Army, retired list.

DEATHS.

WEAKES, HARRIETT, wife of Henry Weakes, at Mansion House, Brompton, Chatham, on August 14.

WHATELY, GEORGE FREDERICK, M.R.C.S. Eng., late of Great Berkhampstead, Herts, at Chiswick, on August 16, aged 63.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BRIXTON, STREATHAM, AND HERNE-HILL DISPENSARY.—Resident House-Surgeon. Candidates must be unmarried and possess both medical and surgical qualifications. For particulars apply to the Secretary at the Dispensary, Water-lane, Brixton, S.W.

EASTERN DISPENSARY OF BATH.—Resident Medical Officer. Candidates must possess the diplomas of a Royal College of Surgeons and the Society of Apothecaries. Testimonials, post-paid, and marked "Eastern Dispensary," to Francis Savage, Esq., Honorary Secretary, 10, Beaufort-buildings East, on or before September 2.

ESSEX AND COLCHESTER HOSPITAL.—House-Surgeon and Apothecary. Candidates must be legally qualified to practise medicine and surgery, duly registered, and unmarried. Applications, with testimonials as to moral character, etc., to the Committee, at the Board-room, on or before September 12.

GENERAL INFIRMARY AT LEEDS.—House-Surgeon. Candidates must possess a medical qualification, and be Members or Licentiates of a British College of Surgeons. Copies of testimonials to Dr. Heaton, at the Infirmary, Leeds, on or before September 12.

QUEEN ADELAIDE'S DISPENSARY, POLLARD-ROW, BETHNAL-GREEN.—House-Surgeon. Candidates must possess a registered qualification to practise both medicine and surgery. Testimonials to the Hon. Secretaries, on or before September 5.

ST. PANCRAS, MIDDLESEX.—District Medical Officer. Candidates must possess the qualifications prescribed by the Local Government Board. Applications—which must be made on forms to be obtained at the Guardians' Offices,—accompanied by diplomas and other evidences of qualifications, to Daniel Fildew, Guardians' Offices, Vestry Hall, Pancras-road, N.W., not later than 10 a.m., August 26.

WEST HERTS INFIRMARY.—House-Surgeon and Dispenser. Candidates must be Members of the Royal College of Surgeons of London, Edinburgh, or Dublin, and Licentiates of the Royal College of Physicians of London, or Licentiates of the Apothecaries' Company, duly registered, and unmarried. Applications, with testimonials and certificate of registration, to the Secretary, on or before September 5.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population in computed according to the census of 1871.

RESIGNATIONS.

Ormskirk Union.—Mr. W. L. White has resigned the Fifth District; area 6624; population 2016; salary £20 per annum.

Sheffield Union.—The Workhouse is vacant; salary £150 per annum.

APPOINTMENTS.

Barnsley Union.—John F. Horne, F.R.C.S. Edin., L.F.P. & S. Glasg., L.S.A. Lond., to the Workhouse.

THE PARIS DEMOGRAPHIC CONGRESS.—Writing in the *Gazette Hebdomadaire* (August 16), Dr. Bertillon, jun., states that the Congress of Demography (the new word for Medical Statistics) has met with such complete success that a committee has been appointed to choose a place for its successor to meet at, the *savants* delegated by the various governments having expressed themselves as highly pleased with the results. One of the questions discussed which excited most interest was that of still-births, introduced by Dr. Kummer, the Swiss delegate. The point that most aroused attention was the enormous excess of "morti-natality" in illegitimate as compared with legitimate children; and in no country has it been found so enormous as in France, where the illegitimate morti-natality is just double that in legitimate children. This is no natural occurrence, and can only result from a large number of infanticides being concealed under the title of still-born. The very severity of the law prevents these cases being denounced as they should be (M. Lagneau, in a recent paper read at the Académie de Médecine, severely blames the law in France which interdicts any attempt at fixing the paternity of infants.) A very remarkable fact is that illegitimacy aggravates the fate of girls much more than that of boys. Dr. Bertillon, sen., has shown that the infanticides committed at the time of birth are not the only ones. The legitimate infant finds its life become more consolidated in the progress of age, its mortality being far inferior during the second week of its life than the first, the amelioration continuing also regularly progressive. For the illegitimate the mortality of the second week far exceeds that of the first: and there is but one way of explaining this paradox, and it is certain that the excess of mortality in these infants between eight and fifteen days is brought about by those who will not be at the expense of bringing them up. "For some days they may live by autophagy, but this resource does not last them for long; and about 1500 natural infants die annually in France by this second procedure."

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

*** Dr. Falconer complains of the following paragraph which appeared in a report published from our special correspondent with regard to the Bath meeting of the British Medical Association:—"Moreover, it was known that the then President-elect had been granted, in advance, a kind of bill of emancipation as regarded personal expenditure in entertaining the Association; and this did not look promising for festivity." Dr. Falconer says—"I beg to state that this paragraph is wholly unfounded. No such 'bill of emancipation as regarded personal expenditure' was ever granted to me." We cannot for a moment hesitate in giving publicity to this denial. We have made careful inquiry, and find that our correspondent had what seemed to him good authority for making the statement; but, of course, such second-hand evidence cannot be held up in the face of Dr. Falconer's personal authority.

Quæstor.—It is true we were somewhat surprised to receive a list of those invited to accept the hospitality of the King and Queen's College of Physicians, Dublin, on the occasion of the meeting of the British Association. Moreover, the list was accompanied by a request to publish it. They don't do these things in Pall-mall.

Legislation: Buenos Ayres.—Among the various new taxes proposed by the Legislature are an excise duty of 75 per cent. on tobacco, and a drainage-rate of £1 on each house.

A New Knight.—It is announced that the honour of knighthood is to be conferred on Dr. James Salmon, M.D., R.N., Inspector-General of Hospitals and Fleets. Dr. Salmon has been in the Naval Service since August, 1833, when he was appointed an assistant-surgeon, and was employed on the *Castor* and *North Star*, under Lord John Hay, on the coast of Spain, during the progress of the first Carlist war in 1837-38. He was promoted Surgeon in 1840, served in medical charge of H.M.S. *Medea* in the Mediterranean from 1841 to 1845, and from 1847 to 1850 in the *Sidoa*, on the same station. As Surgeon of the *Neptune*, flagship of Rear-Admiral Plumridge, he also took part in the expedition to the Baltic in 1854. In June, 1855, he was appointed a Deputy Inspector-General of Hospitals and Fleets, and served from 1855 to 1859 in charge of the Royal Naval Hospital at Malta, and from 1861 to 1868 in charge of the Royal Marine Infirmary at Woolwich. Dr. Salmon, who is an Honorary Physician to the Queen, became Inspector-General in December, 1868, and was chief medical officer at Haslar Hospital from April, 1869, to April, 1873, retiring in February, 1875.

Surgeons of Volunteer Corps.—In consequence of doubts having arisen as to the head-dress of medical officers of volunteer corps which have adopted the new helmet, an addition has been made to the Army Regulations of 1878, directing that medical officers of volunteers should wear cocked hats, similar to those worn by surgeons of the regular forces, silver being substituted for gold. The plume to be of black cocks' feathers five inches long, but surgeons appointed before October 1, 1877, will wear the plume six inches long.

Diphtheria, Surbiton.—Dr. M. C. Colman, the Medical Officer of Health, stated, at a meeting held last week of the Surbiton Commissioners, that no further cases of diphtheria had come to his knowledge within the previous ten days, and he hoped the outbreak had ceased. He attributed the source of the disease to milk supplied from a certain dairy, over which, it was explained, the Board had no control.

W. L. L., Leeds.—An accurate register of births and deaths has been kept in Prussia since the year 1820. See "A Statistical View of the Births and Deaths in the Prussian States in the Fifteen Years from 1820 to 1834," compiled by M. Hoffman, Director of the Statistical Bureau of Berlin, and translated from the German by Mr. Deverell, of the London Statistical Society.

Sanitary Progress.—The active progress of sanitation effected through our Local Boards of Health in important sanitary improvements and supervision is a noticeable and a gratifying fact. The Medical Officer of Health having reported to the Town Council of Neath the existence of typhoid fever in Bowen-street and its neighbourhood, consequent on the stoppage of a sewer and the failure of the flushing tank recently erected, have ordered the construction forthwith of an entirely new sewer with an outlet into the river.——Steps have been taken to provide public baths and washhouses for the town of Swansea. Public baths, no doubt, ought to be looked upon as a necessary institution in every town; moreover, it is anticipated they will become so popular in Swansea as in course of time to be a source of revenue to the Corporation.——A committee of the Town Council of Colchester, appointed to consider the erection of an infectious hospital in that town, last week presented their report, unanimously recommending the Council to acquire, as a site for the hospital, land of about two acres in extent in the direction of the cemetery, the price, including six cottages erected on the land, being £750. The Medical Officer of Health was of opinion that these cottages, which were detached in blocks of two, might be adapted for the purpose required. There was some opposition by owners of property adjacent to the site proposed, but the recommendation of the committee was adopted.——The Leyton Local Board of Health summoned a builder of that town for committing a breach of the by-laws of the Board by constructing some shops of concrete mixed with earth and mud and pieces of broken brick and rubbish. Evidence was produced as to the danger of the faulty construction and the badness of the materials, and the defendant was fined £5 and £6 15s. 6d. costs.

Railway Fatalities and Accidents, 1877.—The annual report to the Board of Trade on railway accidents during the year 1877 has just been issued. It exhibits still a ghastly return of fatalities and personal injuries, although upon the large increase of passenger journeys the proportion of passengers killed from causes beyond their own control during the year shows a large decrease when compared with that of the previous year. The total killed was 1175, and 3705 persons were injured. Of these, 126 persons killed and 1283 injured were passengers; of the remainder, 642 killed and 2163 injured were officers or servants of the railway companies or contractors, and 407 killed and 250 injured were trespassers, or suicides, or other persons who met with accidents at level crossings or from miscellaneous causes.

Dr. McM.—No Blane Medal has been awarded within the last few weeks.

M.D., F.R.C.S. Eng., Clapham.—The following is a copy of the declaration made by the individual since struck off the Medical Register and the list of the College, viz.:—"*Royal College of Surgeons of England.*—Declaration of a Member.—I, ——, of ——, do solemnly and sincerely declare that while a Member of the Royal College of Surgeons of England I will observe the by-laws thereof; that I will obey every lawful summons issued by order of the Council of the said College, having no reasonable excuse to the contrary; *that I will demean myself honourably in the practice of my profession; and to the utmost of my power maintain the dignity and welfare of the College.*"

Egypt as a Health-Resort.—At a time when the public mind is so prominently directed to the Levant, we have pleasure in calling attention to Dr. Grant's excellent sanatorium at Cairo, Egypt. Dr. Grant has had twelve years' practical experience in the country, and invalids will have the advantage not only of his skilled medical supervision, but also of the care and attention of experienced English nurses. The beginning of November is the best time for the arrival of invalids at Cairo.

Army Medical Service.—It is stated that the Departmental Committee upon the Army Medical Service has completed its report, and that the appointment of one medical officer to each regiment amongst the suggestions will be conspicuous by its absence.

Hygiene.—The climate of Malta *per se* offers but few immediate sources of endemic disease. It is rarely that the heats of summer are untempered by a breeze, and if the decomposing organic matters washed up on its low-lying districts occasionally engender fevers which are not to be found in other parts of the island, there are few paludal sources of miasm.

Foul Streets.—Under the 49th section of the Sanitary Act of 1866, complaints could be made to the Secretary of State, and upon their being verified the Local Government Board would have power to deal with the matter.

Fatalities from Bicycles.—We have frequently noticed in these columns the dangers from vehicular traffic in the public streets and thoroughfares. A comparatively new and increasing danger has been created by the bicyclists—numerically, a very large body. Many serious accidents have occurred from reckless bicycle riding. Till the law provides power to regulate bicycle travelling—which it would appear it does not at present—the limbs and lives of the public will continue to be thus endangered.

Indian Items.—The Bombay Municipal Corporation have rejected a proposal to spend 15,000 rupees on extra hospital accommodation, on the ground that the health of the city does not necessitate extra precautions for dealing with cases of sickness.——The Army Sanitary Commission have issued a memorial upon the report of the Bombay Municipality for 1876, and the Secretary of State in considering it has desired the Bombay Government to urge upon the Municipality the necessity of carrying out speedily a system of drainage that will reduce the serious elements of disease and death now prevailing in Bombay.——Surgeon-Major Rogers, who had seen considerable service in Persia and India, and was at one time Professor of Midwifery in Bombay, died of blood-poisoning in Bombay on the 15th ult.

Medical Counterfeits.—Cooke, a barrister, in his "Unum Necessarium," 1648, gives the medical history of a certain doctor Trigg, who had an extensive practice. Whatever his education might have been—and perhaps it was little enough—he had been called a "doctor" for twenty years, and was a universal genius, for "he did abundance of cures upon poore people," curing "every yeare, all sorts of feavers, plague, palsies, agues, gout, consumptions, dropsies, collicks, and all sorts of diseases: and his manner of practice is to take little or nothing from the poore, and from the rich 2s. or 2s. 6d. at the most, for his advice and physick." Moreover, says Cooke, "our clyent hath done good to above 30,000 men-women, and children in and about this city since 1624." But the College of Physicians—liking Trigg no better than they did Margaret Kennix, for whom Sir Francis Walsingham was obliged to intercede that the worshipful body would "admit her into the quiet exercise of her small talent"—prosecuted the counterfeit physician, and Cooke was his counsel. The cause, however, was lost, and a judgment for penalties to the amount of £115 (being £5 a month for using his art) was entered against Trigg. The case was carried, by a writ of error, before the House of Lords, but how it was decided we have not at hand the means of knowing.

The Temperance Movement.—The first cocoa-room of several similar establishments, intended to compete with the ordinary public-house, has been opened at Wrexham. Mr. Osborne Morgan, M.P., took part in the proceedings. The Coffee Public-houses Association, Charing-cross, announce that it is enabled by one of their members to offer a prize of £200 for an essay on the providing, on an adequate scale, of halls, or other places of resort and recreation, for the working-classes. The arguments are to include the sale of refreshments, but not of intoxicating drinks. The manuscripts must be sent in on March 1, 1879.

Two Centennials.—The 100th anniversary of the birth of Gay-Lussac will occur on December 6 next; and on the 17th of the same month also that of Sir Humphry Davy. The American Chemical Society propose to celebrate in some appropriate manner these centennials.

Factory Children in France.—For the protection of children employed in factories and workshops in France, various laws have been passed since 1841, chiefly based upon the English laws on the same question; but in France they have been a failure. There were 154 prosecutions, last year, of employers who had violated the Act. In Paris only, well-organised measures have been adopted to enforce the provisions of the law of 1874. The municipal authority has annually increased the number of inspectors and district committees, in Paris and its suburbs, for supervising the 16,127 factories and workshops.

Benefactor.—Mr. C. Seeley, M.P., has presented a donation of £1000 to the funds of the Lincoln County Hospital.

COMMUNICATIONS have been received from—

Dr. G. E. Herman, London; Dr. Thos. Barlow, London; Dr. Frederick Churchill, Tunbridge Wells; Mr. John Chatto, London; Messrs. Ingram and Royle, London; Dr. Edward B. Aveling, London; Mr. James T. Warwick, Torquay; Mr. Wm. Fearnley, London; Dr. B. W. Falconer, Bath; Messrs. Salt and Son, Birmingham; Mr. R. M. Gurnell, London; The Registrar of Apothecaries' Hall, London; Messrs. Corbyn, Stacey, and Co., London; Dr. W. H. Triplett, Washington, U.S.A.; Medical Registrar, London; The Sanitary Commissioner of the Punjaub; Mr. J. T. W. Bacot, Seaton; Mrs. F. G. Ernst, London; Dr. W. Arding, Wallingford; Messrs. J. C. and J. Field, London; Mr. Becher, Leamington; The Secretary of the Surgical Aid Society, London; The Registrar-General of Edinburgh; The Secretary of the University of London; Mr. R. W. Parker, London; Mr. Knowsley Thornton, London; Dr. J. W. Moore, Dublin; Dr. J. M. Finney, Dublin.

BOOKS AND PAMPHLETS RECEIVED—

China: Medical Reports for the Half-Year ended September 30, 1877—W. H. Triplett, M.D., Life.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médicale—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Nature—Medical Examiner—Centralblatt für die Medicinischen Wissenschaften—Cincinnati Lancet and Clinic—Gazette Hebdomadaire—Guy's Hospital Gazette—New York Medical Journal—Students' Journal and Hospital Gazette—New York Sanitarian—Richmond and Louisville Medical Journal.

APPOINTMENTS FOR THE WEEK.

August 24. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

26. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m. Royal Westminster Ophthalmic, 1½ p.m.

27. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

28. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 1½ p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

29. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

30. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 17, 1878.

BIRTHS.

Births of Boys, 1255; Girls, 1166; Total, 2421.
Average of 10 corresponding years 1868-77, 2242·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	793	724	1517
Average of the ten years 1868-77	766·3	706·6	1472·9
Average corrected to increased population ...	...	...	1576
Deaths of people aged 80 and upwards ...	...	...	47

Note.—The births and deaths registered last week may be compared with the average numbers in the corresponding weeks of the ten years 1868-77 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	2	2	...	7	...	...	...	41
North ...	751729	...	3	8	4	13	...	6	1	47
Central ...	334369	...	...	2	2	7	...	...	1	15
East	639111	...	3	2	2	11	...	2	1	52
South... ...	967692	9	2	13	3	22	1	4	1	108
Total	3254260	9	10	27	11	60	1	12	4	263

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·473 in.
Mean temperature	62·2°
Highest point of thermometer	76·6°
Lowest point of thermometer	50·7°
Mean dew-point temperature	55·6°
General direction of wind	S.W.
Whole amount of rain in the week	1·08 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, August 17, 1878, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1878.*	Persons to an Acre. (1878.)	Births Registered during the week ending Aug. 17.	Deaths Registered during the week ending Aug. 17.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3577304	47·5	2421	1517	76·6	50·7	62·2	16·78	1·08	2·74
Brighton	103923	44·1	66	52	72·5	50·5	61·4	16·33	1·22	3·10
Portsmouth ...	129461	28·9	58	52	...	...	...	...	...	...
Norwich	84620	11·3	46	55	...	...	...	...	...	...
Plymouth	73599	52·8	55	33	70·5	52·0	61·1	16·17	2·43	6·17
Bristol	206419	46·4	128	93	72·9	50·4	61·6	16·45	2·21	5·61
Wolverhampton ...	74240	21·9	47	37	69·7	47·4	58·8	14·89	1·94	4·93
Birmingham ...	383117	45·6	286	244	...	...	...	...	...	...
Leicester	121473	38·0	87	64	...	...	...	...	...	...
Nottingham ...	165267	16·6	109	83	74·0	48·3	60·4	15·78	1·74	4·42
Liverpool	532681	102·2	400	337	67·7	54·0	59·4	15·22	1·15	2·92
Manchester ...	360514	84·0	271	181	...	...	...	...	...	...
Salford	170251	32·9	133	105	71·5	45·9	58·0	14·44	1·73	4·39
Oldham	107366	23·0	87	51	...	...	...	...	...	...
Bradford	185088	25·6	142	100	69·2	51·6	59·5	15·28	2·85	7·24
Leeds	304948	14·1	232	181	71·0	52·0	59·9	15·50	1·94	4·93
Sheffield	289537	14·7	211	147	72·0	51·5	60·0	15·56	1·55	3·94
Hull	143139	39·4	119	95	73·0	50·0	59·8	15·45	1·57	3·99
Sunderland ...	112459	40·6	89	62	79·0	52·0	61·5	16·39	0·97	2·46
Newcastle-on-Tyne	144570	26·9	93	81	...	...	...	...	...	...
Edinburgh	222371	53·1	141	80	73·2	43·5	58·2	14·55	1·07	2·72
Glasgow	566940	94·0	321	231	71·0	45·5	58·0	14·44	1·27	3·23
Dublin	314666	31·2	192	176	74·9	45·5	60·7	15·95	1·31	3·33
Total of 23 Towns in United Kingdom	8373953	38·0	5734	4057	79·0	43·5	60·0	15·56	1·63	4·14

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·47 in. The lowest reading was 29·19 in. on Wednesday morning, and the highest 29·84 in. at the end of the week.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1878 by the addition of seven years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. Nottingham, Salford, and Oldham, however, form exceptions to this rule, as the estimates for these three towns have been revised with the aid of local information as to the rate of increase of inhabited houses. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE ON DIABETES INSIPIDUS.

DELIVERED AT THE LONDON HOSPITAL.

By STEPHEN MACKENZIE, M.D., M.R.C.P.,
Assistant-Physician and Lecturer on Pathology.

GENTLEMEN,—As I have a case of diabetes insipidus—a not very common disease—in my wards, and as the case illustrates well the general features of the malady and a successful way of treating it, I propose to make it the subject of some remarks to-day.

J. S., aged thirty-two years, was admitted on January 30, 1878, having been sent to me by Dr. Kennedy, of Plaistow, who first detected the nature of the case. The patient is a well-developed but spare man, weighing only 9 st. 1 lb. on admission. When in good health, previously, his weight had been about 11 stones. He has light hair and blue eyes. His tongue when he came was red, flabby, and dry; it has sometimes been in this condition since, but now is large, fleshy, and coated with fur. His skin on admission was dry and somewhat scaly. He has always lived in the country, and has been employed during the greater part of his life in farm occupations. He has been temperate in his habits, and until recently felt quite strong and able to do his work, part of which consisted of lifting heavy sacks (weighing 250 lbs.) in loading waggons. A year before admission he had a heavy weight fall on his back, but he felt no subsequent ill effects from the accident. There is no history of disease in his family: none of his relatives, to his knowledge, ever suffered from diabetes. He states that he enjoyed his usual health up to the beginning of last December, when he was attacked with severe pain at the back of his head, followed in a few days by dryness of the mouth and throat, and insatiable thirst. He lost his appetite, but had no very marked dyspeptic symptoms, though he had a peculiar feeling of pressure across his abdomen, which lasted a few days. The next symptom he noticed was a frequent desire to pass his urine, being compelled to rise every hour in the night to micturate. He measured his urine at the time, and found he passed as much as ten quarts in the twenty-four hours. He has had no diarrhœa or excessive sweating by day or by night.

On admission, examination of his chest and abdomen showed no disease; he had no œdema; no changes in the fundus of the eyes.

The day after admission his urine was measured, and it was found he passed 10,500 cubic centimetres in the twenty-four hours. With an ordinary urinometer—an inexact instrument—its specific gravity was 1000, or the same as distilled water. It was very pale, clear, and limpid; its reaction was somewhat neutral. It contained neither sugar nor albumen, and had no marked odour. The 10,500 cubic centimetres of urine contained 21·6 grammes of urea—the total amount for the twenty-four hours. His temperature was normal.

During the month of February the quantity of urine averaged about 8000 cubic centimetres, the extremes being 11,000 and 6000 cubic centimetres, its specific gravity ranging between 1000 and 1006, the amount of urea between thirteen and twenty-four grammes. He had occasional headaches, beginning always in the back of his head, but not usually very severe. He never vomited; his bowels were rather costive, as they have been throughout his stay in the hospital. He took his food fairly well; for the first week he had four ounces of meat daily, and half a pound of potatoes, with twelve ounces of bread, a quart of milk, and a quart of beef-tea. He required to drink eight quarts of other fluids to make up for that which passed from him. After the first week he had a distaste for meat, and had allowed him two eggs in its place; at the same time he discontinued the potatoes. During this month his weight increased from 9 st. 6 lbs. to 10 st. 3 lbs. His temperature never rose above normal. Mistura rubra (burnt sugar and water) and occasional aperients were the only medicines he took at this time.

During the first half of March his condition was stationary. He suffered from occasional, but not severe, headache. The average daily quantity of urine was 7000 cubic centimetres, and he drank about seven quarts of fluids of different kinds. During this time he took drachm doses of lactic acid three times a day. On March 21, I ordered him powdered valerian in half-drachm doses thrice daily. Within four days of taking it the quantity of urine had fallen to 4500 cubic centimetres, and it has never since risen to 5000 cubic centimetres. Eight days after commencing the valerian treatment it had to be suspended for a few days, owing to the stock in the dispensary being exhausted. It is interesting to notice that the good effects of the valerian did not cease with its administration, for the polyuria continued to diminish. The valerian was resumed in a few days, and the urine fell to 3000 cubic centimetres. It has kept below 3000 since, once being as low as 2500 cubic centimetres. With the diminution in the quantity of urine, the specific gravity has risen, and since the quantity has been about 3000 cubic centimetres or under, the specific gravity has been from 1006 to 1009. The patient's temperature was always normal until the latter end of the month. On March 26 it rose to 100°, and two days later it was 100·5°. At the same time that the temperature rose the headache increased in severity. At the end of the month the patient again took meat for about three weeks.

During April the patient's headache was very severe, and it is noticeable that throughout this month the temperature was constantly above normal, being sometimes 100° for several days together. On April 1 and 2 he kept his bed, owing to the severity of the pain, which he describes as beginning at the back of the head, but extending thence to the rest of the head. His description of the sensation was, "The pain kept thumping away like a great hammer," and when it subsided somewhat, it left a feeling "as if something was knocking on his head." He never vomited, but on one occasion he felt sick. The valerian was increased to forty grains on April 16, and to sixty grains on the 30th. His temperature remained a little above 100° until the end of the first week in May.

At the present time (May 15) he is better in every respect. Complains of no pain whatever; his temperature is normal; he sleeps well. His bowels, as usual, are constipated; his appetite is very small, however; he eats no meat; takes from six to ten ounces of bread (sometimes not more than four ounces), two eggs, one or two pints of beef-tea, two pints of milk, and from one to two quarts of other fluids—soda-water, lemonade, water. During the latter part of April his weight went back a couple of pounds; but with this exception he has slowly but progressively gained flesh, and now weighs 10 st. 9 lbs.—one stone and a half more than when he was admitted. The urine, as I have said, is now about 2800 cubic centimetres, specific gravity 1008-9. It contains 0·7 per cent. of urea, which gives 19·6 grammes of urea for the twenty-four hours. He himself thinks he has derived great benefit from taking the valerian; and it has never on any occasion made him sick or upset him in any way.

You will observe the most prominent symptoms our patient has presented have been the large quantities of urine he has passed, and thirst; and to these must be added the pain in the head. The excessive urination and excessive thirst, the most obvious features of the disease, have each been regarded as the fundamental characteristic of the affection of which he is the subject, and hence it has been named polyuria, or polydipsia, according to the bias of the writer. The disease has many other names, however: it has been called hydruria, hydromania, uriuæ profluxio, chronic diuresis, azoturia, false diabetes, and diabetes insipidus. The last name is by far the most suitable, since, as Dr. Dickinson says, "It implies alliance or analogy with diabetes mellitus, a suggestion with which our advancing knowledge is accordant." The disease is just as true a *diabetes* as the mellitic variety—fluid simply passing through (Διὰ βαινω) the system by a mechanism we shall presently consider, and carrying with it no substance which is not a normal constituent of the urine. The name polydipsia is unsuitable, because the patient only drinks to supply the loss of fluid by the kidneys: the blood becomes dehydrated, and fluid is craved for by the system to restore the balance.

Let us for a moment consider the physiology of the renal secretion. The kidney consists of two parts—an actively secreting part, the epithelium of the secreting tubes; and a filtering part, the Malpighian bodies. Some of the solid constituents of the urine are secreted by the epithelium, while some simply filter through the glomeruli; the whole excreta must be strictly proportionate to the blood brought

to the kidneys by the renal arteries, and the relative pressure in the renal artery and capillaries. Anything which relaxes the pressure in the renal artery increases the pressure in the renal capillaries, whilst increased pressure in the renal artery, by increasing the pressure on the cardiac side of the artery, diminishes the pressure in the renal capillaries and veins. The renal arteries are governed by nerves—the vaso-motor nerves. The renal nerves have two sources; the greater number of the fibres of these nerves originate from the greater splanchnic nerve, through the intermediation of the solar plexus, while, according to Claude Bernard, a certain number of the fibres of the renal nerves are furnished by the lesser splanchnic nerve, and are distributed directly to the kidney, following the course of the vessels. Now, Claude Bernard and Vulpian have shown that section of the great splanchnic nerve on one side produces marked congestion of the corresponding kidney, with polyuria and albuminuria: there may be also, according to Claude Bernard, escape of blood. When the splanchnic nerve is divided in this way, the renal vein becomes dilated and the blood of a dark colour. Electrisation of the splanchnic has the opposite effect. It constricts the renal artery and vein, the blood in the latter becomes paler, the kidney itself becomes pale, and the secretion of urine is arrested. It is clear, therefore, that the splanchnic nerve contains the vaso-constrictor nerves of the kidney. Claude Bernard found that section of the pneumogastric nerve in the rabbit, and electrisation of the peripheral end, caused augmentation of the secretion of urine, dilatation of the renal vein, and deepening in colour of the blood in that vein. Vulpian has tried similar experiments in the rabbit and dog, but neither he nor his assistants have ever been able to observe these phenomena. Vulpian thinks that probably the vaso-dilator nerves of the kidney are also contained in the splanchnic nerve, but that they are less numerous than the vaso-constrictors; and hence, section or electrisation of the splanchnic nerve shows a predominant action on the constrictors. It is only natural to suppose that section of the great sympathetic in the thorax above the splanchnics will have the same effect as section of the splanchnics; and it is so, for by section or electrisation of the great cord of the sympathetic, or of the last cervical or first dorsal nerve, can be caused engorgement of the kidney and polyuria, or anæmia and anuria. But the nerves can be traced still higher to the great vaso-motor centre in the medulla oblongata, where Claude Bernard has shown that puncture of the floor of the fourth ventricle, between the auditory and pneumogastric nuclei, causes polyuria and glycosuria, and puncture immediately above the auditory nuclei gives rise to simple polyuria. It is thus clear that the secretion of urine is under the influence of the nervous system; that the nervous tract which governs the secretion, originating in the medulla oblongata, passes down the spinal cord to the last cervical or first dorsal nerve, and thence to the gangliated cord of the thorax; from here the fibres separate to form part of the splanchnic nerves, and after passing through the solar plexus are distributed to the kidneys. But, when we say the medulla oblongata is the great vaso-motor centre of the body, we must remember that this centre is in intimate connexion with all parts of the nervous system, in order to insure that correlation between the needs of the system and the work performed by the various viscera. Thus, though Claude Bernard has shown us that puncture of a particular point in the floor of the fourth venticle causes polyuria, it must not be supposed that lesions producing diabetes insipidus will always be found in this situation. They have been found here in some cases, as in two cases reported by M. Hayem, where polyuria was associated with grey degeneration of the floor of the fourth ventricle. But for one case having such a definite localisation in the centre which governs the secretion, a large number will be found where the lesion was elsewhere situated. Diabetes insipidus has been found dependent on meningitis—tubercular and epidemic cerebro-spinal meningitis—scrofulous masses in the brain, tumours—gliomatous, syphilitic, and of other kinds. The changes, various in kind, are much more constant in position, and have nearly always been found in the cerebello-medullary region.(a) The disease has been observed to follow injuries to the head, and the blow in such cases has generally been found to have been inflicted on the anterior part of the skull, and its effects have been most marked, from *contre coup*, at the opposite extremity—the posterior region of the brain. Similarly it has been shown by Mr. Hutchinson and Dr. J. Ogle that anosmia, when following injuries, is nearly always due to injuries in the occipital region, whereby the shock to the brain expends itself on the anterior region, and the movement the brain is subjected to ruptures the delicate filaments which pass from the olfactory lobes through the cribriform plate of the ethmoid bone to the nose. In some traumatic and some non-traumatic published cases there was glycosuria with polyuria at the commencement, the sugar disappearing from the urine after a time, but the polyuria remaining more or less permanent. This is another piece of evidence of the relationship of the two varieties of diabetes. Dr. Dickinson and Professor Haughton have reported cases where it would appear that the paralysis of the vaso-constrictor nerves of the kidneys was caused by implication of the splanchnic nerves or solar plexus by abdominal tumours. Dr. Ralfe has recorded two cases where aortic aneurism was attended with increased secretion of urine of a low specific gravity (1009 to 1113). He attributed the polyuria to pressure of the aneurism on the left pneumogastric nerve; for, as I have told you, irritation of the pneumogastric nerve has been found experimentally to produce polyuria.

(To be continued.)

(a) Dickinson, *op. cit.*, page 189.

FORTY-SIXTH MEETING
OF THE
BRITISH MEDICAL ASSOCIATION.

HELD IN BATH, AUGUST, 1878.

THE SECTION OF SURGERY.

OPENING ADDRESS.

By GEORGE W. CALLENDER, F.R.S.,
Surgeon to St. Bartholomew's Hospital; President of the Section; etc.

THE AVOIDANCE OF PAIN.

GENTLEMEN,—I know of no alloy to the satisfaction a surgeon must feel in being allowed by your favour to preside over this section. His first words should give expression to his thanks for the honour which has been conferred upon him. Such words are mine.

Beyond this, however, it is his privilege to speak to you on the subject which interests us so deeply—the Science and the Art of Surgery. In the age to which this Association has flourished, your President has an advantage over his earlier predecessors, in that he can look back upon the work which has been done in connexion with this section, and can reckon up many important advances in our knowledge of surgery which have been first made public under the auspices of the Association.

I prefer, for myself, to look forward and to endeavour, with your permission, to try to interest you in a subject for which you must forgive me if I seem to be in any way too earnest in my pleading, for I do feel respecting it most anxious that it should commend itself to your favourable consideration. From the wideness of its relations it is, I think, a fitting one to be spoken to by your President, who should, I conceive, always endeavour to put before you matters of broad interest and of general professional concern.

Whilst engaged in the study of the treatment of wounds, one could not but be attracted to many side considerations. To one of these it is that I venture to ask your attention, and in doing so I preface my remarks by this statement.

An operation or an accident wound can be so treated that the patient from first to last shall be free from pain, and in the treatment of many other troubles a great deal of pain may be avoided by forethought and care on the part of the surgeon.

Next to insuring the life-safety of our patients—and I think we may assert that the mortality after injuries and after operations is not a tithe of what it was, even in comparatively recent years,—surely it is something to endeavour to attain to, that we may promise a patient, who can under an anæsthetic pass without suffering through an operation,

that he may be sure of convalescing without an ache or a pain from the handling and dressing of his wound, and to feel confident that our promise will be borne out.

Now, what are the causes of pain? Why do patients make the varied complaints which we group together as those of pain? How various are those complaints! I often ask the sick to describe to me the sort of pain from which they are suffering. If we except certain odd and only occasional replies, I find that they adhere to the descriptions which from childhood they have been taught to associate with pain. There is tenderness to the touch, there is the sense of throbbing and of shooting or of darting, and there are dull aching pains, or there are pains likened to some chance experience of the past, a revival of some old association—the pain is like that which attended a cut, or a burn, or the rubbing of a blistered surface.

But it is not pain alone, that is, in the ordinary acceptation of the word, with which we have to deal, and it is not the patient's description of his kind of pain which is of importance. It is the cause of his discomfort or of his pain to which attention must be directed, if we are to learn how to prevent them by obviating the conditions out of which such troubles arise.

I say it is not pain alone. There are various sensations, not strictly of a painful nature, and yet causing restlessness, and hence causing pain. Such are the impressions after an amputation which make the patient fancy that the hand or the foot cut off still remains part of his body, or still needs to be steadied by muscular action. As he dwells upon the sensation, or as the muscles assume their accustomed vigilance, the muscles which lie in the wound, and with which foot or hand movements are usually made, are apt to fidget and grow irritable; then they cramp or jerk and prevent rest, and so interfere with the process of repair. But this local condition begets general restlessness, and this is added to the muscular trouble, which latter may induce what is termed "jumping" of the parts concerned in the wound, especially when the patient is falling off to sleep, so violent may be the muscular contractions and loosenings.

This trouble arises from education, and from oversight in the treatment of a wound.

From education, if, for some time prior to the amputation, the muscles have been trained to keep a joint, such as the knee or ankle, in a state of rest. During such training, the muscles relax from the state of contraction when sleep begins, and then follows that jerking of the limb, causing pain in the jarred joint, and so arousing from sleep, which is so well known to surgeons as one of the distressing symptoms attending joint-diseases. It may be obviated by the use of weights so applied as to steady, under slight extension, the affected part, irrespective of muscular action. If it have not been so obviated, the training to which the muscles have been subjected will live in the stump, and the result will be that the muscular relaxation at the oncoming of sleep will shake the wound and cause severe pain, unless, indeed, the stump have been so supported as to rest easily and equally in its bearings, and free to swing with the chance movements of the body.

In cases in which this trouble, the starting of a limb, has been strongly marked before an operation, as it often is, more especially with disease of the knee-joint, I recommend that the nerves exposed on the face of the stump should be stretched so as to numb and for a time to quiet the muscles supplied by them or by nerves in association with them through a common plexus of origin; and if, in addition, the stump be properly secured and swung, the pain and unrest which might otherwise have followed the operation from the starting of muscles will be effectually prevented.

From some oversight in the treatment of the wound. There is an essay by an old French surgeon, M. Pouteau, in which he treats of the dislocations of muscles, and the discomfort and restlessness caused by their being displaced from their natural relations. Now, for the comfort of a patient, we should always be sure that the parts of a wound are, so far as may be possible, in their natural positions; for instance, that the relations of tendons are normal, or, taking the face of a stump as an illustration, we should be certain, before the wound is closed, that the several muscles and tendons, in the thigh or forearm for example, are in their proper relations one to another. If they be not, if they be dislocated, they will lie in unrest and the patient will feel the discomfort due to their displacement. The discomfort may not be great, but it is one the cause of which is easily avoided. If, again, muscles have been long fixed in one position, and if an operation have to be performed, if possible (it may not always be feasible), we should place the parts so that they may rest after the operation with the muscles in the position to which they have been tutored. If we do not, the muscles, with cramp, or in trembling, will show how ill they bear their altered relations, and again a sense of pain and discomfort is established. And to this I may add that, when we can, it is as well, before operating, to train parts for a position which may be needed after an operation; not only do we thus accustom the patient to an unusual and perhaps irksome position, but we may learn that certain positions are individually unbearable, and we have then to devise others in their stead. We cannot have a better illustration of the good of this training than in an instance to which I have often referred, the making a child wear some bands of strapping over the lip and cheeks before operating for a hare-lip. He does not resist and fret over the dressings which are needed after the operation, having been broken into their use. It is a rule with me never to saw through a knee-joint for genu valgum, to amputate a limb, or, in a word, to perform any operation which involves subsequent confinement by splints or an unusual position, without, whenever it is practicable, training the patient as suggested, in order to accustom him to the restraints.

When practicable, a wounded part should be suspended and balanced so as to lie at rest independently of all chance movements of the body. The muscles otherwise would be on guard to protect the injured structures from such movements. The protection is at best imperfect; but nature at once recognises the help given by an evenly balanced support, and the muscles lie inactive and free from liability to start. I am sure that, if these details be attended to, we shall never have our patients complaining of the discomforts which are due to muscular restlessness.

There are, however, yet other conditions dependent upon muscles which require attention, and I may refer to these under the head of orderly and of disorderly actions.

One illustration of either will suffice. After the removal of a tumour of the breast, the wound is, of course, influenced by the orderly movements of respiration. If we leave the wound comparatively free, all moves together; but if we over-tightly compress and bandage the parts, the skin will cling to the dressings, whilst the deep surface follows the movements of respiration. A state of unrest is established between the two surfaces, which is an obstacle to success and a cause of pain. This is orderly action.

If, on the other hand, we attempt to change the dressings of an amputation at the thigh, we find that the muscles will start and jerk the moment the dressings are disturbed; and with the jerk not only is there pain, but parts just united are liable to be sundered. This is disorderly action. So we learn never to attempt such a change of dressing without fixing the limb by suitable appliances, so as to give to the part that sense of steadiness which prevents the starting of muscles. It may, however, be necessary in dressing a wound to put in action certain muscles which are then apt to move spasmodically, causing great suffering by their disturbance of a wound. How this may be avoided, I will mention when referring to the treatment of breast-amputations.

Let us next consider two common causes of unrest and of pain, viz., first, tension of wounds; and secondly, distension of wounds. We often hear complaints from patients of tightness about a part, and one is surprised to find how slight a change in the bearings of a dressing will often give relief. After a fracture, say of the tibia, has been put up, the sense of discomfort is often promptly arrested by cutting with scissors the edge of the bandages to a trifling extent; or if the patient complain of discomfort about the ankle, we do not slacken the side-splints, but we tighten the strap which secures the side-splints just below the knee, and thus and at once the strain is taken off the lower end of the limb, and the patient is relieved.

I am in the habit, when it has been necessary, to use bandages or strapping for the securing of a first dressing, of always dividing, some twelve hours later, the confining bands, without otherwise disturbing the appliances. No better example of the relief thus afforded can be had than after an ordinary operation for strangulated hernia. It is

quite needless, it is true, to apply any firm compress or tight bandage after any such operation, but, suppose that a piece of carbolised lint is laid over the wound, protected by gutta-percha tissue, and that a turn of a bandage round the hip and upper part of the thigh secures this, a certain amount of swelling, which, so far as my experience goes, always follows an operation, ensues. The bandage passing over the abdomen is cut, at once the ends separate an inch or more, and the patient gives expression to a sense of relief; a piece of strapping bridges across from one portion of the divided bandage to the other, making the dressing again secure, whilst the distension, which was beginning to cause uneasiness, and which might have occasioned restlessness and sleeplessness, is no longer a source of trouble.

Another cause of uneasiness is the condition arising from the collection of fluid in a wound—distension—in contradistinction to that general infiltration of a part which gives rise to what I have termed "tension" simply. Often, in visiting a patient some hours after an operation, I used to find him restless and complaining of pain about the wound. On examining it there would be tenderness, and perhaps a little redness about its margins. If a probe were introduced, a few drops of blood-stained serum would well up by its side, and would continue to ooze into the dressing along the track thus made for it. Then, and immediately, the tenderness and the blush are dissipated, and the patient is at ease. It is in this one sees the beginning of a trouble which, in my experience of the past, hardly ever received attention in this its earliest stage, but which was the commencement, at least, of great constitutional disturbance, was the first step in the occurrence of diffused local inflammation, and, in my opinion, by the directly poisonous action of the serous fluid when simply reabsorbed, was the cause of much of that blood-poisoning which was formerly often the cause of death after surgical operations, but which is now known to be a preventable complication. It was a knowledge of the liability to trouble from this source which led surgeons to leave wounds of depth freely open, and thus to lose the advantages of primary union. It is, I consider, amongst the most important factors in the successful treatment of a wound, that distension from accumulation of fluid should be prevented by well-devised drainage; and by the use of this an important cause of pain and of restlessness has been eliminated.

But, if the greater distension from fluid collecting in a wound be prevented, there is another lesser unrest of the parts, due to the swelling of the edges of the wound, when these are brought into contact by sutures, which are thus tightened; and this discomfort is increased if any strain is borne by the sutures which join these edges. Under such circumstances, there soon arises irritation about the line of should-be union, and primary adhesion is imperilled. This has induced us to use, when such strain may be looked for, what I term "mainstays"—that is, sutures carried deeply through the wound from a considerable distance on each side, so arranged as to bring its edges together to a great extent, and yet, whilst relieving tension of the lesser stays or ordinary sutures which join the edges of the wound, placed so far away that the irritation, if any, where they press on the skin, can have no influence on the repair of the actual margins of the wound. Here, again, in a small matter of detail, discomfort will be avoided by escapement from irritation from the sutures which are used for closing a wound.

It will, I think, be obvious that union of a wound cannot take place unless the parts to be united are kept at rest; and the first and least considered cause of unrest (and with this invariably goes pain) is the swelling of the injured structures and the collection of fluid within a wound, either of which conditions causes disturbance of the parts which should unite (the latter by actual separation of surfaces), and either, by the tightness it occasions, gives rise to pain—pain which may be, and which ought to be, guarded against by the simple provisions which have been named.

Another and better known cause of pain is that which comes from what may be termed coarse movements of a wound. When I recall the manner in which, for instance, the wound after an amputation was formerly treated, the pain, and the dread of the pain associated with its dressing, I cannot but feel strongly in stating that all and every dressing after an amputation may be, and ought to be, conducted without causing the patient the slightest hurt—ought to be, not merely for the avoidance of pain, if that alone were not reason enough, but to insure that perfect rest without which rapid repair of the injury is impossible; in a word, every wound should be kept as immovable as we have long known that a broken bone must be, if its union is to be insured.

In pleading, then, for the avoidance of pain, let me detain you whilst I briefly refer to the management of two very ordinary cases—an amputation of the breast and an amputation of the leg; and let me premise that it is necessary to scheme and to prepare beforehand all the dressings you will require. These dressings must insure support and rest and ease.

And here let me mention, if, in dressing a large surface, as after the separation of sloughs after a burn, or when a considerable portion of skin has been of necessity sacrificed in an operation, we find there is much pain complained of in each changing of the dressing, examine the surface carefully, and we shall mostly find there are certain parts painful, and others not so. The painful points are the spots where nerves are lying exposed on the surface; and if such spots be protected with a small piece of isinglass or gutta-percha tissue, all other parts of the wound may be dressed without any hurt to the patient; and this is a means of relief from pain, so often coming under our notice, that it is only necessary to mention it to claim for it attention.

Now, take a wound left after amputation of the breast, and let care have been given to staunch all bleeding, and let the line of incision have been so arranged as to leave an end of the wound in a dependent position. The wound may be drained by the insertion of a tube, say of perforated india-rubber, along its entire length, one end being left projecting at the dependent point. I say nothing about the carbolising of the wound, as I am now dealing rather with the treatment so far as pain-avoidance is concerned. Then bring the wound together by means of mainstays. Then close its edges with silver sutures, from which, as the wound swells, tension will be largely taken by the main stays we have introduced. Apply the dressings, not too tightly, or the movements of respiration will make the costal surface of the wound rub upon the more superficial; and then place the forearm and hand across the chest, and secure them against sudden starts by a bandage lightly passed from the wrist round the neck, supporting the elbow, and to the wrist again. Seven or eight hours later, cut through the strapping with which you will find it the more simple plan to have secured the dressings, and, with a sense of relief to the patient, they will separate an inch or more; a strip of plaster will reunite them, and, whenever the wound has to be dressed, this strip should be cut through and a new one placed over it, the originally-applied plaster never being removed, because, especially if from a hairy surface, its removal is attended with much discomfort. When the wound has to be dressed, slip the bandage from the wrist, and then grasp the arm above the elbow firmly in one hand, and with the other move the hand and forearm to a straight line with the arm; then, still grasping the arm, move it out from the side so far as you may think fit. By this guarded movement, you will prevent the sudden and involuntary contraction of the biceps and of other muscles, which, if the arm be not steadied, will assuredly occur, and will be followed by a corresponding jerk in the pectorals, disturbing the wound and causing the patient to cry out with pain. The dressing is then removed and renewed, and, using as I do carbolised oil or lint, protected by gutta-percha tissue, this part of the operation is most simple. See that the drainage-tube is acting properly, and renew some tenax in the axilla, or a small sawdust pad, to catch the discharging serum, if any, and then carefully replace the arm and then the forearm to its original position. Tended in this way, we are certain of conducting our case without an ache or a pain, so far as the dressing of the wound is concerned.

I have already referred to the dressing of amputation-wounds, and this model will show the plan, which I described in several of its details before the Association some years ago. The limb is steadied by being secured on a back splint; it is allowed to swing easily whilst so secured, and, by the dropping of the end of the splint, the dressings can be renewed without pain; without, indeed, the patient's knowledge. But to show how nicely the details have to be arranged, it may be added that the least roughness in handling, causing but a slight jolt of the apparatus, will be followed by a cry of pain, reminding us of the ease with which may be produced the suffering we study to avoid.

I do not speak of the use of opium in its varied forms. My contention is that pain is to be avoided, and therefore it is no part of my present purpose to refer to its being masked. Yet I would add that, as want of sleep begets restlessness and discomfort, it is always well to guard against such trouble by making sure that, after an operation, there shall be good sleep—it matters not at what time of the day, for it is often undesirable to wait for night before giving the sedative. It is, therefore, a rule with me always to give morphia (injected beneath the skin, so as not to disturb the stomach after the anæsthetic) after every operation on adults, and sometimes after those on children.

But I must detain you no longer than is necessary to ask your indulgence for having spoken to you on this detail. Our work is the culture of practical surgery. It is well, no doubt, to inquire into the pathology of disease, and to discuss remote questions of cause; interesting and sometimes important results flow from such inquiries. But, face to face with the practice of our art, it is the question of treatment which forces itself to the front. I have sought to speak to you as from the bedside of the patient; and I venture to hope that we may count it as a practical gain if, by careful attention to the details I have mentioned, we can take from operative surgery that dread with which it is so commonly associated—the dread of pain.

THE SECTION OF PUBLIC MEDICINE.

OPENING ADDRESS.

By JOHN T. ARLIDGE, M.D., B.A. Lond., F.R.C.P. Lond.,
Physician to the North Staffordshire Infirmary, President of the Section.

ON OCCUPATIONS IN THEIR RELATIONS TO HEALTH AND LIFE.

Gentlemen,—My first duty, in coming before you, is gratefully to acknowledge the honour conferred upon me by my election to this office of President of the Public Health Section, at this annual meeting of the British Medical Association. It is not for me to question the choice made, but, so far as I can, to justify it by giving my best talents and energies to fulfil the duties of the post, and to render the Section a success.

Among other duties, I find myself called upon to deliver an address bearing upon the scope and purposes for which this particular Section is instituted; and, after inwardly debating what its subject should be, I have come to the conclusion that a special topic of public medicine will be preferable to a general dissertation upon the whole theme.

In adopting this course, I do not conceive that I have taken the easiest one; for I suppose it would have cost me less study and pains to have addressed you on the importance of public or State medicine, on the valuable results it has attained, on its future plans of usefulness, or on its past history and progress; or, again, leaving matter of fact, to have soared into the realms of imagination, and have pourtrayed some Utopian scheme of public health and constructed anew a Hygeiopolis. But I refrained dealing with these wide, though interesting, subjects, because, in the first place, they have, for the most part, been amply handled and more artistically placed before you than they could be by myself; and, in the second place, I am of opinion that the subject I have selected is one neither sufficiently recognised nor discussed: I refer to the subject of the influence of occupations upon health and life; in other words, the diseases of trades.

The influence of occupations upon health may be examined from two points of view, viz.:—1. Their influence upon the community at large and outside the factory; and 2. Their influence upon those engaged in them. It is from the latter point of view that I shall attempt to consider them.

Causes affecting the health of the body, for better or worse, have been searched out on all sides, and have been discovered in climate, in diet, and in sanitary surroundings. The search has been prolific in books on climate, on soils salubrious and insalubrious, on health-resorts and disease-haunted spots; probably even more prolific in works on diet, telling mankind what to eat, drink, and avoid, abounding in excellent rules which all men approve and none practise. Lastly, again, the search has of late years given birth to a multitude of books and tracts on matters hygienic and sanitary, calculated to almost alarm ordinary people by the display of the sanitary dangers surrounding them, or else to perplex them by the thousand and one schemes propounded to infallibly preserve their health and to prolong their sojourn upon earth, and varying in magnitude from simple sanitary appliances to the construction of a city of health. Nevertheless, in all this flood of sanitary literature, very little is to be found written on the occupations of the people and their effects upon health. This is true, especially of this country. In France and Germany, many treatises have appeared on this subject; and in England, so far as I am aware, no independent work has been published besides the meritorious one of Thackrah, "On the Effects of Arts, Trades, and Professions on Health and Longevity," in 1832. Of necessity this work has ceased to truly represent the circumstances and processes of manufacture found at the present day. Beyond this work we have nought else than papers read before societies and a host of pamphlets discussing single questions, and particularly statistics.

Parliamentary literature has, however, largely filled the void of books written by private individuals. Since attention was drawn to factories and their workpeople, eighty years ago, numerous Blue-books have been printed by command; and without acquaintance with this mass of publications no one can form a correct notion of the advancement made in manufacture, in the processes and machinery employed, or in the physical and moral condition of the operatives. It is worth while for a few minutes to sketch the rise and progress of Parliamentary action in the interests of the factory population. At the close of the last century, when the future pre-eminence of this kingdom had its birth, and the textile manufacture more particularly assumed proportions of magnitude, the relations of master and servant, of employer and employed, had acquired no clear and definite character or bounds. Work hitherto had been carried on in cottage homes and in small shops. Manufactories were novelties, and associated labour was without precedents and without law. Apprenticeship was the ancient institution, and it was attempted to graft it upon a new one. As a matter of course, the attempt failed; and, instead of the free apprentice protected by his indentures, a class of hands were drafted into the new factories, gathered from workhouses and the floating population of towns. The consequences of this state of things soon betrayed themselves in wretchedness, sickness, disorder, and immorality on one side, and much oppression and ill-treatment on the other. The law of master and servant was at the time such that the apprentices were virtually slaves, and the masters slave-owners.

The father of the late Sir Robert Peel was one of the first of the statesmen of the period who, in his place in Parliament, made an effort to mitigate the evils of the apprentice system in factories by legislation. The system had then grown to the dimensions of a public scandal. Mainly by his influence, inquiries were instituted, and in 1816 a Commission reported upon the condition of factory operatives. In 1819 an Act was passed to carry out the amendments proposed by it. This was the first rudiment of factory legislation. Soon, however, the Act was found ineffectual; and the spread of epidemics among factory hands, the prevalence of deformities consequent on their work, the amount of overwork, the irregular hours of work, the state of moral degradation and the crass ignorance among them, made further investigation and legislation a matter of necessity. Hence a second Commission was appointed, which prosecuted a lengthened and minute inquiry, by the report of which the lines of future legislative action were laid. This Commission had only a short existence; but the revelations it had made, and the immense field for inquiry it had opened up, induced Parliament to appoint the Children's Employment Commission, which, by repeated renewals, carried on its work until a few years since.

In 1844 the comprehensive and very complete Factory Act was promulgated, which, with some modifications and additions, has remained in force to the present day, although destined to give place to a consolidation Bill next year.

Since 1844 several inquiries and reports have been made by the Children's Employment Commissioners; the last and most important in 1865.

In 1873, two special commissioners, Dr. Bridges and Mr. Timothy Holmes, were selected to make a special inquiry concerning the hours and ages of employment in textile factories, and to report to the Local Government Board.

The report issued is filled with valuable information respecting the particular factories visited.

But the most complete and valuable information we possess respecting the health of factory hands, the nature of the manufacturing processes and their effects upon health, is contained in the reports issued year by year for several years by that eminent sanitarian Mr. John Simon, C.B., during the period he held the post of Medical Officer of the Privy Council. Under his supervision, many important researches were made by members of his staff concerning the causes of the excessive mortality from chest diseases and phthisis in several occupations; on the effects of the use of arsenic, mercury, lead, and phosphorus in the arts; on the sanitary condition of tailors, dressmakers, and compositors; and on several other sanitary questions.

Of all the staff employed, Dr. Headlam Greenhow holds the first place by reason of the extent and wide importance of his investigation relative to the prevalence of chest-diseases and phthisis. We owe to him three very masterly reports, severally published in 1858, 1860, and 1861.

His fellow-labourers in the inquiries instituted were: Dr. Guy, who reported on the occupations which have to do with arsenical green; Dr. Bristowe, who collected the facts respecting occupations which have to do with phosphorus; Dr. George Whitley, who examined into the occurrence of lead and mercurial poisoning among persons who work with lead and mercury respectively; Dr. Edward Smith, who investigated the sanitary circumstances of printers and tailors; and, lastly, Dr. William Ord, who did the same for dressmakers and needlewomen in London.

For several years these most valuable inquiries into the health and health-conditions of trades were suspended; but we have to congratulate Dr. Seaton, the present Medical Officer of the Local Government Board, together with the present Government, for its more enlightened policy, in the resumption of like investigations, as exemplified by the elaborate and most painstaking report by Dr. Edward Ballard "On the Effluvium Nuisances arising in connexion with various Manufacturing and other Branches of Industry, and on their Effects on Health."

Another source of information respecting trades and maladies incident to them is found in the Reports of the Inspectors of Factories, which have appeared half-yearly as Parliamentary papers. These reports very frequently afford considerable insight into the processes of manufacture and various conditions associated therewith, besides furnishing a full summary of accidents befalling those employed, from which an idea that few could realise may be got of the enormous sacrifice of life and limb involved in our manufacturing activity.

In the several official documents referred to we possess, indeed, a mine of information; and, for the most part, that information still holds good, although, in certain particulars, it fails to represent the present state of things, by reason of alterations in the processes of manufacture, and a general advancement in the sanitary condition of the artisan class. Moreover, this great lesson, deducible from all the materials placed before us, remains unalterable; to wit, that the study of the maladies incident to various trades, of the circumstances associated with them (whether accidentally or necessarily), and of the process of manufacture in their sanitary bearings, is imperative upon medical men if they would rightly investigate and treat disease as physicians, or seek, as sanitarians, to remove its causes or to prevent its occurrence.

In my humble opinion, the influences of occupation in producing deranged health, or positive organic disease, have never yet been effectively or thoroughly brought home to the apprehension of medical men. Assuredly, indeed, there are certain occupations, the injurious effects of which are of universal recognition; but there are, withal, numerous others, whose influences for evil often fail to be perceived and understood; and I entertain the impression that it is of too frequent occurrence for a diagnosis to be made and a mode of treatment adopted, without adequate inquiry respecting the occupation of the patient, or due allowance for the effects of the employment, being made.

If I am right in my opinions, it behoves us as medical men to become more particular in our inquiries as to the occupation of our patients, and to give more heed to the study of those conditions and circumstances of employment in which lie hidden the seeds of disease and suffering.

On a survey of mankind in their relation to employments, the first division that presents itself is, into the employed, and the unemployed or idle; the busy bees and the drones of society. In a discourse upon the consequences of employments, the case of the unemployed has really no place. Yet this negative condition of doing nothing has its consequences, and very serious ones too, in connexion with the health of its possessors. They pay the penalty of an aimless existence and of the escape from bodily toil, by both mental and bodily disorders. Happily, in this country, so far as the male sex is concerned, the number of luckless do-nothings is small; the nobility of labour is generally recognised, and the man who might vegetate at his ease usually discovers for himself the means of useful employment and of active recreation.

The lack of definite occupation, or of occupation satisfying the mind and conscience, and which is fraught with blessing, is especially the misfortune of women; and we all of us witness among them every day the sad consequences of a purposeless, useless, selfish existence. It is more particularly so in the case of unmarried females in so-called "easy circumstances." What a lamentable array of disorders is their lot!—a group largely associated with the protean, ill-defined, and ill-understood condition we call hysteria. What miseries, mental and bodily, do they not themselves experience; and what vexations and troubles do they not inflict upon their friends! It is a praiseworthy feature of the present day, that great endeavours are made to find employments for females, to enlarge the bounds of their pursuits, and to supply them with pastimes and amusements calculated to arouse interest and to foster physical exertion.

But, putting aside the unemployed, let me turn to those who have to labour for their livelihood. This our native land is pre-eminently a land of industrial energy. It is the principal shop or store for the nations of the world, and gives employment not only to a legion of workers engaged in manufacturing its stock, but also to a great band occupied in the stowing, the receiving, the distributing, and the exporting of the articles brought into stock. There is, in rhetorical language, an infinite number of employments, great and small, and the demands of modern civilisation and of commerce are daily adding to them. The addition, of late years, has proceeded more rapidly, particularly in the direction of manufacturing operations. The researches of the physicists and of the chemists, coupled with the mechanical ingenuity of engineers, have created new trades in no small number. At the same time, there is an ever-increasing tendency to the subdivision of labour, and the workman capable of undertaking several branches of a trade, or several processes of a manufacture, becomes yearly more uncommon. As a necessary consequence of these circumstances, the number of trade-conditions affecting the health also progressively augments, and we get likewise more pronounced amongst our workpeople the influence of sameness or monotony of occupation—an influence which cannot be salutary either to bodily or to mental health.

For the convenience of future consideration of trade-diseases, it will be well to throw together the principal occupations of the country into groups. Such groups can have no pretence to systematic classification. As a matter of fact, they must overlap one another, by reason of the conditions and the processes of each not being absolutely peculiar to itself, or restricted in their action. The primary division that suggests itself is into occupations connected, or unconnected, with a manufacturing process—that is, a process whereby a material result is produced in the shape of a manufactured article, whether by the hand of man or by machinery.

The group of occupations associated with a manufacturing process presents a subordinate one, wherein a manufactured article is subjected to further changes in the way of conversion, of artistic completion and ornamentation, and of practical application. A second and further subordinate group, having few features connecting it with a manufacturing process, is represented by occupations having for their end the folding, sorting, and packing of manufactured goods, their carriage or transmission, and their sale, whether wholesale or retail. The class of persons whose occupation is unconnected with a manufacturing process includes the members of the learned professions, those who are in the service of the army and navy, engineers, and artists. These persons, from the point of view of political economists, are

non-producers—they do not directly add to the material wealth of the country. But besides these non-producers, there is the large body of agriculturists, who do not fall within the category of persons occupied in a manufacturing process, although they are producers of material wealth.

As my chief purpose is with those engaged in manufacture, I shall say little of the class just defincd, not but that they offer much well worthy of consideration in connexion with the relations subsisting between their employment and their health. In the case of each and all of them, a medical man, when estimating their physical powers, their proclivity to disease, and the treatment to be adopted when disease overtakes them, must not overlook the influence of their occupation and surroundings.

For brevity's sake, I must pass by unnoticed the hygienic conditions of professional men and of the devotees of art. The occupation of soldiers and sailors, except when engaged in active warfare, is one not necessarily connected with conditions destructive of health—in fact, they represent a class in whose interests hygiene is peculiarly attended to and studied. Nevertheless, there are circumstances connected with their duties which experience has shown to be productive of disease. These are especially found in overstrain from excessive exertion; in the case of sailors, from rowing in heavy boats and heavy seas; in that of soldiers, from heavy marching with weighty kits and embarrassing accoutrements. The result both in one and the other is the production of heart disease. But farther, when called upon to treat either a soldier or a sailor, we must keep in view various collateral conditions of his calling, such as the climates in which he has served, the diseases he has been exposed to, whether climatic or diathetic; and more particularly, in the case of a sailor, the possible deficiency of food, in quantity and quality.

The cultivators of the soil—the agricultural labourers—*quoad* their calling—are happily exempted from specific morbid influences. The oldest occupation of man is withal the most healthy. The farm-servant is a worker in the open air, and follows the natural order of day and night in apportioning his period of work and rest. If his abode be healthy and in a healthy locality, the conditions of his labour are calculated to promote health and physical energy. If his fare be poor, he has compensation in the life-sustaining power of open-air work, and in digestive powers capable of utilising all he eats. From indiscreet exposure to weather he will suffer, like the rest of mankind, with inflammatory and other diseases arising from cold and wet, though not in the same high proportion. Probably he is a more frequent victim than others to crippling rheumatism as age advances.

What is wanting with our agricultural labourers as a body is the intelligent recognition of the importance of well-ventilated and clean homes, of the necessity for the removal of all effete matters; or, to use the expressive and comprehensive word employed so cogently by Mr. John Simon, of all "filth" from about their dwellings, and of the need of a good blood- and bone-making diet, in place of the half-starving diet of bread-and-butter and tea, which, unfortunately, has of recent times made its way among our labouring classes of all sorts as the popular diet. It is not a question of means to obtain a better diet, for even in the case of agricultural labourers wages are double those earned by their forefathers, who found for themselves more nutritious food in the shape of meal, of oatcake, of sweet milk or butter-milk, of bacon and bacon-broth, along with what their small gardens contributed. The explanation is to be sought elsewhere, and is partly furnished, I believe, by the indolence of the wives in cooking, or learning to cook, who find it easier to replenish the teapot and cut bread-and-butter than to make porridge and oatcake, or to prepare broth; and I am of opinion that the "free breakfast-table," the cheapening of tea and sugar, for which some years since a cry was raised, and out of which much political capital was gathered, has been rather an evil than a good to the working classes, and at the same time a cause of great loss to the revenue of the country, without gain to any, except it be importers and the intermediate agents of commerce.

To return, however, from this digression respecting the food of the working-classes, I feel that this will be the right place to speak respecting a class of occupied people who really stand midway between the actual non-producers unconnected with manufacture and those engaged in manufacturing processes. I allude to the numerous class comprising, among others, our shopkeepers and dealers, wholesale and retail, in manufactured commodities. I cannot attempt to treat of this class in detail, but, after some general observations applying to all of them, must content myself with a few short special remarks concerning one or two of the number.

Among conditions common to the whole class are: more or less confinement to the house, warehouse, or shop; deficient opportunities for outdoor exercise, much standing, often badly ventilated and overcrowded rooms, both by day and night; the breathing of air exhausted by gas and poisoned by the products of its combustion; not infrequently improper diet and irregular meals, and, coupled with all these *lædentia*, the wear and tear of business. Moreover, it is not uncommon among tradespeople to take more, if not richer, food than they require in the absence of outdoor exertion; to make a principal meal shortly before retiring to rest, and to indulge too freely in malt and spirituous liquors.

Hence it happens that disorders of the digestive organs prevail most widely in this class; we get obstinate dyspepsia and liver disease, and, later on in life, degenerative disease affecting the heart, the liver, and the kidneys; and, amongst the prosperous and well fed, an undue development of fat growing at the expense of muscular soundness and of muscular vigour.

But it must not be overlooked that a large proportion of tradesfolk are prematurely cut off before that degenerative disease can operate. The insanitary conditions of their callings kill off a considerable number in early life by consumption. In short, we find therein the principal agencies charged by the late Dr. Baly with the excessive production of phthisis among the prisoners at Millbank Prison, as compared with that found in London at large, and of which the influence was equally insisted upon by Mr. Simon. To recall them to your memory, they are, as stated by the latter authority (in his third report, published in 1861): "Deficient ventilation, sedentary occupations, and want of bodily exercise, and a listless, dejected state of mind." The last-mentioned condition Mr. Simon introduces as a feature attaching to prisoners; nevertheless, in certain aspects, it applies also to many engaged in retail trade, particularly to assistants, shopmen, and shopwomen; for, in the circumstances surrounding them in business, there is little calculated to interest and cheer the mind, and much to deject and annoy in their position of servitude.

If they escape consumption in their earlier career, shopkeepers largely languish with anæmia and its results, and, in the case of the female sex, with uterine irregularities, and, of both sexes, from overstanding, with varicose veins. Several trades stand more prominently forward as fraught with injury to those engaged in them. It is enough to single out, by way of example, publicans and bakers. The business of publicans has so bad a reputation that respectable insurance offices are very shy of accepting the lives of those following it, and our experience as medical practitioners will justify the action of assurance offices. It would be well did their vital statistics act also as a warning to their customers of the destructive effects of alcoholic drinks. The temptations to indulge always surrounding them, the customs of the trade, the social usages subsisting between them and their patrons, and the enforcement of an indoor life, prove to most of their number active causes of early disease and of death by the medium of cerebro-spinal disease or of liver or kidney lesions.

Bakers, again—that is, those who are actually engaged in bakehouses—are an unhealthy body of men, with a relatively low value of life. The amount of night-work to which they are subjected, the hot and often dark and ill-ventilated shops in which they work, and the tendency to recruit bodily exhaustion by recourse to stimulants, constitute so many circumstances destructive of health. Hence the anæmia and sallowness consequent upon deficient blood-making and the imperfect depuration of blood, the weak hearts, the degenerative disease, and dropsy so commonly seen among them.

In order to find time for a brief consideration of the diseases of those engaged in manufacturing processes—the subject which I have chiefly had in view in this address—I must delay no longer with the health-history of trades not falling under that head.

A survey of the manufactures carried on in this country makes it evident at once that they must affect the health of

those engaged in them in a great variety of ways; and that we may look for almost as many directions in which they so do as there are varieties in their processes. To arrive, therefore, at a proper knowledge of trade-diseases, we need know the general character of the processes of manufacture, and likewise the manner whereby those processes prove hurtful.

But we require also to know the circumstances of a manufacture which are not intrinsic or essential, but rather collateral and accidental, and which, in many instances, are more injurious to health than the essential parts of it. For example, the inhalation of dust—the most common direct cause of trade-diseases—has its morbific energy very considerably modified by collateral conditions, foremost amongst which stands ventilation, and with it the less active factors heat and humidity or dryness, the posture assumed during labour, the temperate and regular habits of the workman, with the cleanliness observed by him in his own person and in his surroundings, the age at which work is carried on, the amount and duration of labour, and the climate in which he lives. Lastly, early marriage and intermarriage must be included in the list.

From a comprehensive view of the circumstances directly answerable for the production of disease, I have constructed the eight following classes, some of them of wide-spreading influence, others of very limited operation.

1. The evolution of dust.
2. The evolution of unwholesome vapours and gases.
3. Materials of an irritant or poisonous nature acting through the system or only locally.
4. Over-heated air, whether dry or laden with moisture.
5. Compressed air and rarefied air.
6. External conditions acting upon the organs of special sense.
7. Over-exertion of particular parts of the body.
8. Mechanical appliances productive of bodily injury.

Upon each of these direct causes of trade-diseases I will venture to make a few remarks illustrative of their mode of action and consequences.

The most widely spread source of disease flowing directly from the labour pursued is assuredly the evolution of dust. Its presence and action are observed in all textile factories; in potteries; in mining, whether for coal or metallic ores; in cutlery manufacture; in cutting and polishing stone, ivory, and mother-o'-pearl; in the grinding of flour; and, in fact, in many other small trades that need not be specified.

The conditions of labour have been especially studied in the case of textile works. Dr. Greenhow's investigations were largely directed to this subject, and are contained in the Reports of the Medical Officer of the Privy Council of 1858, 1860, and 1861. The heavy rate of mortality from diseases of the lungs and phthisis furnished the grounds for undertaking the inquiry. In mills, whether flax, cotton, or silk was the article manufactured, it was shown by him that it was in the preparatory processes that most dust was given off and most ill-health encountered. These processes are those of "sorting," "carding," and "dressing," of "combing" and "hackling." The "carding" machines of cotton-mills were prolific of dust from the carding process, and also from that of preparing, "grinding," and cleaning the machine from day to day or several times a day. Modern ingenuity has devised a plan whereby the machine is made to clean itself, and otherwise to set itself in working order without manual interference; consequently the evils of dust-evolution are vastly reduced. Improvements have also taken place in the machinery for weaving silk and woollen goods, and both these occupations are now rendered comparatively innocuous. Gentlemen who have written to me from the cloth-making districts speak of the health of the artisans as very good, or at least not visibly so affected by the manufacturing processes as to present any special form of disease as a result.

Silk-making has never been a very dusty occupation. In the working of silk-waste some dust is given off, which is detrimental to those employed, but their number is inconsiderable.

The manufacture of linen still leaves much room for improvement in the health-interests of those engaged in it. In the act of "hackling" (a sort of combing) the flax, the greatest quantity of dust is evolved. The dust is visible to the eye, floating diffused through the air of the workrooms, and in those unaccustomed to the shops at once produces a huskiness in the throat and a desire to cough. The fine dust is in Belfast called "pouce," and the sufferers from it are said to be "poucey." Another unhealthy process in the flax-manufacture is "wet spinning"; but its consequences to health are of late years less apparent, by reason of improved machinery, diminishing greatly the diffusion of steam and the wetting of the operatives employed. A temporary acute illness attacks all newcomers into the spinning department of flax-mills, known as "mill-fever."

In all these textile manufactures referred to, as well as in subordinate branches of them which I need not enter upon in detail—such, for instance, as the manufacture of carpets and that of hosiery—the evolution of dust is a primary factor in developing disease, and pre-eminently so in the making of linen. The diseases consequent upon it are—chronic bronchitis, dyspnœa, asthma, and pulmonary phthisis. But in one and all of these manufactures there are, over and above the dust, more or fewer concurrent conditions of an insanitary character; and no one can read Dr. Greenhow's painstaking inquiries, or examine the matter for himself, without recognising the most important part bad ventilation plays as a disease-producing agent. Its importance is abundantly demonstrated where, as in several trades, such as lace-making and glove-making, the factor of dust is outside the category of morbid agents in operation, but wherein the mortality from chest diseases and phthisis reaches nearly the same level as in the dusty occupations. I will not repeat the list of collateral conditions inducing sickness, but will cite the sanitary history of Leek in illustration of my argument. The town of Leek is entirely a silk town, and to my friend Dr. Ritchie, the medical officer of health, I am indebted for the statistics I now present. It was a town notorious years ago for its heavy mortality from phthisis and chest diseases, and engaged the special attention of Dr. Greenhow when inquiring, in 1858 and 1860, into the cause of such mortality. The tables before me show that, between 1851 and 1860 inclusive, the death-rate to the mean population from lung diseases generally was 8·3 to 1000 living, and from phthisis alone 5·3 to 1000 living. In the next decenniad—1861 to 1870—the corresponding ratios were respectively 8·0 and 3·8 per 1000 living. Here was a slight though satisfactory fall in the mortality; but in the period between 1871 and 1877 inclusive the diminution has been most remarkable, and the figures for each class of disease noted stand respectively 4·7 and 1·6.

Such facts as these are most encouraging to sanitarians. They prove beyond question the immense share preventable causes have in the production of trade mortality. For, in the silk manufacture, since the time Dr. Greenhow investigated it, there have been no material changes in the structure of machinery or in the processes in operation, to have modified very tangibly the evolution of dust. The improved hygienic state of the workers must therefore be assigned to improvements in the collateral conditions of the manufacture, among which are—the replacing old mills by new ones of a much more spacious character, and in which great attention is given to ventilation and to cleanliness; the shortened hours of employment; and the enforcement of sanitary regulations in the dwellings of the artisans. Another potent cause is the shutting up of the weaving-rooms in the homes of the silk-spinners, for doubtless the heaviest mortality occurred in these places of domestic manufacture, where overcrowding, bad ventilation, neglect of cleanliness, irregular work, and overwork with its concomitant intemperance, prevailed without supervision and without control.

I regret I cannot point to hygienic advance in populations engaged in the flax trade; or, to speak more correctly, in the population of Belfast, the chief centre of the manufacture. By the kindness of my friend Dr. Charles Purdon, of Belfast, I was privileged to witness the whole process of flax-spinning, and I am further indebted to him for an admirable essay on the health of Belfast, accompanied by very numerous statistical tables. His researches extend over ten years, and the outcome is, that the ratio of mortality in that great town is increasing. The mills are improved in construction and spaciousness; more attention than formerly is given to ventilation and cleanliness; and machinery is improved in a direction to benefit the health of those occupied with it; and, notwithstanding, the sanitary state of the people retrogrades. This is a sad outlook to the sanitarian and social economist; and assuming as fact the improved hygienic state of the factories, a cause must be found outside of them. This much Dr. Purdon's tables show, that the mill-hands in

the isolated country mills are more healthy than the like artisans working in the town factories. The inference is, they are saved from social evils contingent on town existence, and breathe a purer atmosphere. The prejudicial influences acting upon the town operatives are bad social habits, intemperance—chiefly in the form of whisky-drinking—the general sanitary state of the town, wretched courts and miserable ill-ventilated and dirty homes. In connexion with this question of the hygienic state of Belfast, it is worth recording, as a small partial explanation of its retrogression, and with the fact before us, that the flax trade is more injurious to health than the silk, that formerly there was carried on in the town a considerable manufacture of silk, that this business is now extinguished by foreign competition, and that the making of linen usurps its place and has very rapidly advanced in extent.

This seems a convenient place to introduce a comment upon the Factory Laws; for whenever we hear of improvements in the health of factory operatives, we are bound to remember what those laws aim at, and what they have accomplished in regard to those improvements. They have limited the hours of work; have stopped nightwork and most overtime employment; have brought about much greater regularity in the performance of labour; have given regularity to meals; have prevented the employment of the too young, the feeble, and the diseased; have brought about improved ventilation and cleanliness; have indirectly promoted the building of larger and better ventilated factories; and have in an equal degree discouraged domestic labour of the same sort as that performed in factories, and with which it was in regrettable rivalry. In the textile districts, particularly in the cotton-spinning towns, the benefits of those laws are acknowledged on all sides; and the deformed and broken-down mill-hands, formerly numerous, are, according to the best authorities, no longer seen in the streets.

I cannot conclude the account of trades in which inhaled dust is the active principle of mischief to those employed in them, without referring to potters. Respecting these mechanics and their diseases, I can speak from great practical experience. At the date of Dr. Greenhow's visit to the Staffordshire Potteries, in 1859, the mortality of the two sexes together from pulmonary diseases was at the rate of 7·2 per 1000 inhabitants living. In 1864, I published an analysis of the death-register for Stoke-upon-Trent for the year ending March, 1863. In that year the mortality from respiratory diseases stood at 9·10 to 1000 living. Phthisis alone killed 3·75 per 1000 living inhabitants; and when the deaths of potters alone were taken, the ratio to 1000 potters living mounted up to 13·5 from chest-maladies.

These figures are sufficiently startling, and irresistibly point to conditions of labour exceedingly destructive of health and life. The statistics quoted may be somewhat less valuable, because based on the mortality records of a single year; yet, on the other hand, it is only right to state that there was nothing peculiarly unhealthy in that year. Moreover, the inferences gathered from those statistics are confirmed by subsequent investigations, and I may appeal in evidence to the essay "On the Diseases of Potters" which I read at the Social Science Congress held at Leeds in 1871.

The destruction of the lives of potters is beyond question primarily due to the inhalation of dust, given off mainly in the clay-moulding processes by which our articles of earthenware and china receive their shape. The dust consists almost entirely of silicious particles; these, in the act of respiration, are drawn into the bronchial tubes, along which they make their way to their finest divisions. They quickly, as irritants to the mucous membrane, set up bronchitis, and afterwards induce a chronic inflammatory action in the pulmonary tissue, whereupon a fibrosis of lung with consolidation supervenes. In this way, larger or smaller portions of lung get disabled, whilst elsewhere in the tissue the cells become over-distended and emphysematous over limited areas. The resultant symptoms, cough, dyspnœa, asthma, and wasting, with purulent expectoration and lung deliquescence, constitute the maladies known as potters' bronchitis, potters' asthma, and potters' consumption.

In the *British and Foreign Medico-Chirurgical Review* for October, 1875, I gave a pathological history of the lung lesions of potters consequent upon the inhalation of dust; to this essay I must refer those of my hearers who would pursue the question of potters' consumption farther than I can just now do.

I was prepared, gentlemen, to have placed before you many facts touching the diseases from the inhalation of dust consequent on employment of Sheffield grinders, of mother-o'-pearl workers, of miners working in coal and ironstone mines, or in tin, lead, and copper mines, of the workers in granite, and of millers, but the time taken up by my previous remarks forbids my so doing. But I cannot refrain from noting two curious instances of special diseases apparently due to the inhalation of organic dust proceeding from hair and furs. The consequence common alike to all the dust-producing trades already enumerated, is that of the development of pulmonary disease from the direct irritation of the inhaled dust; not so, however, with regard to the occupations to be mentioned. For a knowledge of them I am indebted to my friends Drs. Allbutt and Edward Ballard. The former tells me of cases of an extraordinary form of "pneumiconoid poisoning" occurring among mohair sorters, of a most destructive character, and chargeable most probably to malignant blood-poisoning, that is, to septicæmia. The condition Dr. Ballard reports to me is the outbreak of "charbon," or malignant pustule, among some women employed at a horse-hair factory, in sorting and "willowing," or dusting, some specimens of Russian hair, consisting of horses' manes, coming from Russian Tartary. While on this subject, it must also be mentioned that Dr. Greenhow, many years since, pointed out that a bronchitic state originated from the sorting and hackling of hair and Mexican fibre. The inference suggests itself from the foregoing observations, that there must be something peculiarly noxious in the hair of animals as imported in the rough state; a something probably adherent to the hair of a contagious nature, but set free in the course of the preparatory processes it is submitted to.

To make a few passing remarks respecting the other causes of trade-diseases is all I can attempt. The *second group* I have established includes all processes in which unwholesome gases or vapours are given off.

Examples are found in chemical works, particularly where bleaching powder is made; in gas works; in brassfounding; in the roasting of ores, particularly of such as contain arsenic; in the labour of well-sinking and of sewers; in the making of artificial manures, of glue, etc. In manufacturing bleaching powder, chlorine and hydrochloric acid are driven off, which, besides killing vegetation in the country around, produce in those subjected to them, bronchitis; in some instances, emphysema; and, in others, a disintegration of lung-tissue, with the symptoms of phthisis.

In brassfounding, when the zinc is added to the molten copper, a white cloud of oxide of zinc is diffused through the casting-shop, which, when breathed for any length of time, produces what is called "brassfounders' ague"; not that the disease can be classed with ague, but it is characterised by tightness and oppression in breathing, followed by rigors; then an indistinct hot stage, which, in its turn, yields to a stage of profuse sweating. Moreover, unlike ague, it exhibits no periodicity. From inquiries that I have made of Mr. Atkinson, surgeon of the very extensive works of the London and North-Western Railway at Crewe, where brassfounding is largely carried on, I learn, by his kindness in reply, that examples of this disorder are unknown to him, and I infer that this so happens because the workshops at Crewe are most airy and well ventilated, and that the sanitary state of the men is well looked after. The corollary is, that when this peculiar malady shows itself, it is a result of bad workshops, of bad ventilation, and of unnecessary exposure.

It is, however, but fair to mention what this same experienced medical officer tells me on this head, that brass-moulders usually become asthmatic after some years, and die of consumption in a high ratio.

As to trades evolving offensive vapours, we have the fullest and most careful information collected by Dr. Ballard, and published in the recently issued report of Dr. Seaton to the Local Government Board. It will take some at least by surprise, especially considering that Dr. Ballard reports only on emanations from animal matters, to learn that he has been unable to establish any distinct and positive ill results from them. The gist of what he has to say is, that they are nuisances, offensive to the sense of smell, and through it annoy the stomach, and, in the case of sick persons, aggravate their sufferings.

This general deduction from Dr. Ballard's inquiries is certainly in harmony with what the experience of travellers

in foreign lands tends to show—viz., that the offensive emanations, as encountered in many cities abroad, cannot be so seriously detrimental to health and so productive of disease as cleanly Englishmen are disposed to believe.

The *third group* of trade-conditions acting prejudicially to health is represented by the use of materials of an irritant or poisonous nature, which act through the system at large or else only locally.

Unhappily, many substances are used in the arts and in manufactures which operate in one or other way, or in both ways together. I may enumerate lead, mercury, arsenic, and phosphorus as the most important of such substances. Lead acts not only by its salts, but also in its metallic form. This is witnessed chiefly among the file-cutters of Sheffield. But white-lead is by far the most largely used form of the metal; it constitutes the basis of paint, and enters largely into the composition of enamel colours, enamels, and glazes. Painters' colic and wrist-drop are too well known to require more than naming among its ill results. But in certain branches of the potting trade more frequent and severe consequences flow from its use, and not only wrist-drop, but much more extensive paralysis is met with. Persons engaged in enamelling visiting and other cards likewise suffer frequently, and the same may be said of the enamellers of metal, of hollow-ware utensils, and other articles of iron.

It has been received in books on medicine as a fact that there is a distinct pathological relation between lead-poisoning and gout. I cannot concur in this notion, and believe it to be founded upon inadequate experience collected chiefly from among house-painters. This class of workmen, particularly in large cities, have a reputation for indulgence in intoxicating drinks, and far too much in other habits of dissipation. The occurrence of gout among them cannot therefore be regarded as a curiosity. On the other hand, I can speak from the observation of many hundreds of cases of lead-poisoning among potters, and cannot recall one instance in which gout has been a concomitant, either actively or latently.

Mercury brings on, among those using it in the arts, tremors, salivation, and paralysis. Water-gilders suffered most from it, but that class of workmen has of late years been greatly reduced in number, electro-plating having nearly replaced water-gilding. The silverers of mirrors are so little in contact with the metal that few of them suffer. Dr. Whitley, who, in 1862, at the instance of Mr. Simon, conducted some researches on the poisonous action of mercury in the case of workmen employing it, showed that furriers used certain mercurial salts in the cleaning and preparation of furs, and he noted two instances of severe poisoning, one indeed fatal, thereby.

Arsenic, it so happens, forms certain salts of great brilliancy of colour, which are comparatively cheap, and therefore much used as colours. The preparation known in trade as emerald-green is the most employed. It affords colour for wall-papers, artificial flowers, fruits, and seeds, and at times, most shamefully, for articles of confectionery; it also is an ingredient in the coloured compositions used by printers and lithographers, and gives the gay green hue to the muslin-like material worn by ladies under the name of "tarlatan." The chemical properties of emerald-green are such that it is readily separable from the materials it is attached to, and withal it is soluble. We owe to Dr. Guy the fullest account of this poisonous colour; it is to be read in the fifth report of the Medical Officer of the Privy Council, published in 1863.

Arsenic acts as a local irritant to the surface of the body, and, when absorbed, gives rise to its characteristic symptoms. But it is remarkable, considering the virulent nature of the poison, that, in the industrial processes wherein it is brought into contact with workpeople, it is attended by so little harm, as reliable evidence shows it to be; and there is this further singularity about it: that some individuals seem almost insensible of its poisonous effects. Dr. Guy observed this fact, and Mr. Reed, of Poole, in Cornwall, where the arsenical ores are roasted, and the workmen largely exposed to the arsenical dust in the course of collecting it from the wide flues which they enter and clean, kindly informs me that there are individuals amongst them who "literally wallow in it" and do not suffer at all. The contact of the poison brings on great irritation of the skin, with the formation of pustules resembling much those caused by tartar emetic, but penetrating more deeply the subcutaneous tissues. Those workmen are found to have an active, freely perspiring skin, and the parts of the surface that suffer most are those subject to most friction.

Workers with phosphorus, it is well known, are apt to get necrosis of the jaws; but, fortunately, this horrible lesion is not frequent among them, at least in this country; for experience has shown that, by due arrangements of the several departments of the match-making business—for this is practically the sole occupation in which phosphorus acquires importance as a trade material—by attention to ventilation and cleanliness, the ill results of the poison are reduced to a minimum. But what has had still greater hygienic effect of late years, and almost rendered the jaw disease a matter of history, is the substitution of amorphous phosphorus for the common form.

Besides the formidable external irritants and poisons already spoken of, there are several other materials of an irritating quality connected with various trade processes. For instance, a peculiar eruption has been noticed as attacking those whose skin is much in contact with petroleum and naphtha. Further, flax operatives engaged in spinning and in scutching are subject to skin eruptions. In old times, when chimneys were climbed by wretched lads, there was a disease of the scrotum known as chimney-sweepers' cancer. Other diseases, the offspring of neglect of cleanliness, are the itch of grocers and bakers, from the irritation of sugar and flour respectively.

Exposure to overheated air, whether dry or laden with moisture, considered as a cause of trade-disease, plays no considerable part. Heat is borne with wonderful impunity. The highest degree workmen are ever subjected to is in the casting-rooms of statuary.

Highly compressed air may be a cause of suffering and disease, but it is one rarely seen in action. The clearest example is furnished by men who work in the caissons employed in modern bridge-building for laying the foundations in deep water. An American physician has carefully described the morbid symptoms produced collectively under the title of the "caisson disease."

Rarefied air has a distinct effect on the normal state of the body, as we know from the accounts of mountain-climbers and of balloonists. Such exceptional instances need no consideration from me; but I have been informed that in Utah and Colorado, where mines are worked at a great elevation above the sea-level, the miners suffer from the rarefied atmosphere, and find it necessary at intervals to descend to the lower regions.

The next group of causes inducing diseases among workmen exposed to them comprises conditions acting upon the special senses. Opinions differ as to the proclivity to eye-diseases of those who are exposed to intense light. Mr. Atkinson, whose valuable experience I have before quoted, writes to me that at the Crewe works, where so much furnace-work goes on, he has not made out any unusual frequency of eye-diseases among the artisans, although he has seen temporary disturbance of vision attack those working at a white heat. Watchmakers work with a strong concentrated light, but, so far as I can ascertain, are not often sufferers with ophthalmic disease. Violent noise will produce deafness, and it thence happens that the rivetters, who work much inside boilers, get deaf. Old sailors and soldiers, also, will tell of cases of deafness coming from heavy firing of cannon. The organ of smell is subjected to causes provocative of local suffering, and also of general disorder. The only trade in which this sense suffers and induces disease is that of tobacco- and snuff-making. I can quote a solitary example in which an occupation acts through the organ of taste as a cause of illness; I allude to the business of a tea-taster, and the nervous disturbances brought about by this peculiar business.

The next group in order includes occupations wherein particular parts of the body are over-exerted. It is a very limited one, and it will suffice here to refer to "dancers' cramp"; to "writers'" cramp or paralysis; to aortic disease and aneurism among "strikers" at ironworks and dock-labourers.

The final group I have to notice is that where danger of mechanical injury, mostly from machinery, constitutes the evil the workman has to guard against in his occupation. It is one needing no elucidation; but, in connexion with it, I may allude to the excellent results accomplished by the clauses of the Factory Acts enforcing the fencing-in of

machinery, together with various other provisions calculated to lessen danger therefrom.

I must now close this long address, thanking you for your patient hearing. It is, after all, a mere sketch; but such as it is, I trust it has been found not without interest, and that it may awaken more attention to the observation of trade-diseases, and thus, indirectly at least, contribute to the advancement of medicine, and in a more direct manner promote the sanitary welfare of our industrial population, and give to the manufactures of Great Britain a more healthful character, with its attendant greater happiness and prosperity.

ORIGINAL COMMUNICATIONS.

CLINICAL REMARKS ON A CASE OF SYME'S AMPUTATION;

WITH OBSERVATIONS ON CATGUT DRAINAGE AND SUTURES.

By J. C. OGILVIE WILL, M.D.,
Surgeon to the Aberdeen Royal Infirmary.

As the history of the patient before you possesses no features of special interest, it is unnecessary to dwell upon it; but the operation performed upon her was one that is often called for, and I have found that students have somewhat confused ideas regarding the mode of its performance—which is not to be wondered at, for several surgical text-books, and even works professing to be guides to the proper method of carrying out this and all other operations, are indistinct, and even incorrect, in the directions given respecting this particular operation. This is due to the fact that Mr. Syme improved upon his original operation, and the authors of the works referred to, instead of quoting his perfected mode of procedure, give that originally suggested by him. There are also several points of interest connected with this case after operation, which are worthy of note, and to these I shall in due course direct your attention.

The patient, when admitted to Martha ward in the beginning of autumn, was suffering from caries of the os calcis of considerable duration, the result of an injury she sustained, the occurrence of the disease being favoured by a strumous diathesis. At that time there was a short sinus on the outer side of the heel, leading down to diseased bone; discharge was slight but purulent, and the integument was comparatively sound. The disease was evidently confined to one bone, and therefore it seemed a favourable case for gouging away the diseased portion, in the hope that this might prove curative. This procedure was therefore put in force, and for a time things looked well, the greater portion of the wound healing kindly; but the discharge continued, the opening in the soft parts became surrounded by unhealthy granulations, and the integument became more and more infiltrated. I then suggested removal of the foot, and this was agreed to on the condition that the patient should be allowed home for a time; and a few days after her return to hospital the foot was removed. These are all the points requiring notice, but before explaining the method of performing the operation I may mention that we had an alternative operation under consideration—viz., excision of the os calcis. This was proposed at the consultation held on her case, but I was unwilling to have recourse to it, for in cases of the kind it is universally agreed that there is a great probability of recurrence of the disease in the adjoining bones; and even when excision succeeds, the foot that is left—being deprived of its main prop—is a comparatively useless member, requiring the application of a special form of boot; and even with its aid such a foot cannot be regarded with much favour. On this account I determined to adopt Syme's amputation, which, for reasons to be presently brought before you, I believe to be infinitely preferable not only to the various so-called improvements suggested, but even to that of Chopart, by which, as you know, a considerable portion of the foot is preserved.

[The method of performing the operation was then demonstrated, and the suitability of the stump for supporting the weight of the body, and the general advantages of Syme's amputation, were considered.]

Having now reviewed the operative part of the procedure adopted, I desire next to direct your attention to some points connected with the progress of the case, to the mode of drainage practised, and to the behaviour of the materials used for sutures.

First I may remind you that, at the time of operation, intense putrefaction was present, and you may recollect that at the conclusion of the cutting part of the operation I endeavoured to eliminate the putrefactive elements by the use of Volkmann's sharp spoon, scraping the unhealthy granulations away, and washing the surfaces of the wound with a 1—20 carbolic solution; after which the parts were stitched together under spray, and the usual dressings were applied. Although I felt bound to make an attempt to get rid of putrefaction, I had not, as some of you know, great hopes of succeeding—for preventing the access of germs to a wound is one thing, and putting them out of possession is another. The difference will, I think, be readily appreciated by you if I make use of a quaint illustration given by my friend, Mr. Chiene, of Edinburgh. On one occasion, when speaking on this subject, he said, "There are two ways of preventing potatoes from growing in a field: the first is, to lift them after you have planted them; the second is, not to plant them at all. So it is with germs: you can readily prevent them from growing if they are never planted, but there is a great danger of any measures you may take for uprooting them not being searching enough." So it proved here, for three days after operation the discharge was found to be putrid. I then stopped the Lister treatment, and applied a piece of lint soaked in carbolic oil to the parts; and under this dressing union proceeded rapidly. In little more than a fortnight, with the exception of one small point, the healing process was complete, and the stump felt firm and solid. The highest temperature registered was 100·8° Fahr.

The result must be considered satisfactory, for the girl is evidently strumous, and, as you are aware, the healing process is slow in the case of persons so tainted, and the tissues of which the flap was formed were in far from a healthy state. I intend next to notice some of the minor points connected with the management of the case; and, first, I would direct your attention to the mode of drainage adopted. You may have observed that, instead of employing an indiarubber tube, I inserted a bundle of catgut consisting of nine or ten threads, bringing out one end of the drain at the inner angle of the wound, and the other through the opening of the pre-existing sinus on the other side. I did not intend to adopt this mode of drainage, as I expected putrefaction, and I did not consider that drainage by catgut was suitable in such a case, but I used it simply because there did not happen to be any drainage-tubes at hand. I do not regret having done so, as I shall presently explain, but as a number of questions have been put to me by students regarding catgut drainage, and as they wished to know what becomes of the catgut, I purpose considering this subject at some length. Regarding the origin of this mode of drainage, let me read you a quotation from a paper contributed to the *Edinburgh Medical Journal* by Mr. Chiene. He writes:—"Acknowledging the undoubted advantages of the drainage-tube as regards efficiency, I have long felt its disadvantages: for instance, its interference with rapid healing throughout the whole extent of the wound; the irritation it not unfrequently caused by its presence as a foreign body; the blackening of the protective, showing that irritating compounds were always present in the rubber, however pure; the tendency to regurgitation of air along the elastic tube during the dressing, thereby increasing the danger of mischief passing into the depths of the wound; the necessity of dressing a case solely in order to shorten the tube; and the impossibility of being able properly to estimate the rate at which this should be done. These are self-evident evils, and their removal has for some time occupied my attention." Mr. Chiene was led to think of substituting a skein of catgut for the ordinary tube, by a statement made to him by Mr. Callender, of St. Bartholomew's Hospital, that he had stitched the ends of the drainage-tubes together with catgut in order to keep them in position for the first three or four days, when, the catgut becoming absorbed, the tubing could be gradually removed by cutting off slices. This idea then struck him: "Why not make the entire drain of catgut instead of gutta-percha?" If efficient, its advantages, in being absorbable, were at once apparent. He believed that catgut, acting by capillary attraction, would carry off the discharges. He adopted this method, and

found that his assumptions were correct; and many of you have seen it adopted in my hands in a great number of cases with much success.

Before referring to the special advantages of catgut drainage, let me first explain what is the fate of catgut when embedded in living tissues; and here I must avail myself of the results of experiments performed by Dr. Fleming, of Glasgow, and recorded by him in the *Lancet*. He introduced pieces of catgut into the tissues of various animals, carrying out his experiments antiseptically, and afterwards killing the subjects at varying periods; he then cut sections of these parts where the catgut had been placed, and having hardened them in spirit, he next froze them, and examined them microscopically. He found that a gradual softening takes place from without in, the catgut breaking down, and becoming infiltrated with cells, probably leucocytes; next the pultaceous mass, into which it becomes converted, begins to metamorphose, is soon permeated by bloodvessels, and ultimately may be described as a cast of the catgut in a kind of granulation tissue freely supplied with bloodvessels. Dr. Fleming's experiments prove most conclusively that organisation of catgut takes place when proper antiseptic precautions are observed; and what he achieved in the case of the animals he experimented upon, we can surely do in the case of our patients, if we can only hold in sufficient respect and constant remembrance the importance of carrying out the true antiseptic system in its uttermost details. Let us now consider the advantages which may accrue from drainage by catgut—and they will be readily appreciated by you if you recall the words contained in the quotation from Mr. Chiene's paper, where he pointed out the disadvantages of the ordinary drainage-tube, for catgut is guiltless of all the evils there referred to. It is absolutely unirritating, there is no danger of regurgitation of germ-loaded air, and there is no need to remove the dressings for the purpose of looking after the drain—*i.e.*, shortening it, or replacing a larger by a smaller tube—for, under appropriate conditions, nature will effect, in the case of the absorbable drain, what we must do in that of one composed of an unabsorbable material. Above all, it is efficient; and I believe that Mr. Chiene has not over-estimated the results that will ultimately be obtained when the Lister treatment is carried out faultlessly, as given in the paragraph which I shall now read to you:—"We may now anticipate a time when, with catgut stitches instead of silk, horse-hair, or silver wire, catgut drains instead of india-rubber tubing, and chromic-acid gut fixing together the buttons instead of silver wire, it will not be necessary to uncover our wounds from first to last during healing, when the deep dressing need never be shifted, and when the outer dressing will only require to be removed when soaked with discharge. The amount of discharge, in its turn, will be reduced to a minimum by the use of an absorbable animal material like catgut, instead of non-absorbable foreign bodies like silk, silver wire, and indiarubber."

Let us now return to our patient's case, and let us see how the catgut drain acted in it. Those of you who watched the case saw that, even after putrefaction occurred, the drain acted efficiently; there was at no time any tendency to "bagging" or tension from retained secretions, but the fluid found free vent, being readily drawn to the surface by the threads of catgut. On the seventh day the projecting ends of the drain dropped off, and on the tenth day the sinus was found to be healed. In this case the only advantages were that we had not to pain the girl by interfering with the drain, as we must have done had a tube been employed, and that we had not to irritate the wound by extracting from it, and pushing into it, an irritating body from time to time. These advantages—though slight compared with what we would have experienced had the wound remained aseptic—were not inconsiderable, for the patient is extremely sensitive, and had we been obliged to move the drain the union of the cut parts would have been endangered, as we should have been called upon to combat the involuntary contraction of the muscles which would have taken place, and which would certainly have tended to draw the cut surfaces asunder.

Since I commenced to prepare this lecture, another mode of drainage, with which I was previously acquainted, but which I did not regard with so much favour as it seems to deserve, has been brought prominently forward by Professor Lister: it is drainage by horse-hair, and as you may not have seen the paper, it may not be out of place if I give you a short *resumé* of it. He employs common black horse-hair purified by steeping in a 1—20 carbolic solution. Its mode of action is similar to that of catgut—by capillary attraction—and it is used in the same way. The advantages claimed for a horse-hair drain over one composed of catgut are:—1. Its cheapness. 2. That on account of its non-absorbability it can be used over a longer period. 3. That it can be readily reduced in bulk, or altogether withdrawn, at an earlier period than is required for the absorption of catgut; for the latter material in process of organisation and absorption becomes more or less incorporated with the surrounding tissues through the medium of the cells of new formation which invade it, and if an attempt be made to withdraw the drain, in whole or in part, there will often occur inconvenient oozing of blood though the rupture of newly formed vessels. 4. If, on the other hand, the drain is left intact until the parts in the wound are entirely absorbed, there remains a small granulating sore at the place of exit of the drain, which may retard for some days complete healing of the wound. Lastly, the threads of catgut, as they undergo organisation, are increased in bulk by the formation of new cells, and their interstices are liable to be more or less choked, so as to interfere with efficient drainage. The horse-hairs, on the other hand, lie unchanged among the tissues, and their interstices remain to the last as efficient as they were at the outset.

These are the advantages claimed for it, and I allow that in some cases it should receive the preference; but in others—the majority—catgut seems to me to be infinitely preferable, for if we use horse-hair we can never achieve the highest possible result: we must change the dressing from time to time for the purpose of attending to the drain; therefore I hold that drainage by catgut, or any other suitable material capable of absorption, brings us one step nearer perfection in the treatment of surgical wounds. When I find that catgut does not act efficiently, then I shall have recourse to horse-hair, but for the present—excepting in those cases where I require a more lasting drain—I shall continue the use of the absorbable one. I would say, further, that it is only by the use of such a drain that the true antiseptic system can ever be brought within the reach of the great mass of practitioners, for so long as we have a foreign body in a wound we must, as I have just said, remove the dressings, both superficial and deep, to see how things go on; and this, as was recently well shown by Mr. Chiene, has two manifest disadvantages—first, the expense involved by the use of fresh gauze; and second, the increased number of times during which the spray-producer is called into action. But if we have not to remove the deep dressings from first to last we save gauze; and the use of the spray is not called for during the removal of the external dressing, if we take the precaution to damp the outer layer of the deep dressing with an antiseptic solution, so as to insure the destruction of any germs that may fall upon it during the application of the fresh layers of gauze of which the external dressing is formed. Thus we in great measure get rid of the *bête noir* of the Lister treatment, and we gain something more by the comparative disuse of the spray: we avoid irritating our wounds by the spray—regarding the irritating nature of which none of you who have had any personal experience in carrying out the antiseptic treatment can have any doubt.

The last point worthy of notice is the behaviour of the sutures employed for keeping the cut surfaces in apposition. All the sutures inserted were made of the same material, catgut, but the method adopted in the preparation of the catgut used for superficial and deep sutures respectively was quite different. The former consisted of common catgut steeped in an oily solution of carbolic acid; the latter of catgut specially prepared by immersion, first in a solution of glycerine and carbolic acid, and afterwards in a fluid containing chromic and acetic acids. Let me now direct attention to the behaviour of the two kinds; I shall take the superficial one first. In the course of a few days after operation it was noticed that some of them had given way, from the parts within the wound having become thinned and softened; at the end of a week I picked off some of them without requiring to use a scissors, and pointed out that, in the case of some of them, hardly a trace of the parts originally within the wound was to be seen; in others, only a short, thin, slimy end, adherent to the knots, remained.

They had all long since ceased to be of the slightest use, so far as keeping the edges together was concerned, and this although there was no tension. But regarding the specially prepared deep sutures, the case was markedly different, for they remained unchanged from first to last. On the Saturday week after the operation the last of them were removed, and I then showed you that the parts of the sutures, which had lain for ten days within the tissues, were in exactly the same state as when inserted, and they had not occasioned the slightest irritation. Now, these facts are very instructive, for a material for use as sutures, which does not irritate, does not give way, and is easily withdrawn, has been for long a desideratum. Sutures formed of textile materials —such as silk—used to be the only kind employed, but, on account of the irritation which such sutures occasioned, the stitches had to be withdrawn at an early period, whether union had taken place or not; then Marion Sims introduced wire as a substitute, and it was for a time universally adopted. This was a great gain, for the tolerance exhibited by living tissues to metallic bodies is well known; but the gain was not unalloyed, for wire sutures are very prone to cut their way out of the tissues, and they give pain during their removal, and thus they endanger the integrity of the union by the pain causing involuntary contraction of the muscles, and drawing the feebly united parts asunder. Then catgut came into favour, but even Professor Lister, its introducer, soon discarded it on account of its ready absorbability. Soon after I first heard of it I made use of it largely, and I very speedily appreciated its advantages; but I saw at once, and stated so in a communication to the *Lancet*, that it was only useful when early union was to be looked for, and this view I have ever since held. But it seems to me that in this specially prepared catgut—also brought out by Professor Lister—we have got a material with all the advantages of wire, and with none of its disadvantages, for it is very fine, very strong, and totally unirritating, while it can be removed without causing the slightest pain. It is not yet perfect, for we still want an absorbable material, but one that will last longer than the oily catgut, and this I have been seeking to obtain by experimenting with different solutions, but as yet my efforts have not been rewarded by success.

[The lecture was concluded by a demonstration of the method employed in the preparation of chromic catgut, and some remarks on the proper application of plasters.]

Cold Water Injections in Chronic Diarrhœa.—Dr. Messemer, of the Mount Sinai Hospital, New York, relates three cases of the value of his practice in the treatment of very obstinate chronic diarrhœa, accompanied by much tenesmus. He orders a quart of iced water to be injected (in divided doses of half a pint) after each stool, the exit of the water being assisted after each injection by pressure made on the abdomen by the hand. After the expulsion, a small quantity (about half a teacupful) may be again slowly injected, so as not to excite peristaltic action; and this is enough to keep the walls of the rectum apart and prevent their irritating each other. Dr. Messemer does not object to internal treatment being employed at the same time, and he considers proper dieting as of the highest importance. Improvement soon resulted in these cases, although they were examples of bad diarrhœa.—*Amer. Jour. of Med. Science*, July.

Reform in Medico-Legal Expertism.—After a paper upon this subject had been read at the International Congress of Legal Medicine, by its President, M. Devergie, and a long discussion had taken place, the Congress passed the following resolutions:—"That the Government be asked to establish in France institutions which have been at work for years in Hungary, Austria, Prussia, Belgium, Holland, etc., having for their object the formation of experts in legal medicine and experts in toxicology, remunerated by the State, and who shall be elected by *concours*, having for its basis trials essentially practical; that, with the object of educating such experts, a great extension should be given in the different faculties of medicine to courses of practical legal medicine, such as M. Devergie first established at the Morgue in 1834, and which has been reopened last year at the request of Prof. Vulpian, Dean of the Faculty; and that special courses for instruction in toxicological analysis be opened at the Ecoles de Pharmacie.—*Union Méd.*, August 20.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THE CENTRAL LONDON SICK ASYLUM, CLEVELAND-STREET, W.

JAUNDICE FROM MECHANICAL OBSTRUCTION—DOUBLE PNEUMONIA—PYÆMIA—ABSCESS OF PANCREAS—DEATH.

(Under the care of Dr. LEDIARD.)

From the infrequency of the occurrence of lesions of the pancreas, and the difficulty in their diagnosis during life, they have attracted but a small amount of attention, and I think it desirable to place on record such a case as the following:—

S. W., aged thirty-three, a laundress, was admitted into the Central London Sick Asylum, in Cleveland-street, on April 12, 1877, suffering from jaundice.

The family history exhibited no taint of any kind. She has three children living—eldest six years and a half. Two miscarriages—the first when she had small-pox, six years ago; and the other eighteen months since, after a fall. Has always had good health until nine months ago, when she became jaundiced and was troubled with biliousness, but she did not give up work. She has attended a hospital as an out-patient for three weeks. Bowels have moved twice daily, and motions have always been light-coloured, though not at all like clay stools. Urine has varied in colour. Not subject to cough, but breath short of late. She has not lost flesh. Catamenia regular up to twelve months ago; ceased altogether since then.

On examination, the surface generally is deeply jaundiced; expression is calm, and she answers questions intelligently. Lungs resonant in front, and respiration clear. Heart's action rapid and weak; no murmur present. Has some cough and scanty mucous sputa. Behind, lungs are dull at base, and present pneumonic crepitation. Tongue dry and furred. Has some appetite, and there is no vomiting. Abdomen is soft; there is no ascites. The liver is much enlarged, extending from right nipple to within one inch and a half of navel; edge is easily felt; surface apparently quite smooth; there is some tenderness over it. Splenic dulness is perhaps increased, but runs into the hepatic dulness in front. Motions light-coloured. She never noticed gall-stones pass. Urine high-coloured, and contains bile in free quantity; no albumen.

April 14.—Had a rigor.

16th.—This morning is hot and sweating. Rigor at 5 a.m., and another at 9.15, lasting half an hour. Surface dark yellow colour. The tongue is moist but furred.

19th.—Copious pneumonic sputa; less hepatic tenderness; jaundice as before; skin hot.

20th.—Sputa more purulent. Pain in right side. Pulse 148; temperature 100·4°. Has a troublesome cough. Jaundice still present, but not so marked; cheeks flushed; teeth present sordes; tongue red, whitish, and dry. Bowels open. Urine lighter in colour. No vomiting.

21st.—Restless night. Tongue brown. Abdomen hot and dry. Acute pain over right lower ribs. No more rigors. Pulse 160. Legs drawn up. (At this point of the case I was inclined to suspect pyæmia, with pus in liver.)

23rd.—No return of rigors. Is much worse. Respiration rapid. Diarrhœa and thirst. Temperature 100°. Tongue dusky and brown. She died the following day.

Post-mortem Examination, twelve hours after Death.—Body thin, but not emaciated; surface of a well-marked yellow colour. On opening abdomen, the liver was found to extend right across the abdomen to the splenic region, the left lobe being marked by the ribs on the left side; weight five pounds and three-quarters; gave no reaction with iodine; its substance firm, surface smooth; upper surface discoloured, and bulging here and there. In the right lobe were numerous abscesses; some of large size, a few more collections of pus towards the centre of the organ. Five or six angular gall-stones of small size (orange-pips) in an empty gall-bladder. The common bile-duct was much thickened and dilated, but no stone found impacted. The lining membrane of the portal vein near the pancreas was healthy. Spleen large, weighing

eleven ounces; substance healthy; it was displaced downwards, its normal situation being occupied by the left lobe of the liver. Heart weighed ten ounces, healthy, and contained some deeply yellow-tinged clots. The right lung showed a large gangrenous patch in the upper lobe, with early pneumonia of the base; the left, advanced pneumonia at the base, going on to purulent change. No peritonitis, but parts about pancreas somewhat matted. On removing the pancreas, which presented a tumour of the size of a large orange towards its duodenal end, the thin capsule gave way, and a copious amount of thick yellow sweet pus escaped. On further examination, it was found that the abscess involved the substance of the gland, hollowing it out into an irregular cavity, the lining membrane having a reticulated appearance. The duct of Wirsung was intact, as also the splenic vein and artery; but posteriorly the portal vein was incorporated with the wall of the abscess. The ductus communis opened into the duodenum by a wide aperture, the margin of which was dusky-looking. Weight of the pancreas when washed, cleaned, and dissected from attachments, five ounces and a half—usual weight (Quain's "Anatomy," eighth edition), two ounces and a quarter to three ounces and a half; length, seven inches and a half; thickness normal. The head and tail were apparently quite healthy.

Remarks.—It is not easy to trace the sequence of events in this case, but I am disposed to think, from the thickened and dilated condition of the common duct, taken with the presence of stones in the gall-bladder, that the jaundice must have been due to mechanical obstruction of the duct near its duodenal surface. Then double pneumonia supervened, followed by pyæmic abscess in the liver, and the abscess in the pancreas may have been a part of this. Russell Reynolds, in his "System of Medicine" (first edition, page 415, vol. iii.), states that abscess of the pancreas is liable to occur from metastasis, and that Tournellie twice observed pancreatic abscess in puerperal peritonitis; and by Craigie after suppression of some habitual evacuation, as diarrhœa, hæmorrhoids, and catamenia; and I am able to confirm what is further stated, that there are no specific symptoms indicative of pancreatic suppuration; and it is worthy of note in the present case that the catamenia had been absent for twelve months.

Puerperal Fever in Prussia.—According to the report of the Puerperal Fever Committee appointed by the Berlin Obstetrical Society, there is an annual mortality in the Prussian kingdom of 8872 women from puerperal fever, or from twenty-eight to thirty-nine deaths among 100,000 inhabitants. Among 100 deaths at least one occurs from puerperal fever; and of the women who die at the child-bearing age, 12 per cent. do so from this disease.—*Petersb. Woch.*, August 10.

The Professor of Clinical Surgery at Liége.—On the occasion of Dr. von Winiwarter, one of Billroth's assistants, having been just appointed to this chair as successor to Prof. Gussenbauer called to Prague, the *Wien. Med. Woch.* observes how differently is the appointment received in Belgium to what that of Gusserow's was some three years ago. One of the ablest of Billroth's assistants, his nomination was still received with a torrent of indignation, he being a foreigner and not even a Frenchman. The Faculties, the student-world, and even so grave a body as the Academy of Medicine, were for passing the most stringent resolutions and placing every obstacle to his advent and success. Fortunately, Prof. Gluge, himself a German, at that time President of the Academy, prevented matters passing into extremes. And Gusserow was not easily put out of countenance, but, possessed of great tact, indomitable energy and perseverance, and the highest surgical ability, he gradually overcame all opposition, secured to himself the esteem and confidence of his colleagues, and attained the position of the first surgeon in Belgium. When the call from Prague arrived, the Belgian Government used every effort to retain him, and when this was found to be impossible, despatched the University Curator to Vienna to seek at the hands of Billroth for another of his pupils. The Vienna Professor, in fact, seems to combine with his other useful functions that of a provider of Professors for other Faculties. Five of these he has already placed, besides numerous chief surgeons and operators in the various provinces of the Empire.

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Medical Times and Gazette.

SATURDAY, AUGUST 31, 1878.

THE AVOIDANCE OF PAIN.

Mr. Callender's Opening Address, as President of the Section of Surgery, at the Bath meeting of the British Medical Association, is worthy of something more than mere record. It deserves to be well considered and pondered over, for it is obviously the outcome of much thought and of a large practical and personal expenditure of both time and labour. The "avoidance of pain" after surgical injuries and operations is a subject which appeals to one's best sympathies. It would therefore deserve—and obtain, no doubt—our earnest consideration, even if it were useful only from a humanitarian point of view. But modern surgeons have come to regard it less, perhaps, from a purely humanitarian view than as a valuable ally both in the operating-theatre and in the ward. From the operating-theatre pain has long been banished, chloroform having accomplished this for us and for our patients; and this anæsthetic does good service for us also in the wards, where it is freely used during the application of surgical dressings, whenever these latter, for any reason, seem to require it. It was reserved to Mr. Hilton to point out the value of pain as a diagnostic agent, and the important lessons which a careful analysis of pain was competent to afford us. Mr. Hilton further showed us how Nature herself invariably adopted certain measures and precautions in the case of disease of any part, and taught us the importance of following her example, and the value of physiological rest in the treatment of nearly every form of disease. Mr. Callender has still further elaborated this doctrine of rest. He thinks that "an operation or an accident-wound can be so treated that the patient from first to last shall be free from pain; and, in the treatment of many other troubles, a great deal of pain may be avoided by forethought and care on the part of the surgeon." Such a dictum may appear to some as rather high-flown. To us, however, it conveys the idea of a

minimised amount of suffering, and this as the outcome of an unceasing personal supervision of the cases by the surgeon in charge, and of an unwearying attention to the details, which are too frequently left to one or other of the subordinate officers. We do not for a moment imagine that Mr. Callender believes that every wound can be repaired without some amount of suffering—for many wounds, from their very nature, are painful. He implies, however—and, we think, justly—that a great deal of the pain and suffering which are daily witnessed in the wards of any of our large hospitals is directly due to a want of ordinary and simple precautions, while another proportion is the result of aggravation due to the neglect of means, easily accessible, which would certainly mitigate, if they did not altogether prevent it.

As an instance of avoidable pain, Mr. Callender quotes the well-known twitchings and startings not infrequently complained of in the stumps of limbs amputated on account of joint-disease. He points out the desirability of stretching the nerve-trunks of an amputation-stump, with a view to temporarily benumbing them; and of carefully swinging and steadying the stumps of such limbs, where the startings have been a prominent feature before operation. Mr. Callender goes further than this, for he even makes it a rule never "to saw through a knee-joint for *genu valgum*, to amputate a limb, or, in a word, to perform any operation which involves subsequent confinement by splints, or an unusual position, without, whenever it is practicable, training the patient as suggested in order to accustom him to the restraint." Such care must obviously secure great results for the surgeon who bestows it, and it will no longer be a matter of surprise that Mr. Callender's statistics are so favourable, when it is known at what a cost of time and labour and thought they are obtained.

As two common causes of unrest and of pain, he referred to "tension of wounds" and "distension of wounds." "We often hear," he says, "complaints from patients of tightness about a part, and one is surprised to find how slight a change in the bearings of a dressing will often give relief. After a fracture, say of the tibia, has been put up, the sense of discomfort is often promptly arrested by cutting with scissors the edge of the bandages to a trifling extent." How true this all is, we need not say, and yet we fear that the practice recommended is by no means a very general one. Mr. Callender says, "I am in the habit, when it has been necessary to use bandages or strapping for the securing of a first dressing, of always dividing, some twelve hours later, the confining bands, without otherwise disturbing the appliances." Speaking next of "distension" of wounds, he instances the immediate relief both of pain and tenderness which the escape of a little serous or inflammatory exudation affords from a wound, the external orifice of which has been too tightly closed up. The simple opening of such a wound with a probe, allowing pus or exudative material to ooze out, has saved many a limb from an attack of purulent œdema or phlegmonous erysipelas—limbs which, in former times, would have "gone to the bad" for the want of this timely and judicious relief. It is exactly this "drainage" of wounds which offers such a strong contrast between past and present surgery, both in treatment and in results. It certainly is a remarkable circumstance that such a totally different plan of treatment was adopted. In former years the wound was closed carefully with stitches or strapping: while to-day it is carefully provided with vent-holes in the most dependent positions; not infrequently fresh openings are made when the wounds themselves do not occupy positions favourable for drainage, and drainage-tubes are freely inserted.

Another and exceedingly common cause of pain was referred to by Mr. Callender—viz., coarse handling. There is a tendency (we do not say this ill-naturedly) to become brutalised by the constant sight and contact with suffering; and we are, as a result, a little too apt to forget that inflamed tissues are exceedingly painful, and that they require most careful handling. The harm is not always a merely temporary one; unfortunately, a form of unrest—reflex unrest—may be set up, which lasts for several hours. Hence the importance of constant care when handling the delicate and easily disturbed tissues of inflamed parts.

Speaking of the dressing of large surfaces, as after burns, Mr. Callender advises that a careful examination of the surfaces be made. He thinks that the chief pain will be found in little local patches, corresponding with the termination of the nerves of the part; and he teaches that, if we find out these painful places, we may prevent further trouble by simply covering them over with isinglass or thin gutta-percha tissue. This will be an acceptable and useful hint to many, and we doubt not that it will prove of great service and save many an anxious foreboding in the future.

We have followed this interesting subject far enough to impress on all, we hope, the great value of care and forethought. There is just one point on which we would speak, not exactly to join issue. Mr. Callender says, "It is a rule with me always to give morphia (injected beneath the skin, so as not to disturb the stomach after the anæsthetic) after every operation on adults, and sometimes after those on children." We would ask, Why only "*sometimes* after those on children?" Do not children require a sedative as much as, or even more than, adults?

The whole subject of the avoidance of pain is one of great interest and of great value. It is a great art—that of keeping one's patients free from pain,—and can only be learnt at the bedside. It requires that the surgeon shall see and examine for himself; and this necessitates an amount of personal care and attention which, in themselves and apart from all other considerations, are valuable aids in securing rest—rest and peace of mind: the mental satisfaction which hospital patients can fully appreciate and fully enjoy, of knowing and feeling themselves in the hands of a surgeon who makes their comfort, and not their mere recovery only, a matter of personal interest and personal supervision.

DR. ARLIDGE ON TRADE-DISEASES.

The Section of Public Medicine was confessedly one of the poorest features of the Bath meeting of the British Medical Association, for even the President of the Section had to deliver his address to an almost imaginary audience. And although the subject of Dr. Arlidge's remarks is one of the highest interest and importance both to the sanitarian and to the physician, it is more than possible that those members who did not avail themselves of the opportunity of listening to him may have found more congenial employment elsewhere. Dr. Arlidge, who is known to the profession as an authority on the various aspects of the diseases incident to those engaged in the pottery trades, took for his theme the relations of trades and occupations in general to health and disease—a subject, surely, of the greatest general and professional interest, but one of too great magnitude, and requiring too many details to be made sufficiently telling in the limits of a sectional address. Dr. Arlidge, in our opinion, would have not only acquitted himself to the greater satisfaction of his hearers, but would have also done himself more justice had he followed the example of the presidents of the other sections, and confined his remarks to a limited topic, on which he was personally competent to speak in detail with special knowledge and authority. Instead of this, his attempt to give a survey of the whole range of trade diseases resulted in a performance

which was at once too lengthy and too short—much too lengthy as a sectional address, and yet, as he himself confesses, only "a mere sketch" of the subject.

But the Address, though thus discursive and sketchy, will repay the attention of our readers, as being the production of one who has evidently devoted much time and attention to the important matters discussed. The introductory remarks on the rise and progress of Parliamentary action during the present century for the amelioration of factory and other operatives are alone of sufficient interest to merit an attentive perusal. Dr. Arlidge points out that since the publication, in 1832, of Thackrah's meritorious, but now obsolete, work "On the Effects of Arts, Trades, and Professions on Health and Longevity," no independent treatise on the subject has appeared in this country, the reports of Parliamentary Commissions and other Blue-books, especially those issued by Mr. Simon when Medical Officer of the Privy Council, forming the great sources of our information on the sanitary condition of artisans and their surroundings. The stores of information in these various official documents, though in a somewhat crude and not readily available form, have been of the greatest value, and we were glad to have to record the resumption, under Dr. Seaton and the Local Government Board, of investigations similar to those formerly carried on with so great success under Mr. Simon and the Privy Council. In the recently published Supplement to the sixth annual Report of the Local Government Board, we find a most interesting and elaborate report by Dr. Edward Ballard of investigations "On the Effluvium Nuisances arising in connexion with various manufacturing and other branches of industry, and on their effects on Health." As this report is a very lengthy and important one, we hope to present our readers, as opportunity occurs, with abstracts of its most interesting disclosures and suggestions.

After his introductory survey of the history of Parliamentary action on the subject—an aspect of the question which by itself would have formed ample material for a sectional address,—Dr. Arlidge proceeded to the main task he had set himself, viz., a consideration of the influences of trades and occupations upon the health of those engaged in them. But finding such a range of subjects too extended to present even a bird's-eye view of it, after a few references to the diseases incident to soldiers and sailors, to agricultural labourers, to dealers and shopkeepers, and to publicans and bakers, he entered upon a more detailed examination of the deleterious conditions and surroundings of the more strictly manufacturing or artisan class. Premising that in many cases some of the worst results are the consequences of conditions not intrinsic or necessary concomitants of the manufacturing processes, but of collateral and accidental circumstances, such as the intemperate, irregular, or uncleanly habits of the workmen, he endeavoured to summarise the chief morbific agencies affecting the particular class of operatives he had in view under the eight following heads:—The evolution of dust; the evolution of unwholesome vapours and gases; materials of an irritant or poisonous nature (as metallic poisons) acting through the system or only locally; over-heated air, whether dry or laden with moisture; compressed and rarefied air; external conditions acting upon the organs of special sense; over-exertion of particular parts of the body; and, lastly, mechanical appliances productive of bodily injury. This list probably includes all the more important deleterious agencies at work as necessary concomitants of the manufacturing processes, some of those mentioned being of much more extended influence than others. Taking up one by one, in the above order, these direct causes of trade-diseases, the lecturer endeavours to make a few remarks under the head of each, illustrating its mode of action and consequences, and mentioning the chief branches of industry in which each operates most powerfully. But here, again, the mistake of attempting too much makes itself evident by the fact that the lecturer is practically obliged to confine his remarks to the first three groups of deleterious conditions in the above summary. The first condition discussed, and assuredly the most extended source of disease resulting directly from the labour pursued, is the evolution of dust. To this condition, accordingly, Dr. Arlidge devotes a considerable portion of the remainder of his Address, bringing forward several interesting points in reference to the workmen engaged in textile manufactures and other trades in which it operates most powerfully. Under this heading he refers to his own experience and observations on the clinical and pathological history of the lung lesions of potters consequent upon the inhalation of dust, and we cannot refrain from repeating our opinion that Dr. Arlidge would have produced a more telling address by limiting himself to the consideration of such a subject as this, on which he could have given the profession his authoritative and personal experiences. He has little new to tell us in regard to the second group of deleterious conditions—the evolution of unwholesome vapours and gases. After a few remarks regarding the third group—the action of metals or other materials of an irritant or poisonous nature—which are interesting because he here takes the opportunity of going into some detail, he is obliged to dismiss the other five groups in almost as many sentences. As we have indicated, the best parts of the Address are the review of the Parliamentary action on this subject, and the remarks the lecturer gave himself time to make on the deleterious results of the evolution of dust and of metallic poisons in the different branches of industry.

THE WEEK.

TOPICS OF THE DAY.

At a recent meeting of the Council of the Metropolitan Hospital Sunday Fund, held at the Mansion House, the Distribution Committee presented their report containing recommendations for dividing the sum subscribed in June last. The number of participating charities has this year been increased from 119 to 125, and the total amount recommended to be paid was £24,460, to be apportioned as follows:—£22,992 to seventy-nine hospitals (including four institutions which may be classed as hospitals), and £2167 to forty-six dispensaries. As was arranged last year, it was proposed that any further payments should be allowed to accumulate in aid of next year's Fund. The committees of ten hospitals had been invited to send deputations to confer with the Distribution Committee, but only two institutions out of the ten had responded to the invitation, the remainder preferring to accept the award recommended without offering any explanations. The following are some of the amounts awarded to the general hospitals:—Charing-cross, £520; French, £116; German, £625; Great Northern, £156; King's College, £1041; London, £2604; Metropolitan Free, £161; Poplar, £281; Royal Free, £572; St. George's, £1562; St. Mary's, £833; Seamen's, £750; Middlesex, £1250; University College, £937; West London, £218; Westminster, £729. It was resolved that the report of the Committee of Distribution be received and approved, and that the payments be at once made; and further, that the suggestions of the Committee—giving effect to the intention of the Council on the subject—that in future the sum of 1 per cent. of the total amount of the collections be set aside for the purchase of surgical appliances, be adopted. Letters of recommendation are to be issued on application to the several contributors to the Fund, which letters, as soon as the medical authorities of any hospital or

dispensary shall have certified that the case is a fit one for relief, will enable the patient to obtain the surgical appliance required through the agency of one of the hospitals or dispensaries.

A boring for water, conducted on behalf of the Admiralty authorities at her Majesty's Dockyard at Chatham, has just been carried to a successful issue under circumstances of considerable scientific interest. The object was to reach the lower greensand, as advised by Professor Ramsay, the Director-General of the Geological Survey, who, when consulted on the subject by the Admiralty some time since, strongly recommended that the boring, which was then in the chalk, and yielded only brackish water, should be carried down through the gault, with the expectation that the lower greensand would then be reached, and a plentiful supply of good water obtained. Acting on this advice, the boring was continued, and the lower greensand has been reached at a depth of 903 feet from the surface, the water having risen so as to overflow the top of the well. Some years ago the same contractors tapped the lower greensand at Caterham, but, as the boring was very small, it was continually choked by the sand. The subject is interesting geologically, and will excite more attention when viewed in relation to the water-supply of the metropolis. A well at Loughton has also yielded an ample supply of water from the lower greensand at a depth of 1092 feet, the locality being about four miles from Waltham.

The principal residents in Muswell-hill and Fortis-green, alarmed by a recent severe outbreak of diphtheria in the locality, which they attributed to defects in the local board's drainage system, lately induced that body to apply to the Local Government Board, praying them to instruct one of their inspectors to make a full investigation into the alleged cause of the outbreak. Mr. J. Thornhill Harrison, C.E., was accordingly deputed to conduct the inquiry, and a copy of his report has been forwarded by the Local Government Board to the Hornsey authorities, pointing out the importance of their giving immediate and serious attention to the improvement of the sewerage system near Fortis-green, and to the desirability of introducing flaps at several points of their system, so as to prevent the passage of sewer-gas from the lower to the upper part of their district. It was further suggested that the freest possible circulation of air through the ventilators should be promoted, and that, when practicable, special ventilating shafts should be constructed at the dead ends of the sewers. It was also advised that the inspector of nuisances, or some other qualified person, should make a house-to-house inspection in the locality, with a view of examining the connexions with the sewers, and with the object of ascertaining their sanitary condition generally. The report and letter have been printed and circulated amongst the members of the Hornsey Board, and the subject is shortly to be fully discussed.

The Report of the Lunacy Commissioners for the past year has just been issued, and must be pronounced to exhibit results which are far from satisfactory. The total number of registered lunatics, idiots, and persons of unsound mind in England and Wales on January 1 last was 68,538, showing an increase of 1902 on the number given for the previous year. This increase is represented by 85 males and 10 females among the private, and by 774 males and 1033 females among the pauper patients. Among the private patients the increase for the year has been below the average of the last ten years; among the pauper class it has been somewhat above that rate. One feature of the past year has been the large increase of pauper patients in county and borough asylums, and their diminished number in licensed houses. This has been in a large measure due to the opening, during the year, of the third asylum for Middlesex at Banstead, and the removal to this and the two other county asylums of Middlesex of patients previously in metropolitan licensed houses. The ratio of lunatics to the population on January 1 last was 27·57 per 10,000.

Lord and Lady Rosebery last week presided at a meeting held in Glasgow for the purpose of handing over to the Royal Infirmary there a sum of £3500, the proceeds of an exhibition of paintings lent for the purpose by the merchant-princes of the town and neighbourhood. Lord Rosebery took occasion to congratulate Glasgow upon the success of so worthy and benevolent an enterprise, which might with advantage be imitated by other large towns for the benefit of their medical charities.

Our contemporary, the *Morning Post*, is responsible for the following:—"The *Saturday Review* once declared that the greatest benefactor of the human species would be he who could enable men to drink an unlimited quantity of wine without getting drunk. Such a man has been found. Dr. Bell invented the telephone, but its wonders pale before the telegastograph. This is an electrical machine by which the palate can be tickled and pleased by any flavour, and for any length of time, without fear of indigestion or inebriety. By putting fish, or soup, or wine, into a receptacle connected with a powerful battery, the taste of the daintiest viands can be conveyed along a telegraph wire for miles, and to an unlimited number of *bons-vivants*. They have only to put the wire in their mouths, and they seem to be eating and drinking. They may get drunk or overfed; but the moment the contact is broken the evil effects pass off, and nothing remains but 'a delightful exhilaration.' The inventor, however, keeps the *modus operandi* a perfect secret, and wishes to perfect his discovery before he discloses it to the world."

The medical schools in the metropolis will all open on Tuesday, October 1 next. At the Middlesex Hospital there will be an introductory address by Dr. Arthur W. Edis; at the Charing-cross, by Dr. James Pearson Irvine; at St. George's, by Dr. Thomas Whipham; at St. Mary's, by Dr. Robert Farquharson; at St. Thomas's, by Mr. Edward Nettleship; at the Westminster, by Mr. Charles Macnamara; at King's College, by Professor Garrod, F.R.S.; at University College, by Professor Lankester, F.R.S.; and at the Dental Hospital, by Mr. Alfred Coleman, the senior surgeon.

A correspondent of the *Times*, writing from Bristol, reports that somewhat exaggerated statements have been published respecting the health of Bristol. The outbreak of typhoid fever in Redland and St. Philip's has been clearly traced to the supply of contaminated milk; but, including the four deaths which have occurred from this cause, the rate of mortality has been very low, though numerous cases have occurred.

From the last returns it appears that the fatal cases of small-pox in London had declined in the course of the week to 9, the lowest number recorded since November last. This return also included 27 deaths from scarlet fever, 11 from diphtheria, 17 from different forms of fever, and 263 from diarrhœa. The average mortality was 22 per 1000.

THE PROFESSIONAL REPORT ON THE SEAMEN'S HOSPITAL, GREENWICH, FOR LAST YEAR.

The senior resident medical officer at the Seamen's Hospital, Greenwich—Mr. Johnson Smith, F.R.C.S.,—has prepared a general report of the cases under treatment at the Hospital during the year 1877. The number of patients admitted during the year was 2077, 927 of these passing into the medical wards, and 1150 into the surgical wards. In-patient

treatment was afforded to 149 persons who could not be classed as seamen; and in almost every instance there was urgent need for relief, as the applicants were suffering from severe injuries recently received. The report comments on the satisfactory circumstance that during last year only ten boys were received from the training-ships on the Thames, as against seventy-two in 1876, sixty-five in 1875, and forty-two in 1874—a result which may be attributed to very careful attention to hygiene. The cases of sea-scurvy admitted were twenty-four, one of which terminated fatally. Comparison with the records of previous years shows that there was during this year an increase in the number of vessels on which such conditions are allowed to exist as are favourable to the development of this preventable disease. The table of medical cases treated during the year, compared with those of previous years, shows a high rate of enteric fever, and indicates a considerable and increasing prevalence of this severe affection among merchant seamen. The admissions for dysentery were less, but the proportion of fatal cases was greater. The list of fatal diseases for 1877, as in previous years, is headed by pulmonary phthisis, twenty-six out of 120 deaths having been attributed to this cause. The number of fatal cases of injury is high, and exceeds the combined numbers of deaths from similar causes for the two preceding years. In six out of these seventeen fatal cases death was due to extensive burn or scald, and in seven to fracture of the skull. In two of the four cases of pyæmia that occurred during the past year the primary affection was a small suppurating cavity due to disease—of a scrofulous nature in one instance, of syphilitic in the other; in one case the pyæmic condition was associated with acute disorganisation of the wrist-joint after injury; and in the fourth case the attack commenced three weeks after an operation for the removal of some dead bone from the thigh. In not a single instance in the course of the past year were any symptoms of pyæmia, or even of severe traumatic fever, observed in association with wounds made and treated under conditions supposed to be antiseptic.

MEDICAL OFFICERS OF HEALTH AND THEIR DIFFICULTIES.

Dr. McGrigor Maclagan, the Medical Officer of Health for the Hexham Rural Sanitary Authority, in his fourth annual report on the sanitary condition of the district, calls attention to the difficulties in which medical officers of health are placed through not having the power either to close schools when infectious disease attacks the pupils, and when children come from infected houses, or to refuse the latter admission. Nevertheless, he is of opinion that in some cases in country places there is less danger in children attending school than when they are relegated to their own houses. In country districts children are generally obliged to go a considerable distance to school from their own homes, and are thus freely exposed to the atmosphere before reaching the schoolhouse; but if the school be broken up, and children consequently kept at home, they mix freely with their neighbours, and thereby run more danger of incurring disease than when attending school. Another great source of contagion, Dr. Maclagan points out, and one with which medical officers of health are powerless to deal, is shops. He states that he has frequently known cases of scarlatina and other infectious diseases occurring in houses connected with shops, where the owners would come directly from the sick-bed of a relative to serve customers; and this, he thinks, affords a conclusive proof of the extreme necessity for medical officers of health being compulsorily informed of all outbreaks of infectious disease in their districts, either by the medical attendant, or, better still, by the occupier of the house in which the disease occurs. Another suggestion of Dr. Maclagan's is, that valuable aid would be accorded to medical officers of health by a systematic registration of disease, namely, the knowledge of its geographical distribution. Such knowledge cannot be obtained from the death-register, for all diseases are by no means fatal; and when they are so, the death-register only indicates where the fatal termination took place, without any reference to where it originated; and it must be very apparent that this may be a great source of fallacy in estimating the healthfulness of a locality. The attention which Dr. Maclagan bestows on the subject renders these and other suggestions which appear in his report well worthy of consideration for increasing the efficiency of the aid rendered to sanitary science by medical officers of health.

THE CAUSE OF BRONCHOCELE.

The etiology of bronchocele still remains obscure. The old theory which attributed thyroid enlargement to magnesio-calcareous soils should be accepted with great diffidence. Thus Dr. J. Dudgeon writes that, in China, goître is frequently found in the absence of the supposed ordinary producing causes. M. Nivet says (Dr. Dobell's "Reports on Diseases of the Chest," vol. iii.), not only that, in the Puy-de-Dôme, bronchocele is rife in certain districts the substratum of which is neither calcic nor magnesic, but also that, in some localities the subsoil of which is magnesio-calcareous, this disease is almost unknown. Without absolutely denying the influence of a magnesic or calcic soil upon the development of goître, M. Nivet believes that this affection results from the conjunction of various causes, such as low and damp localities, and possibly some rheumatic affection of the vaso-motor nerves of the thyroid gland. Dr. Braxton Hicks supposes both exophthalmic and single goître to be the results of local congestions. The tendency to local congestions being greater in women, this circumstance accounts for the greater frequency of both these affections in the female. Lastly, Professor Klebs considers the *navicula* developed in drinking-water the only cause of the disease in Salzburg, in which city dogs often have goître.

INDIAN MEDICAL SERVICE.

The following is a list of the candidates for her Majesty's Indian Medical Service who were successful at the competitive examination held at Burlington House on August 12:—

1. I. H. Sweeny	2261	8. W. P. Carson	1965
2. D. F. Barry	2252	9. H. B. Briggs	1954
3. G. F. A. Harris	2247	10. C. G. W. Lowdell	1940
4. I. Anderson	2245	11. A. S. Faulkner	1760
5. C. J. Bamber	2218	12. C. Mallins	1640
6. E. H. Dumbleton	2120	13. R. M. Allen	1530
7. M. O'Dweyer	1997	14. E. M. Damla	1490
		15. H. St. C. Carruthers	1472

Twenty-one candidates competed for fifteen appointments; nineteen were reported qualified, two having retired during the examination.

SOCIETY OF PUBLIC ANALYSTS.

The annual meeting of this Society was held at the Royal College of Surgeons of Ireland on Monday, August 19; Dr. Wallace, Public Analyst of Glasgow, presided. Dr. C. A. Cameron read an interesting paper on "The Inconstant Composition of Well Waters." Two samples of water drawn from the same pump were widely different—one drawn from a great depth being hard and good; the other, drawn from near the surface, being soft and bad, owing to the percolation of surface drainage. Dr. Allen, Public Analyst of Sheffield, said that Dr. Cameron's discovery would go far to explain some of the supposed discrepancies in the analyses of samples of the same water by different analysts. Dr. Estcourt, Public Analyst of Manchester, read "Notes upon the Desirability of Fixing by Analysis some Standards of

Value for Beer." Other papers were read—by Dr. Cameron, on "The Solubility of Plumbic Iodate"; by Dr. Wigner, on "The Nitrogen Compounds present in the Cereals"; by Dr. Allen, on "The Distinctive Tests for Carbolic Acid, Cresylic Acid, and Creasote." A ballot for new members having taken place, the proceedings terminated with a vote of thanks to Dr. Wallace for presiding.

TREATMENT OF THE PYREXIA OF PHTHISIS.

Amongst numerous contributions to the treatment of phthisis, analysed in Dr. Dobell's "Reports on Diseases of the Chest," vol. iii., we have collected the following means of combating the febrile state. With this object Dr. R. Bartholow gives atropia. Against troublesome cough morphia may be combined with atropia; and in the case of vomiting, strychnia may be given in the same prescription. In this country Dr. McCall Anderson combats the sweating with subcutaneous injections of atropia; and the high temperature with the internal use of quinine, digitalis, and opium, conjoined with the use of iced cloths. Against the sweats Dr. Fothergill also prescribes belladonna, by itself or combined with opium. In some cases, however, this physician prefers oxide of zinc with hyoscyamus; and Dr. Hayden holds Dover's powder a better anhydrotic than belladonna. Observing that in advanced phthisis hectic depends on purulent absorption, Dr. Douglas Powell has prescribed sodic salicylate. The antiseptic treatment of phthisis is also in favour in Germany, where Dr. J. Schnitzler and Dr. J. Hirschfelder have succeeded in reducing the fever and the sweats by means of hypodermic injections of hydric-carbolate. In Italy, Dr. Antonio Lombardo assigns the following effects to the treatment of phthisis with *Silphium cyrenaicum*:—The expectoration is much facilitated; the dyspnœa is diminished, and the circulation becomes more regular; while no digestive disturbance results from its administration.

THE YELLOW FEVER EPIDEMIC IN AMERICA.

Our readers will have seen by the daily newspapers that a most alarming epidemic of yellow fever has now for some weeks been raging in the Gulf States of the American Union. The State of Louisiana has been the great scene of the pestilence, the mortality in the city of New Orleans having been fearful. But the epidemic was also soon conveyed up the Mississippi River to Grenada (Mississippi), where a perfect panic occurred, the whole population except about 700 (of whom 100 were smitten with the disease) having speedily left the town. The telegrams of last week stated that the mortality in Grenada was increasing, that the railways and steamboats were crowded with fugitives from the fever-stricken cities, and that physicians, nurses, and provisions were being sent from New York. Later telegrams continue to show a most serious state of affairs in Louisiana. From New Orleans it was reported on the 27th inst. that the deaths from yellow fever for that day alone were at New Orleans forty-nine, at Memphis thirty-three, and at Vicksburg twenty-four. We were glad to see that at Liverpool, which has so large trade relationships with the Gulf States, a meeting had been held on the 28th inst. for the purpose of raising a fund for the relief of the sufferers by this alarming and still increasing epidemic.

Testimonial to Prof. von Arlt.—The celebrated ophthalmologist, Hofrath Prof. von Arlt, has recently received at the hands of a deputation of former pupils an album, which is a splendid work of art, prepared under the direction of Prof. von Stork. It contains the photographs of more than 200 former pupils.—*Wien. Med. Zeit.*, August 1.

DUBLIN MEETING OF THE BRITISH ASSOCIATION.

THE SECOND WEEK.

Dublin, August 26.

Meetings of the Sections—Public Lecture by Professor Dewar on "Dissociation, or Modern Ideas of Chemical Action"—Banquet by the Lord Mayor of Dublin—Dinner at the College of Physicians—Conversazione at the Royal College of Surgeons—Breakfast at the Zoological Gardens—Conversazione at the Royal Irish Academy—Excursions—The Inchicore Railway Works—Mr. Howard Grubb's Astronomical Works.

The sections resumed on Monday, August 19. In the Mathematical and Physical Science Section an interesting paper was read by Mr. Ladd on Edmunds' "Phonoscope," which is an instrument whereby sounds are made visible, the vibrations of sound causing flashes of light in a rotary vacuum-tube connected with an induction-coil. Mr. Richard Anderson, F.C.S., made a very valuable and practical communication on "Lightning-Conductors and Accidents by Lightning." In the Chemical Science Section, Mr. W. L. Carpenter, B.Sc., read a paper entitled "Notes on Water from the Severn Tunnel Springs."

In the Department of Anthropology (Biological Section), Professor Huxley presiding, Professor W. H. Flower, F.R.S., read a paper on the "Methods and Results of Measuring the Capacity of Crania." He said that, of all the measurements by which they could determine the difference between the skulls of different individuals of any race, perhaps the most important was that which gave the cubic capacity of the great cavity which contained the brain. The largest capacity in any human head that he had measured was that of a race of long-flat-headed Indians on the West Coast of Africa, which gave 1589 cubic centimetres. The Laps and Esquimaux, who were only small people, had very large skulls. The latter gave a measurement of 1546 as the average capacity. They then came to the English skull, which was of nearly the same size, 1542; but, as he had said, these belonged to the lower grades of English skulls. He could tell them nothing about the Irish skulls, for there was not a single specimen of an Irish skull in the London museum. (Laughter.) The President had just suggested that they were always broken. (Loud laughter.) The inhabitants of the Canary Islands gave the capacity of 1498; the Japanese, 1486; the Chinese, 1424; the modern Italian, 1475; ancient Egyptian, 1464; the true Polynesians, 1454; negroes of various kinds, 1377; the Kaffirs, 1345; Hindoos, 1306. They then came to the Australians, about the smallest they had got; they gave an average of 1284. They had only two races below the Australians, and they were the Andamanese, who were a very diminutive people, not above five feet high, the capacity of the skull being 1220; and the Veddahs of Ceylon, who had the smallest average capacity of all, 1205.

Professor Daniel Wilson, F.R.S.E., of Toronto University, read a paper on some "American Illustrations of the Evolution of New Varieties of Man." Dr. H. Muirhead made a communication on "Left-handedness." He thought it depended on which half of the brain took the lead. Left-handedness once begun in a family was likely to run in it. It was a curious fact that left-handed people had the left foot one-third to one-eighth of an inch longer than the right.

In the Department of Anatomy and Physiology, Dr. M'Donnell presided. Professor Silvanus P. Thompson, D.Sc., read a paper on "Phenomena of Binaural Audition." Mr. G. F. Fitzgerald, M.A., F.T.C.D., read an able paper on "The Theory of Muscular Contraction." Mr. C. J. Romanes, F.L.S., contributed an interesting paper descriptive of the "Nervous System of Medusæ or Jelly Fish."

In the Section of Economic Science and Statistics, Dr. Joseph Lalor read a paper on the use of education and training in the treatment of the insane in public lunatic asylums, and gave an interesting account of the system pursued in the Richmond District Lunatic Asylum, Dublin.

On Tuesday, in the Chemical Section, Professor C. R. C.

Tichborne described the action on boilers of the Vartry water, which supplies Dublin. He would remind his audience of the general composition of this water, which might be stated to consist of organic matter of a peaty nature 1·6 to 2 grains per gallon, and mineral matter 2·5 grains per gallon—chiefly consisting of chlorides of alkaline and the alkaline earths in equal proportion. The hardness was nearly all permanent, as there was but a trace of carbonate present. The point he wished to draw attention to, however, was the presence of nitrates and nitrites. The first was always present, the latter occasionally in the summer and autumn months. It was present when last tried on August 3. He had never seen any published analysis which mentioned the existence of these acidulous radicals. As his object was to determine the condition of the nitrogen salts, and as heat seemed to reduce nitrates when occurring in this water, he had recourse to evaporation by the aid of a vacuum and sulphuric acid, the test he used being the brucia test—an extremely delicate one if properly applied. For his nitrates he used a thin starch solution, made with a little dilute glycerine to keep it, and a solution of tartaric acid, preserved by a little salicylic acid, the iodide of potassium being carefully purified from iodate. The solutions kept very well and were reliable. The iodide should be dissolved as required. The Vartry water did not give indications with the tests as a rule without concentrating it. The results of his experiments on August 3 were—1. Water evaporated to one-third at 100° C. gave a very striking indication of nitrites besides nitrates. 2. Evaporated in a vacuum it gave no indication. 3. Evaporated to a quarter it gave an indication of nitrites and nitrates. When these salts were rapidly concentrated, as they were in the feeding of high-pressure steam boilers, the nitrogen salts became very serious items of corrosion, owing to the case with which the acidulous radicals were dissociated at high temperatures. He exhibited a boiler-plate which was not eaten away by the corrosive action of water, but the corrosion was done by the steam itself of the Vartry water.

Before the Department of Anthropology, M. Henri Martin, the French historian, read a paper in French, entitled, "Les Races anciennes de l'Irlande; utilité de l'étude des traditions qui les concernent pour l'ethnographie de l'Europe primitive."

In the Department of Anatomy and Physiology, Dr. Allen Thomson, F.R.S., showed a number of sacra exemplifying their regularity as the cause of the oblique pelvis. He referred to similar developmental irregularities in the lower animals, and exhibited one specimen—namely, the skeleton of a wombat—in which the irregularity was one-sided, the common cause of the oblique pelvis in the human subject. A paper by J. A. Wanklyn and W. J. Cooper, "On a Direct Method for Determining the Calorific Power of Alimentary Substances," was also read.

On Wednesday, the last day on which the sections met, the most interesting business was probably that in the Mechanical Science Section. After the conclusion of a discussion on the drainage of the Shannon, Mr. James Price, C.E., read a paper "On the Use of Wind-Power for Raising Water; and the Disposal of Sewage and Drainage, with special reference to Ireland." The average force exerted by the wind all over Ireland equalled 360,000,000 of horse-power. The Hon. R. C. Parsons described a system of ventilation by means of fans and punkahs, worked by compressed air. Mr. Parsons illustrated his communication by means of a very interesting working model. The method he recommended was highly suitable for hospitals. Mr. Parke Neville, Engineer to the City of Dublin, gave a description of the Vartry Waterworks, illustrating his remarks by means of a large map. He mentioned that the total cost of the system up to the present had been £621,240. About 14,000,000 gallons of water were supplied daily to the city of Dublin and its suburbs.

On Monday evening, Professor Dewar, of Cambridge, gave a public lecture in the Exhibition Palace, "On Dissociation, or Modern Ideas of Chemical Action."

The concluding general meeting was held on Wednesday afternoon in the Old Museum of Trinity College. The Assistant-General Secretary announced that 2578 tickets had been taken, being the sixth largest meeting the British Association had ever held.

There were numerous entertainments during the second week of the meeting, the first week having closed with a banquet to some 500 guests by the Lord Mayor at the Mansion House. On Monday the King and Queen's College of Physicians entertained at dinner in their Hall at Kildare-street a very numerous party of distinguished guests. On the same evening the Royal College of Surgeons held a *conversazione*, at which ladies as well as gentlemen were present. The President and Council of the Royal Zoological Society of Ireland entertained some sixty guests at breakfast on Monday morning in the Zoological Gardens, Phœnix-park. After breakfast the Rev. Professor Haughton, as Honorary Secretary, made a very characteristic speech. On Tuesday evening the Royal Irish Academy held a *conversazione*, which was attended by most of the members and associates present at the meeting.

Numerous excursions on Thursday and Friday brought the highly successful session of 1878 to a close. But among the many instructive incidents of the visit of the Association to Dublin should be mentioned the inspection of the wonderfully extensive railway works of the Great Southern and Western Railway of Ireland at Inchicore, near Dublin, and of Mr. Howard Grubb's astronomical works at Rathmines. Here the largest refractor ever attempted is now in process of construction. This instrument is twenty-seven inches clear aperture, and will be erected, when complete, at the new Imperial Observatory at Vienna, which institution Mr. Grubb is also fitting up with all its domes and machinery. Three great domes as large as that in the Greenwich Observatory have already been despatched, and the steel dome, forty-five feet in diameter, which is to cap the great equatorial room in Vienna, is now complete, and ready for despatching. This is the largest observatory roof in the world. This ponderous roof of fifteen tons weight can be moved round by a single hand. In these works within the last few years more than £15,000 worth of astronomical instruments have been manufactured for Germany alone.

FROM ABROAD.

Suicide in India.

The July number of the *Indian Medical Gazette* contains an interesting article upon this subject, based upon a paper read at the Bengal Social Science Association, the period embraced being 1872-76. The first point brought out is that the rates of suicide vary considerably in different presidencies and provinces. The average rates per million for both sexes rendered during this period were—Punjaub, 12·7; Bengal, 31·3; North-Western Provinces, 48·2; Bombay Presidency, 49; Oudh, 51·4; Madras Presidency, 65·6; and the Central Provinces, 70·5. Figures were not collected in Burmah, Assam, the Berars, or any of the Native States. The rate for England, as shown by the Registrar-General's Reports, were 66·2 for the five years 1871-75. Indian rates, therefore, are on the whole lower than English; but how far this may be due to imperfect registration it is impossible to say. But, whatever be the rate of any presidency or province, whether high or low, successive years repeat it very closely, although not so closely as in England. In every province some few districts are found which yield habitually excessively high rates. Thus, while in the province of Bengal the average was 31·3 per million, the following were the averages of five districts:—Pooree, 100·7; Cuttack, 85·2; Nuddea, 71; Patna, 56·7; and Gyn, 49·5. Similar results were obtained in every other province. The reason of this unequal incidence would need for its explanation a special study of the social peculiarities of these districts as compared with others: for the regular recurrence of the phenomena is not to be accounted for by any imperfection or eccentricity of registration. Towns, too, are found to render higher suicidal rates than country areas. London gives a rate of 82·8, against 66·2 for England; Calcutta 77·6, against 31·3 for the province of Bengal; the town of Madras 94, against 65·6 for the presidency; the town of Bombay 90·1, against 49 for that presidency. Registration is more perfect in towns, but the figures probably represent a true social law, and the excess depends, no doubt, on the greater poverty and vice of towns, and the higher pressure on individuals of social influences.

But the most remarkable fact brought out is the excess deaths by suicide among females, as compared with males. n England, for every 100 male suicides there are 33 female, hile in India the proportions are reversed, being, in round umbers, 100 males to 150 females. Considering the uniersal tendency in Indian statistics to understate the vital tatistics of females, there can be no doubt of the truth of he conclusion established by these figures, namely, that, hether from inherent infirmity or from exceptional pressure f social influences, females in India are more prone to ommit suicide than males; and in districts where the uicidal rates are proportionately high, the proportion of emale suicides also rises.

As regards the methods adopted there seems to be a conderable variation in different parts of the country. In England, among 100 suicides, 27·8 hang themselves, 25·1 ut their throats, etc., 22 drown themselves, 10·8 poison hemselves, 5·9 shoot themselves, and 8·4 commit the act in ther ways. Women are relatively more prone to drowning, anging, and poisoning, and men to shooting and wounding. n India, shooting and wounding are everywhere less comnon, and less so among women than among men. Hanging, oisoning, and drowning are the three commonest modes, and he percentages vary in the different provinces. Thus, in Lower Bengal hanging is the prevalent method, more particularly among women. Poisoning by opium is the custom of Behar and parts of the North-Western Provinces and Oudh, more especially in districts where the poppy is grown. In the Punjaub drowning becomes more common, but hanging still maintains its ascendency. In the Madras and Bombay Presidencies, drowning assumes remarkable predominance, more especially among women. Hanging shows a smaller figure, and poisoning, except in the presidency towns, declines in frequency. A very marked excess of suicides takes place in the hot as compared with the cool and cold months of the year. Taking the six months October to March, the suicides occurring in them are, in round numbers, 40 per cent., as compared with 60 per cent. in the six months April to September. As might be expected, famine and disease stimulate the suicidal propensity; and Dr. Cornish states that the number of suicides in 1877 was 2575 against a quinquennial average of 1970 for 1872-76. In Lower Bengal, suicide is frequently attributed to abdominal distress caused by colic, enlargement of the spleen, or worms.

"Apart from physical influences which affect the comfort and value of life, and cause bodily distress and pain, there are religious and moral influences at work in India which predispose to suicide. The practice of *sumajh* or leper-burial, which is not yet extinct in some parts of India, was really a species of suicide sanctioned by society and the priesthood; and so was *suttee* or widow-burning; and various descriptions of torturing, mutilation, and sacrifice, under the influence of religious asceticism or enthusiasm, fostered a general suicidal propensity which survives the practices themselves, now happily a matter of history. The preponderance of female suicides is, no doubt, due to a survival of the *suttee* feeling, and to the social degradation of women in India. The slight provocation under which they commit self-destruction indicates a low moral tone. There is a curious class of suicides common in Eastern nations, and more common now in China and Japan than in India—namely, suicides for revenge. The idea underlying these is that the responsibility for the destruction of life is laid upon the person furnishing the provocation to the act. Brahmans used, under the influence of this feeling, to mutilate and kill themselves, or members of their families; and this was so common a practice that Government was compelled to pass a special law to repress it."

Chronic Alcoholism.

From a clinical lecture delivered upon two cases of chronic alcoholism by Dr. W. H. Thompson, Professor of Materia Medica and Therapeutics in the University of the City of New York, and reported in the *Philadelphia Med. Times*, May 25, we extract some useful observations on the symptoms and diagnosis.

With regard to the *tremor* observed in these cases, it is to be distinguished from that attendant on paralysis agitans by its not being accompanied by the characteristic walk of that disease, an alteration in the gait being a very early symptom associated with the commencing tremor of paralysis agitans. It is caused by a tendency to throw the body forwards, so that the patient walks on his toes. The feet, however, are not lifted from the ground, and thus a shuffling gait is produced. The soles of the shoes always give out at the toes first. Another characteristic feature of this gait is, that although the body is thrown forward, the head is carried erect and looking steadily forward, there being an instinctive effort on the part of the patient to balance himself carefully in walking. On the other hand, when there is commencing locomotor ataxia, the patient puts his heels down first in walking, while if there is paraplegia present, he walks with what is called a "spreading gait," separating his feet as far as possible, to get a broader base of support. The gait in hemiplegia is also highly characteristic, as in it the foot (unless of hysterical origin) upon the affected side is brought round with a swing in walking, describing in a well-marked case a complete semicircle. In hysterical paraplegia the paralysed limb is dragged after, and not swung round the other. In this affection the paralysis that is present is not local as in paralysis agitans, locomotor ataxia, progressive muscular atrophy, and true hemiplegia, but is of a general character; nor is the tremor violent as in paralysis agitans, resembling in chronic alcoholism the tremor of old age. The tremor affects all the muscles and is usually associated with more or less atrophy. This, also, unlike that seen in progressive muscular atrophy, is uniform in all parts of the body. Alcoholic tremor can always be stopped in the hand by your grasping it firmly, while if the tremor were that of paralysis agitans, your hand would also be caused to shake by it.

Another symptom to be noted is the *fear of falling*. It is a curious fact that this does not belong to either locomotor ataxia (except perhaps at night) or paralysis agitans. Although patients with both of these affections are very liable to fall, they do not seem to experience that fear of it which is exceedingly characteristic of alcoholism. If a patient tells you that he is frequently afraid of falling in the street (and yet has no true vertigo), you will be justified in at least suspecting this condition. This sensation of falling not unfrequently comes over such persons while walking, and frightens them to such an extent that a cold perspiration starts out all over them. It often precedes alcoholic epilepsy, in which the mind gives way more quickly perhaps than in any other form of epilepsy. Many patients have insanity in connexion with the epilepsy; but, whether this is the case or not, they always experience this fear of falling first. *Dizziness* (with temporary derangement of vision, but unattended with abnormalities), which is especially remarkable after bending or stooping down, is another characteristic of alcoholism, and gives rise to the fear of falling. It is usually first observed after the person has stooped to tie a shoe or pick up something. In chronic alcoholism the *appetite* is very bad, the patient not being able to take a full meal, being satisfied by a few mouthfuls. This distaste for food constitutes so general a rule that the symptoms of delirium tremens always depend to a great extent upon previous starvation. "I have scarcely ever seen a case of this affection where the patient had not been practically without food for six or eight days, and never one where this had not been the case for at least four days. I have met with one well-authenticated case in which the man took no food for fourteen days; and indeed it is a wonder how such patients continue to live at all. Every individual who takes much alcohol has great difficulty in eating sufficient food for the requirements of the system; and hence it is that the atrophy which is so invariably found in chronic alcoholism is due in great part to starvation." These patients also are much troubled with flatulence. They have a marked distaste for meat, and if they eat it at all, require it to be highly seasoned. *Poor sleep* is an invariable symptom, the patient not only being unable to get to sleep at all for a long time, but also dreaming a great deal, the dreams never being pleasant ones. Hence what sleep he has is unrefreshing. When an individual states that he has had a poor appetite for years, and cannot sleep, suspicion of alcoholism ought to be aroused. More or less *constipation* is a pretty constant symptom. The *cough* observed in these cases is peculiar, as it is mainly laryngeal. It has a decidedly whistling sound, and is about as characteristic of the condition as the loud bark of hysterical cough. It may be very severe, causing the patient to become red in the face, but it is followed by no trouble afterwards, and is therefore easily distinguishable from the cough in phthisis or bronchitis, which is always

followed by quickened respiration, due to the diminution of the residual air. In chronic alcoholism the cough is simply due to an irritation of the epiglottis, and is accompanied by a diffused redness of the fauces. In bronchitis the cough often wakes a patient out of his sleep, but in alcoholism he does not cough until after he has waked up.

"I have brought these two cases before you, and dwelt at length upon their characteristics, mainly for two reasons. The first is, in order that you may be able to recognise similar ones when they occur, notwithstanding that the fact of drinking may be denied. These patients are as sensitive about saying that they are at all intemperate as others are about acknowledging that they have had syphilis; and not infrequently they deceive themselves, for they seem to think that if they do not get intoxicated the use of alcohol is not injurious to them. The second reason is, to remind you of the curability of a great many of the cases of alcoholism. The first essential in the treatment is to get the patient to stop the use of alcohol at once and for ever; and unless you can do this there is no use in going on with the case. For the tremor, the oxide of zinc acts almost like a specific. It is also decidedly soporific in its effects, and has, moreover, the advantage of curing the gastritis which is usually present in these cases, and this greatly improves the digestion. Finally, it is necessary that you should get the patient to eat; and at first milk is often the best form of diet. Food is the only thing that can stop the craving for alcohol: and so firm is my confidence in it as an antidote to this, that I do not hesitate to say that if an individual will never take alcohol except when he is eating, I have not the slightest fear of his ever becoming a confirmed drinker. It is the drinking between meals, and especially early in the morning, that does all the mischief."

GENERAL CORRESPONDENCE.

WHAT TO DO WITH A HALF-DROWNED MAN.

[To the Editor of the Medical Times and Gazette.]

Sir,—Will you or any of your readers enlighten me on a point of much importance connected with the treatment of the apparently drowned? I am acquainted with the methods of Drs. Marshall Hall, Sylvester, and Howard, and I must say, for some reasons, I should prefer that any instructions issued by the Royal Humane Society should be based upon the latest method; for Dr. Howard limits to one hour the time during which the medical man should continue his exertions. It has become traditional that cases of recovery have taken place after five hours' incessant work; and there is in the *Medical Gazette* of December 23, 1846, a record of recovery from drowning after eight hours' perseverance on the part of the medical man. I imagine there must have been encouraging symptoms in some of these cases which led the medical attendants to continue their exertions so long; for in the majority of instances I really think that a medical man might honestly give up his attempts to restore a drowned person after one hour of continued exertion. The public at present consider that in every case of drowning the medical man should continue his exertions while a single spectator remained to have his natural curiosity gratified during the interval of idleness between breakfast and dinner, or dinner and supper. I have been accused of inhumanity, because I would not oblige a company of idle excursionists by going through "the performance" in a case where the cuticle of the drowned man had peeled off, and part of the features had been destroyed by fish! I therefore should be glad to see, in the regulations of the Royal Humane Society, a limit mentioned which would satisfy the ignorant, and leave the medical man free to give up a hopeless case within a reasonable time; and so far I agree with Dr. Howard. But there is at the very outset of that gentleman's directions an order which confuses and puzzles me. He seems to me to upset all former scientific theories as to the reason why men are drowned, and their state when drowned, and therefore how they should be treated when found drowned. In olden time, before science dawned, the populace hung up a drowning man by the heels, let the water run off, and then they rolled him on casks. Science stepped in, and forbade that the patient should be turned upside down. The new theory was that water never entered the windpipe, and that recovery could only be hoped for from attempts to restore breathing by artificial respiration. In Dr. Druitt's "Vade Mecum," for instance, I am told to let the drowned man's head hang down for two seconds, to enable any water to run out of the mouth. Even this concession to public opinion is not always found, for I see in "Swain's Surgical Emergencies" that I am to remove from the mouth all dirt, saliva, etc., but nothing is said about water in the air-passages at all. Now comes Dr. Howard, and, if he be right, then the original *vox populi* was right, and patients should once more be hung up by the heels, and the body should be drained before artificial respiration was attempted. Common sense and science would work together, and excursionists and doctors might each take a share in the recovery of the drowned. Dr. Howard says—"Press with your weight two or three times for four or five seconds each time upon the patient's back, so that the water is pressed out of the lungs and stomach and drains freely downwards out of the mouth." Is Dr. Howard right? Has a post-mortem examination ever shown the trachea and bronchial tubes filled with water after death by drowning? Does the mechanism which prevents the passage of fluid down the windpipe fail in a drowning man? Is the man drowned because he can get no air? If so, artificial respiration seems the first consideration. But if he be drowned because the trachea is blocked with water, hang the patient up by the heels before you attempt anything else. All I ask for is decisive instruction as to "the first step" in the recovery of the apparently drowned. I want to know the reason why, when everyone says not a moment is to be lost, and Dr. Druitt will spare only two seconds to drain the mouth, and Mr. Swain not one, Dr. Howard should allow me to spend as much as fifteen seconds in emptying the drowned man's lungs.

I am, &c.,

Your Seaside Correspondent.

MEDICAL NEWS.

University of Dublin.—At a special meeting of the Senate of Trinity College, held on Tuesday, August 20, under the presidency of the University *Caput*, the degree of Doctor of Laws (LL.D.) was conferred *honoris causâ* on the following twelve distinguished members of the British Association:—

Spottiswoode, Gulielmus.
Smith, Henricus Johannes Stephanus.
Janssen, Petrus Julius Cæsar.
Simpson, Maxwell.
Williamson, Alexander Gulielmus.
Evans, Johannes.
Lubbock, Johannes (Baronettus).
Hooker, Josephus Dalton (Eques Auratus).
Flower, Gulielmus Henricus.
Huxley, Thomas Henricus.
Thomson, Wyville Carolus T. (Eques Auratus).
Thomson, Jacobus.

Each candidate was presented by Dr. Webb, Q.C., Professor of Laws in the University, who delivered a Latin speech, setting forth the claims of the several candidates for degrees. Of Professor Flower he said: "Praehonorabilis Pro-Vice-Cancellarie totaque Universitas—Praesento vobis Gulielmum Henricum Flower, Professorem, Chirurgiae apud Londinenses florem—in Anatomia Comparativa facile principem. Huius in re Physiologica libros, tractatus, varia denique ὑπομνήματα longum est enumerare; nec necesse est ἐν ἐιδόσιν μακρήγορειν." And of Professor Huxley: "Praesento vobis Thomam Henricum Huxley—hominem vere physicum—hominem facundum, festivum, et venustum—hominem nihil (modo philosophia suam lucem praeferat) reformidantem—ne hercule illud quidem Ennianum.

"'Simia quam similis, turpissima bestia, nobis!'"

Apothecaries' Hall, London.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, August 22:—

Evans, Edward Prichard, Llanfaben, Glamorganshire.
Woodman, William Edwin, Linslade, Leighton Buzzard.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Turton, James, Charing-cross Hospital.
Sanders, John William, Guy's Hospital.
David, William Washington, Guy's Hospital.
Epps, Franklin, University College.
Bedford, Walter George Augustus, St Bartholomew's Hospital.
Payne, Charles Alexander, St. Bartholomew's Hospital.
Aldridge, William Edward, Birmingham Hospital.
Clarke, Walter James, Birmingham Hospital.
Bullock, Joseph Ernest, University College.

NAVAL, MILITARY, &c., APPOINTMENTS.

DIA OFFICE.—MADRAS MEDICAL ESTABLISHMENT.—Surgeon James Atkinson West Spence, to be Surgeon-Major.

BIRTHS.

RIETZCKE.—On August 20, at Portsmouth, the wife of Henry Brietzcke, F.R.C.S., of a son.

ATT.—On August 17, at 215, Camden-road, N.W., the wife of Edward Batt, M.D., of a daughter.

UTLER.—On August 21, at Ormonde House, Guildford, the wife of T. M. Butler, M.R.C.S. Eng., of a daughter.

UDGEON.—On June 17, at Pekin, China, the wife of John Dudgeon, M.D., of a son.

ITZGERALD.—On August 17, at Bedford-hill, Balham, the wife of J. G. Fitzgerald, M.D., of a son.

RODSHAM.—On August 21, at Denham House, Upper Streatham, the wife of John Mill Frodsham, M.D., of a daughter.

ORD.—On August 26, at Woodford House, Armagh, the wife of R. G. Lord, M.D., Deputy Surgeon-General, Indian Medical Department, of a son.

OTTE.—On August 19, at Carlton-crescent, Southampton, the wife of Peter W. de la Motte, M.R.C.P., M.R.C.S. Lond., of a son.

OAD.—On August 23, at Chesham Lodge, Lower Norwood, the wife of Henry Carden Noad, L.R.C.P. Lond., M.R.C.S., of a daughter.

AIRMAN.—On August 25, at 42, Robert-street, Hampstead-road, the wife of Robert Pairman, M.D., of a son.

MARRIAGES.

OX—TIDCOMBE.—On August 22, at Crewkerne parish church, Albert George Cox, M.R.C.S.E., of Crewkerne, second son of the Rev. J. Cooke Cox, LL.B., of Eleigh Water, to Rosina Bradford, elder daughter of Captain J. J. Tidcombe, 20th Somerset R.V.

UKE—THOM.—On August 20, at St. Mary's, Paddington-green, George Amos Duke, M.R.C.S., of 9, Cornwall-road, Bayswater, to Julia Janet, fourth daughter of Wm. Thom, M.D., of 87, Harrow-road, Paddington.

ARMAN—SKEFFINGTON.—On August 22, at Ilfracombe, Rodolph Harman, M.B., Staff-Surgeon, to Ada Blennerhassett, fifth daughter of the Hon. Chichester T. Skeffington, county Antrim.

UNT—PARKER.—On August 24, at Southsea, Alfred Hunt, M.R.C.S. Eng., of the Bridge-road, Hammersmith, to Alice, younger daughter of the late S. J. P. Parker, M.D., of 107, King-street, Hammersmith.

ISTER—BURRILL.—On August 22, at the parish church, Masham, Yorks, Edward Lister, L.R.C.P. Edin., M.R.C.S. Eng., L.S.A., of Haydock Lodge, Ashton-in-Macclesfield, Lancs, to Elizabeth Lucinda, elder daughter of the late William Burrill, of Masham and Liverpool.

ARSONS—CAY.—On August 21, at St. Saviour's, St. George's-square, S.W., Frederick Cecil Parsons, of 18, Stanford-road, Brighton, to Fanny Vicars, only child of Charles Vidler Cay, M.D., Surgeon-Major, Coldstream Guards.

RANDELL—MILLINGTON.—On August 22, at Old Charlton, Edward B. Randell, M.R.C.S., L.D.S., of 22, Vanbrugh-park, Blackheath, to Emily Lydia, elder daughter of Charles Millington, Esq., East Coombe, Old Charlton, Kent.

ROBERTS—HUGHES.—On August 21, at Rhosllanerchrugog Church, Richard Lawton Roberts, M.D., only son of R. Chambers Roberts, F.R.C.S.E., of Ruabon, to Christiana, second daughter of the late J. Hughes, Esq., of Fennant, Ruabon.

DEATHS.

ABSCOTT, ROBERT, M.R.C.S.E., at 5, Southernhay, Exeter, on August 19, aged 76.

BREMNER, WILLIAM, M.R.C.S.E., H.E.I.C.S., at 3, Weston-villas, Chippenham, Wilts, on August 10, in his 90th year.

DUFFY, WILLIAM JAMES, M.D., late of Valparaiso, in London, on August 20, aged 72.

FARR, MARY ANN, wife of Frederick Farr, M.R.C.S. Eng., at Montpelier House, Dunstable, on August 25, aged 52.

GAYER, EDWARD JOHN, Surgeon-Major, Indian Army, and Professor of Anatomy, Medical College, Calcutta, at Calcutta, on August 26, aged 44.

PARROTT, BRANSBY BAILEY, youngest son of John Parrott, M.R.C.S. Eng., Clapham-common, on August 28, aged 12.

TUTTIETT, HARRY BARRINGTON, M.R.C.S. Eng., of Ventnor, Isle of Wight, at Honiton, on August 22, aged 62.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BRIXTON, STREATHAM, AND HERNE-HILL DISPENSARY.—Resident House-Surgeon. Candidates must be unmarried and possess both medical and surgical qualifications. For particulars apply to the Secretary at the Dispensary, Water-lane, Brixton, S.W.

EASTERN DISPENSARY OF BATH.—Resident Medical Officer. Candidates must possess the diplomas of a Royal College of Surgeons and the Society of Apothecaries. Testimonials, post-paid, and marked "Eastern Dispensary," to Francis Savage, Esq., Honorary Secretary, 10, Beaufort-buildings East, on or before September 2.

ESSEX AND COLCHESTER HOSPITAL.—House-Surgeon and Apothecary. Candidates must be legally qualified to practise medicine and surgery, duly registered, and unmarried. Applications, with testimonials as to moral character, etc., to the Committee, at the Board-room, on or before September 12.

GENERAL INFIRMARY AT LEEDS.—House-Surgeon. Candidates must possess a medical qualification, and be Members or Licentiates of a British College of Surgeons. Copies of testimonials to Dr. Heaton, at the Infirmary, Leeds, on or before September 12.

MANCHESTER ROYAL INFIRMARY, DISPENSARY, AND LUNATIC HOSPITAL.—Honorary Assistant-Physician. Candidates must be Fellows or Members of the Royal College of Physicians in London, and must have a diploma from some University requiring examination for its degrees. Applications, with diplomas, original testimonials, and a certificate of age, to the Chairman of the Board, on or before September 21.

QUEEN ADELAIDE'S DISPENSARY, POLLARD-ROW, BETHNAL-GREEN.—House-Surgeon. Candidates must possess a registered qualification to practise both medicine and surgery. Testimonials to the Hon. Secretaries, on or before September 5.

WEST HERTS INFIRMARY.—House-Surgeon and Dispenser. Candidates must be Members of the Royal College of Surgeons of London, Edinburgh, or Dublin, and Licentiates of the Royal College of Physicians of London, or Licentiates of the Apothecaries' Company, duly registered, and unmarried. Applications, with testimonials and certificate of registration, to the Secretary, on or before September 5.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Dunmow Union.—Mr. James Parkinson has resigned the Stebbing District; area 12,860; population 3684; salary £85 2s. per annum. Mr. W. Vernon has resigned the Bardfield District; area 8289; population 2275; salary £47 2s. per annum.

Thetford Union.—Mr. P. R. I. B. Minns has resigned the Workhouse and the Thetford District; area 32,413; population 4119; salary £83 10s. per annum. Salary for Workhouse £30 per annum.

APPOINTMENTS.

Droitwich Union.—Mr. John Montagu Cuthbertson, L.R.C.P. Edin., L.F.P. & S. Glasg., to the Droitwich District.

Epsom Union.—William Alfred Cox, M.R.C.S., L.M., and L.S.A. Lond., to the Banstead District.

Farnham Union.—Horace Manders, F.R.C.S. Eng. and L.S.A., to the Frimley District.

Lichfield Union.—Frederick George Dalton, M.R.C.S. and L.M. Eng., L.S.A. Lond., to the Ogley Hay District.

MEDICAL PRACTITIONERS IN FRANCE.—In 1866 there were 11,254 doctors of medicine in France and 5568 *officiers de santé*, together 16,822 practitioners. In 1876 there were only 10,743 doctors and 3633 *officiers*, together 14,376 practitioners, or less by 2446. In 1876 the *pharmaciens* were 6232 in number, the midwives 12,847, and the herbalists 983. In 3484 communes, doctors alone practise, in 2111 *officiers de santé* only, in 764 both doctors and *officiers*, and in 28,697 neither doctors nor *officiers*.—*Lyon Méd.*, August 18.

STRYCHNIA IN NOCTURNAL ENURESIS.—Dr. Kelp has obtained success in obstinate cases of this troublesome affection by the hypodermic injection of the nitrate of strychnia. He inserts in the vicinity of the rectum, a single very small dose sufficing to arrest the malady for a time. When it returns, the injection is to be repeated. His last case was a woman aged eighteen, previously in excellent health, who had suffered from enuresis during several months, consecutive to scarlatina. The first injection procured her a respite for several nights, after which the treatment was repeated, and the cure became complete.—*Presse Méd. Belge*, August 18.

CONTAGIOUSNESS OF CONSUMPTION.—Dr. Holden, of Newark, New Jersey, concludes an elaborate paper on the question "Is Consumption Contagious?" in these words:—"The fact that the health of a well person will deteriorate under the nightly contact of an invalid, whatever be his disease, and that a healthful child will grow ill from like association with an elderly person whose vital powers are failing, *without* active disease, are matters of daily experience; and the conclusion that personal contact, if intimate and continued, with one who has both active disease and failing vitality, will not only deteriorate health, but actually produce similar disease, is more than plausible—indeed, is proven by the following conclusions of our argument:—1. The general experience we have drawn upon favours such belief. 2. Most authorities, even among the non-believers in infection, concede such dangers from intimate contact. 3. Such a theory harmonises, as no other can, the opinions of careful observers. To epitomise concisely, therefore, we believe that consumption is communicable in its later stages by means of solid, excrementitious matter thrown off by the skin and deposited on the bedding and under-clothing, or in any other manner brought into contact with the naked surface of a healthy body; and that, although this may in some instances be thrown off without development into new disease, it is yet very liable to be so developed, and more liable where the healthy person is by heredity or depression in a favourable state for its reception; and, finally, that the idea of infection or communication by the atmosphere is not sustained, and is rare, even if it is possible."—*Amer. Jour. of Med. Science*, July.

Sphygmographic Experiments on the Brain.—Under this title, Dr. Mary Putnam Jacoby, of New York, publishes in the *American Journal of the Medical Sciences*, for July, an account of a series of sphygmographic applications which she has made to the brain which was exposed in an Irish lad ten years of age, in consequence of a fracture of the cranium eighteen months previously. She gives the tracings observed after the administration of quinine, brandy, atropia, tartar emetic, coffee, and bromide of potassium. Is this not following in the same line of action for which Dr. Bartholow incurred severe censure a few years since?

Small-pox in Pregnancy.—Dr. Welsh, of the Municipal Small-pox Hospital, Philadelphia, in a paper published in the *Philadelphia Medical Times* (May 25), after furnishing a tabulated account of forty-six cases of small-pox in pregnant women which have come under his notice, and referring to some published cases, arrives at the following conclusions:—1. It disturbs with striking frequency the functions of the womb, giving rise in the non-pregnant woman to premature appearance of the menses, and in the pregnant frequently exciting abortion. 2. Abortion is a serious complication of small-pox. The earlier in the course of the disease that it occurs, the more serious is the complication. 3. The fœtus does not generally undergo small-pox in utero, although occasionally this may be the case. 4. When a pregnant woman undergoes small-pox without miscarriage occurring, the susceptibility to the disease in the infant is not destroyed.

Criminal Lunatics.—The International Congress on Mental Medicine has, according to the *Gazette Hebdomadaire*, August 23, been very successful, the meetings having been of a very interesting and important character. Nearly 200 physicians, magistrates, and administrators met under the presidency M. Baillarger. One of the subjects which underwent most discussion was "The Measures to be adopted with regard to Criminal Lunatics." The following resolutions proposed by M. Barbier, Conseiller at the Cour de Cassation, were carried after a prolonged debate:—1. In all cases in which an individual (prosecuted for crime or offences) is released or acquitted as irresponsible for the imputed act in consequence of his mental condition, he should be placed in an establishment for the insane as an administrative measure. 2. If his dismissal be demanded on the ground of recovery, before this be complied with he should be examined in order to ascertain whether there is not legitimate suspicion of relapse, the examination being conducted by a committee composed of the physician of the asylum, the préfet or his substitute, and the Procureur-Général or his substitute, with power to call to its aid any alienist physicians. 3. If the committee decides that there is no suspicion of relapse, the individual is to be set at liberty. In the contrary case his dismissal is to be delayed. 4. But this delay is not to be continued beyond a twelvemonth, and at the end of each year he is (having in the interim been the object of special observation) to be re-examined by this mixed committee. 5. The same procedures are to be applicable to persons condemned for crime or offence, and acknowledged ulteriorly to be in a condition of mental alienation. 6. The Congress expresses its desire that asylums or special portions of them should be reserved for the *internement* of individuals condemned or prosecuted by justice, but released or acquitted on the ground of their mental condition.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

The Anti-Pyretic Treatment in Fevers with reference to the Lowering of the Temperature; also, the Heat in Fever and Inflammation attempted to be explained.

To the Editor of the Medical Times and Gazette.

Sir,—Having perused the Address in Medicine by Dr. Henry F. A. Goodridge, F.R.C.P., at the British Medical Association, I beg to observe (though without any intention of subtracting from the merits of Professor Wünderlich) that the use of refrigerants in fevers (intermittent) in order to lower the temperature is no new treatment, inasmuch as many years ago (about the year 1835) the same plan of treatment was adopted by me, and at the same time was found very successful.

I may here premise that the anti-pyretic treatment did not consist entirely of refrigerants—very far from it; because at different stages of disease all the following remedies were prescribed, and considered more or less necessary according to the urgency of the symptoms. Frequently an emetic of tartarised antimony preceded them, then stimulants, diaphoretics (according to the state of the skin), refrigerants (an effervescing draught combined with salines so as partly to imitate a frigorific mixture), acidulous drinks, and last of all quinine, in rather small doses, but frequently repeated according to the severity of the symptoms. But it is scarcely necessary to remark that all the above remedies may be ineffectual if the tongue should continue to be coated; when calomel in alterative doses, with a fraction of the tartarised antimony in order to determine it to the skin was resorted to with the happiest results. It is also needless to remark that aperients were made use of when required. In the worst cases, too, the catheter was employed—a practice, I believe, that originated with me. With this treatment generally I found that fever was more tractable than might have been expected.

Now allow me to call your attention to the explanation or *rationale* of the rise of temperature, both in fever, and also in inflammation. In this way, then, I think it may be explained. Admitting that the circulation is more rapid in fever in the arteries (but not always), the contrary takes place in the venous circulation, as may be partly proved by the venous blood becoming more coagulable, and hence ready to form fibrine, as seen generally when it is abstracted. Now, chemically, we know that when fluids become solids, heat must be evolved or generated. This, then, is the explanation of the rise of temperature both in fever and in inflammation. If this is the *rationale* of the high temperature, it must be allowed to be simple enough, and the only wonder is that it was never suggested or thought of before.

It would thus appear that the oxygenation of the blood is not the principal cause of the elevation in the temperature, inasmuch as we see this rise of temperature when it is only local, as in inflammation; but the rise of temperature is more urgent when it is universal, as in fever.

In inflammation, too, the formation of pus causes locally a rise of temperature, for the same reason; because that, when fluids become more solid, as purulent matter must be when compared with the venous blood, we notice an elevation of temperature in the part affected as the usual consequence of the inflammation.

The coagulation and the buffy coat of the blood may be induced by want of oxygenation of the venous blood, or it may not; for the venous blood, being prone to coagulate, may give rise to a higher temperature without the respiratory system being at all implicated in its production as in inflammation.

If the above is the *rationale* of the preternatural heat in fever and in inflammation, I think that the rise in temperature in other diseases may be soon disposed of.

I am, &c.,

Wallingford, August 20. Willoughby Arding, M.D.

Suggestions as to the Titles of the Officers of the Army Medical Department.

1. Much dissatisfaction exists at the present titles of the officers of the Army Medical Department. They are indefinite, and lead to continual confusion in a society like the military, where everyone's rank is strictly and carefully laid down by regulation. For example, the title "Surgeon" is used to define two grades of medical officers, one being those ranking with Lieutenants, the second those ranking with Captains. It is thus impossible to tell without inquiry and explanation whether a medical officer, while called a "Surgeon," ranks with a Lieutenant or a Captain in the army.

2. The title "Surgeon-Major" is likewise an indefinite one. It is used for officers ranking with Majors, as well as for those ranking with Lieutenant-Colonels. Hence, daily in the army confusion arises on this head, explanations are called for, one's rank is ignored, and friction results, because one's title is so indefinite as to lead to misunderstandings. The title "Deputy Surgeon-General" in the same way does not show the army rank of the officer who holds such a position, nor is "Surgeon-General" free from the same drawback.

3. So long as one's title is indefinite, and one's rank only relative, so long will these drawbacks occur. The fact is, all *relative* rank is the merest nothing, and it is daily ignored in the army. However senior an officer of the Medical Service is, he has no title accurately defining his military status in the army, and as a consequence continual misunderstandings occur, and continual explanations are required to maintain one's just rights, and the position and rank in the army granted by the Sovereign to the Medical Service.

4. Amongst physicians in civil life distinctive titles are not needed. Civil physicians spend their lives as a rule in places where they are well known, and where everybody knows their standing. Not so in the army: constant change of station and friends, and continual change of surroundings, is the rule. Discipline and military organisation also require clearly defined grades to prevent the liability of error in any way. Rank is never forgotten in the army, and in no society is it more carefully guarded than amongst the combatant officers themselves. Outside that limit it is daily ignored. From all the departments of the army who have not army rank the same complaint is heard, but strongest of all from the Medical Department, because its status in civil life is clear and definite, but within the army it is daily depressed, and its rank ignored.

5. So long as the titles of Lieutenant, Captain, Major, Lieutenant-Colonel, Colonel, etc., were solely used to indicate military *command*, so long they were retained justly by, and limited to, the combatant branches of the army. That day has passed by. The Paymaster's Department of the army is wholly a non-executive body. They have no command whatsoever over any officer or soldier. Yet they are called Lieutenants, Captains, and Majors, and rank as such. No question about their position is ever raised. Their titles are clear and distinct, and cannot be ignored or mistaken. With the medical officers it is constantly the reverse. Owing to the want of clear titles, mistakes are every day being made, and it is impossible in the entire army to find a single medical officer who does not know this to be the case. One's title in no way shows one's army rank. It only defines one's departmental standing.

6. Again, in India, the whole of the officers of the Indian Commissariat Department, although they have no command outside their own department, have clearly defined titles, and are called Lieutenants, Captains, Majors, etc., having their special departmental titles also, and no confusion ever arises from it. Their army title gives them no command outside their own department any more than the army title if given to the medical officers would give them command save over the officers and men of their own corps. We never hear a complaint about rank being ignored from the Indian Commissariat. Again we find the Lieutenants and Captains of the Army Hospital Corps, who perform the duties of Quartermasters and Paymasters of the hospitals, have these clearly defined military titles, although they have no command save only in the absence of all medical officers, and are far and away less military than the medical officers.

. We thus see that in the Pay Department, in the Indian Commissariat partment. and in the Army Hospital Corps, military titles, clear and mistakable, are used to distinguish the officers, and no misunderstanding drawback of any kind arises. The titles used do not indicate the right command the fighting men, but only show the status of the bearer in army. Until a similar nomenclature is used for the officers of the edical Corps of the army, and the present system of giving relative rank changed to substantive rank, so long will the body of officers of the edical Service complain of want of recognition of their rank in the rvice. Military society and the military system is such that without ar and unmistakable titles errors will always be liable to occur.

8. Let us look to other armies. The same question of the rank and sition of the medical officers of the army that is now being discussed in r army, for years agitated the regular army of the United States. ictions and misunderstandings occurred, until at length the unquestionle right of army rank, in addition to departmental title, was granted the Medical Corps of the army. Thus we find Major A., Surgeon, S. Army; Brigadier-General B., Surgeon-General, U.S. Army; and ptain C., of the Medical Corps. They are none the less doctors, because icers of the Medical Corps. With us, Colonel D., of the Royal Engineers, none the less an Engineer, because called Colonel in the army. It has en given to the American doctors, because it was found to be the only al remedy to secure the due position and clear understanding of the rank the medical officers. The constant complaints of their rights being nored, and the relative rank granted them by their sovereign being put ide, that are daily heard from the British medical officers, are never ard in the American army, because clear and defined titles show the nk of the officers of the Medical Service.

9. In the Royal Italian Army the same thing exactly occurred. The ysicians and surgeons who joined the National Army during the wars hich made Italy a nation, declined to submit to the constant efforts at pression of the doctors, which it seems almost impossible to separate om the military power when unrestrained. Hence, after years of ruggling, army rank, as Lieutenants, Captains, Majors, etc., in the edical Corps was granted to the Italian medical officers, and is now held them.

10. What has taken place in Italy has also taken place in Turkey, and e status of the medical officers is clearly defined. We thus see that in ree great military organisations the clear right of the Medical Service to my rank is recognised, not as with us by useless relative rank, but by tual substantive rank which cannot be gainsaid. It is the only possible ay to secure equality of treatment and just recognition of the rank of e medical officers. So long as these military titles represented comtant rank only in this and in other countries, no claim was made for em. That day has now passed by. These titles now represent only adations in the military organisation, and should be extended to all the partments. Until it is done it will be impossible to make the Medical rvice really contented, because mere pay increase and splendid pensions e not sufficient if every day one's rank is ignored, or only recognised ter a struggle and a fight, as now is so constantly the case.

11. In the olden days the army declined to recognise the military rank of e Engineers, and it was only granted after a struggle. The same quesion now arises for the Medical Service. Until a War Minister arises fficiently wide-minded to deal fairly and justly with the claims of the ficers of the army of every corps and department on a thoroughly equitble basis, so long will this friction between the departments and the ghting men go on.

12. No mistake will ever occur from the use of these titles. No one istakes a Paymaster because he is called Major E., nor in India a Comissariat officer because he is called Colonel F. In Italy and in America o hitch occurs. But with us every day painful scenes occur, in which the atus and rank of the medical officers is ignored either from want of clear tles for the medical officers, or from uuwillingness on the part of the mbatant officers to allow any medical officer the position and rank anted him by the State. It is an old fight, not limited to yesterday or -day or to England. It has gone on for years, and in every land. In rance and Germany it is slowly righting itself. In Italy and in America is accomplished, and it is quite certain the fight can only be terminated England in a similar way.

13. Finally, what is needed is that every medical officer, in addition to is departmental title, as Surgeon, Surgeon-Major, etc., should have his my rank indicated by the use of the military title of the rank he holds, the same way that a Paymaster, while holding the departmental rank f Staff Paymaster, is also called Major A., Staff Paymaster, or in India a Commissariat officer is called Lieutenant-Colonel B., Deputy Commissary eneral, or Captain C., Deputy Assistant Quartermaster General. Thus he medical officers would be called Lieutenant D., Surgeon, A.M.D., aptain E., Surgeon, A.M.D., Major F.. Surgeon-Major, A.M.D., Colonel ., Deputy Surgeon-General, A.M.D., Major-General H., Surgeon-General .M.D.

This has already been done in the case of the Pay Department, in the ase of the Indian Commissariat Department, and in the case of the Quartermasters of the Army Hospital Corps.

Justice demands that a similar step be taken with reference to all ther army departments. Until it is done, the department of the Service vill consider that their so-called rank, which no one can understand, is a ery valueless boon.

July, 1878.

Cabmen's Shelters.—The liberality of many private gentlemen in providing shelters for cabmen in various parts of the metropolis (another instance of which we are about to record) should be, and doubtless is, appreciated by cabmen. The Committee of the Cabmen's Shelter Fund has just purchased and placed a shelter at the cab-stand on Holborn-hill. The entire cost of it is contributed by Mr. William Arnell, proprietor of Wood's Hotel, Furnival's-inn. It is the Shelter which took the prize at the Alexandra Palace Cab Show.

A Needed Prohibition.—In Paris the Prefect of Police has just had posted up a notice ordering all dealers in children's toys, under heavy penalties to avoid the use in future of colours containing poisonous substances. It is well known that deleterious ingredients are too frequently employed for such a purpose. The toy, it is thought, must be showy and attractive in colours, little regard being had to the probable consequences of injury to the health of the child.

Military Surgeons in the Sixteenth Century.—On this subject a surgeon writes:—"I remember when I was in the wars at Muttrel, in the time of King Henry VIII., there was a great rabblement there that took upon them to be surgeons. Some were cow-gelders and horse-gelders, with tinkers and cobblers. This noble sect did such great cures that they got themselves a perpetual name; for like as Thessalus's sect were called Thessalians, so was this rabblement for notorious cures called dog-leeches; for in two dressings they did commonly make their cures whole and sound for ever, so that they neither felt heat nor cold, nor no manner of pain after. But when the Duke of Norfolk, who was their general, understood how the people did die, and that of small wounds, he sent for me and certain other surgeons, commanding us to make search how these men, came to their death, whether it were by the grievousness of their wounds or by the lack of knowledge by the surgeons, and we accordingly made search through all the camp, and found many of the same good fellows which took upon them the names of surgeons—not only the names, but the wages also. We asking of them whether they were surgeons or no, they said they were. We demanded with whom they were brought up, and they with shameless faces would answer, either with one cunning man or another who was dead. Then we demanded of them what chirurgery stuff they had to cure men withal, and they would show us a pot or box which they had in a budget, wherein was such trumpery as grease for horses' heels and scabbed backs, and shoemakers' wax, with the rust of old pans, and made therewithal a noble salve, as they did term it. But in the end this rabblement was committed to the Marshalsea, and threatened by the Duke's Grace to be hanged for their worthy deeds, except they would declare the truth what they were, and of what occupation, and in the end they did confess as I have declared to you before."

Population Statistics: Italy.—From a volume of statistics just issued, for the first time, by the Italian Minister of the Interior, it is shown, *inter alia*, that the population of Italy is estimated at present at about 28,000,000, the last census having been taken in 1871. The sexes are pretty nearly equally represented, the proportion of births of males to females being 105 to 100, and the death-rate showing within a fraction the same proportion. The number of births in 1875 (the last year for which the figures are made up) was 1,035,000, and of deaths 843,000, of which 223,100 were under one year old, and 3000 over eighty.

Milk Adulteration: A Disputed Point.—In a case of adulteration of milk heard before the Bolton magistrates a few days since, for the defence it was urged that as the milk was purchased by a Corporation official for the purpose of analysis, and not for consumption, it could not have been sold to the prejudice of the buyer, and, according to a judgment of the Lord Chief Justice in a similar case, the essence of such an offence was, that the purchaser should be prejudiced. The magistrates, however, adopted the opinion of their clerk, that a person purchasing milk, whether for analysis or otherwise, was prejudiced if not supplied with good milk, and inflicted a fine upon the defendant, but granted a case for a superior court.

Significant.—The Director-General of the Medical Department of the Navy, with the approval of the Admiralty, has decided to allow candidates for the Indian Medical Service who passed the required examination on the 12th inst., but failed to take a sufficiently high place to obtain a vacancy, to be entered as surgeons in the Navy, the number of candidates offering themselves for that service being unequal to the demand afloat.

A Model Hospital for Infectious Diseases.—In connexion with the Bury Union Workhouse, a hospital for infectious diseases has just been opened. Of its construction—on the pavilion principle—and the plans, the Local Government Board are of opinion it is "greatly in advance of anything hitherto attempted."

Vigilant.—Captain Coram, of the merchant service, was the projector of the Foundling Hospital, London. After seventeen years of untiring perseverance, he, on November 20, 1739, obtained a charter of incorporation for a "hospital for the maintenance and education of exposed and deserted young children." Soon afterwards, on the motion of Dr. Mead, the special thanks of the governors were voted to Captain Coram "for his indefatigable and successful application in favour of the charity, which otherwise would have wanted a legal foundation." Captain Coram died March 29, 1751, at his lodgings near Leicester-square, in his eighty-fourth year. His last request was that he might be buried in the chapel of the Foundling Hospital.

Laundries and Infection.—At the Birmingham Borough Court, recently, a laundress was summoned for transmitting without previous disinfection certain clothing which had been exposed to infection from scarlet fever, contrary to the Public Health Act, 1875. The Chief Inspector of Nuisances, in support of the summons, stated that at the defendant's house there had been three cases of scarlet fever; and during the time the persons thus attacked were suffering from the disease the defendant took in linen to wash, and, in defiance of his warnings, declared that she would continue to follow her business of a laundress "in spite of him or anyone else." The case was proved, and the defendant fined 10s. To check efficiently the spread of disease through the medium of laundries is difficult, and more stringent precautions than are at present in force should be adopted. It is an offence laundresses are too apt to treat with considerable unconcern and levity.

Shortsightedness, Alsace.—The increase of shortsightedness in Alsace is much complained of. In a college at Mulhouse, fifty out of 234 students were lately found shortsighted, the three higher classes showing 68 per cent. It is attributed to studying by twilight and at night with insufficient light.

Spirits Diluted: Important Decision.—Two publicans have been charged at the Barrow Police-court with selling gin 4·46 per cent. and at 41 degrees under proof, and rum at 38 degrees under proof. In defence it was contended that as a notice was posted that all spirituous liquors sold in these houses were mixed with water, such was (according to the recent decision of the Lord Chief Justice in the case of Sands *v.* Small) sufficient to protect the publican. The magistrates, however, decided that the increase of the bulk, weight, or measure of the articles sold, or the concealment of inferior quality, to so large an extent as in these cases, must be treated as fraudulent, and as an infraction of the Act, even where such notices as those alleged had been posted up. They therefore convicted the defendants, because the adulteration had been proved to be excessive, and no knowledge of its extent was or could be conveyed to the buyer. Fines of 40s. and costs were respectively inflicted.

COMMUNICATIONS have been received from—

Mr. John Chatto, London; Dr. Thomas Barlow, London; Dr. J. Milner Fothergill, London; Dr. Alexander M. McAldowie, Stoke-on-Trent; Dr. Alexander Yule, Fernhurst, Haslemere, Sussex; Dr. Willoughby Arding, Wallingford, Berks; Dr. J. Greig Smith, Bristol; Mr. W. H. Everett, London; Mr. John Sutcliffe, Monsall; Dr. J. G. Cameron, Huddersfield; The Military Secretary of the India Office; The Registrar of Apothecaries' Hall, London; Messrs. Jones and Willis, London; Dr. Handfield Jones, London; Dr. Octavius Sturges, London; Dr. Gavin Milroy, London; Dr. Edward Sparks, Crewkerne; Mr. J. Gillingham, Chard; Mr. J. T. W. Bacot, Seaton; The Registrar-General of Edinburgh; Mr. G. C. Levey, Paris; The Sanitary Commissioner of the Punjaub; Dr. J. M. Bruce, London; The Secretary of the Local Government Board; Dr. J. W. Moore, Dublin; Mr. Becher, Llandudno; Surgeon-Major Evatt, Fyzabad; Dr. Chippingdale, Croydon; Mr. R. W. Parker, London.

BOOKS AND PAMPHLETS RECEIVED—

Thomas J. Mays, M.D., on the Therapeutic Forces—Dario Mavagliano, Le Localizzazioni Motrici nella Corteccia Cerebrale; Della Influenza del Vajuolo sulla Pazzia—William J. Russell, M.B., Domestic Medicine and Hygiene—Dr. E. Leyden, Ueber die Entwickelung des Medicinischen Studiums.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médicale—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wocbenschrift—Nature—Medical Examiner—Centralblatt für die Medicinischen Wissenschaften—Cincinnati Lancet and Clinic—Gazette Hebdomadaire—Giornale Internazionale delle Scienze Mediche—American Practitioner—Hardwicke's Science Gossip—Illustrated Australian News.

APPOINTMENTS FOR THE WEEK.

August 31. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

September 2. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m. Royal Westminster Ophthalmic, 1½ p.m.

3. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

4. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 1½ p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

5. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

6. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 24, 1878.

BIRTHS.

Births of Boys, 1244; Girls, 1247; Total, 2491.
Average of 10 corresponding years 1868-77, 2192·5.

DEATHS.

	Males.	Females.	Total
Deaths during the week	737	696	1433
Average of the ten years 1868-77	730·1	679·0	1409·
Average corrected to increased population ...	...	...	1508
Deaths of people aged 80 and upwards ...	...	...	41

Note.—The births and deaths registered last week may be compared wit the average numbers in the corresponding weeks of the ten years 1868-7 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	1	6	2	14	...	1	...	3
North ...	751729	2	2	10	...	13	...	3	2	3
Central ...	334369	...	...	5	3	8	1	1	...	1
East	639111	1	3	1	...	16	...	1	...	4
South	967692	7	4	2	6	23	...	6	1	6
Total	3254260	10	10	24	11	74	1	12	3	19

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·652 in.
Mean temperature	61·5°
Highest point of thermometer	76·4°
Lowest point of thermometer	51·7°
Mean dew-point temperature	54·9°
General direction of wind	E.
Whole amount of rain in the week	0·71 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, August 24, 1878, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1878.*	Persons to an Acre. (1878.)	Births Registered during the week ending Aug. 24.	Deaths Registered during the week ending Aug. 24.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3577304	47·5	2491	1433	76·4	51·7	61·5	16·39	0·71	1·8
Brighton	103923	44·1	56	36	71·3	52·4	60·5	15·84	1·14	2·9
Portsmouth ...	129461	28·9	80	54	...	...	...	...	...	...
Norwich	84620	11·3	51	63	...	...	...	...	...	...
Plymouth	73599	52·8	67	37	70·5	50·0	59·5	15·28	1·11	2·8
Bristol	206419	46·4	138	73	75·8	52·0	61·9	16·61	0·78	1·9
Wolverhampton ...	74240	21·9	45	25	71·5	50·2	57·8	14·34	0·90	2·2
Birmingham ...	383117	45·6	257	237	...	...	...	...	...	...
Leicester	121473	38·0	81	78	...	...	...	...	...	...
Nottingham ...	165267	16·6	102	68	73·8	47·3	58·4	14·66	1·14	2·9
Liverpool	532681	102·2	378	322	68·2	53·3	58·5	14·72	0·53	1·3
Manchester ...	360514	84·0	272	168	...	...	...	...	...	...
Salford	170251	32·9	142	98	74·0	44·0	57·8	14·34	0·52	1·3
Oldham	107366	23·0	60	48	...	...	...	...	...	...
Bradford	185088	25·6	132	66	71·8	48·8	57·7	14·28	0·50	1·2
Leeds	304948	14·1	228	156	73·0	46·0	57·9	14·39	0·44	1·1
Sheffield	289537	14·7	202	135	70·7	46·0	57·9	14·39	1·38	3·5
Hull	143139	39·4	124	111	73·0	45·0	57·3	14·06	0·43	1·0
Sunderland ...	112459	40·6	88	63	76·0	52·0	60·9	16·06	0·39	0·9
Newcastle-on-Tyne	144570	26·9	104	94	...	...	...	...	...	...
Edinburgh	222371	53·1	128	74	70·3	43·5	56·7	13·72	0·08	0·2
Glasgow	566940	94·0	398	212	68·0	48·9	58·3	14·61	0·13	0·3
Dublin	314666	31·3	162	155	72·7	48·3	59·9	15·50	1·25	3·1
Total of 23 Towns in United Kingdom	8373953	38·0	5786	3806	76·4	43·5	58·9	14·94	0·71	1·8

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·65 in. The highest reading was 29·90 in. on Sunday morning, and the lowest 29·27 in. on Saturday afternoon.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1878 by the addition of seven years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. Nottingham, Salford, and Oldham, however, form exceptions to this rule, as the estimates for these three towns have been revised with the aid of local information as to the rate of increase of inhabited houses. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

THE CAUSES AND COURSE OF DISEASES OF THE HEART,

WITH SPECIAL REFERENCE TO PREVENTION AND TREATMENT.

By J. MILNER FOTHERGILL, M.D., M.R.C.P.,
Assistant-Physician to the City of London Hospital for Diseases of the Chest, Victoria-park, and to the West London Hospital.

Lecture I.

VALVULITIS. (a)

In attempting to describe the different lesions and morbid changes to which the heart is subject, their course and progress will alone receive attention at the present. It is not intended in so doing to underestimate the value of a correct diagnosis. Far from it! For a correct diagnosis includes a great deal more than the mere recognition of the physical signs—even than the detection of the precise time of a murmur, the exact spot of its maximum intensity, and the direction in which it is conveyed. Doubtless it is very desirable that this should be done in all cases, but we must bear in mind that, when this is all done, the diagnosis is not complete; in reality we have got together only the material from which to commence to form a diagnosis. Having carefully noted the murmur, the next thing to be done is to ascertain if that murmur is connected with actual organic disease, or is but the phantom of morbid change. In order to do this with any approach to accuracy, it is essential that the mind be familiar with the nature of changes in the valves, their causes, the progress they make, the consequences of these changes, and the different modifications wrought thereby in the vascular system generally. Without this the morbid phenomena cannot be rightly interpreted, except by a lucky accident. For intelligent and systematic recognition of the true interpretation of a murmur, such knowledge is essential.

When, then, the Committee of this Hospital, recognising the number of patients who attend the institution, and thinking it unfortunate that the practice of the Hospital should not be systematically used for the advancement of medical science as it might be, acceded readily to my request to start clinical lectures, and generously placed the theatre at my disposal, my first thought was, "What subject should I choose?" In determining this question there were two main factors to be entertained. The first was, my potential fitness by acquaintance with the subject; and second, how far would the experience acquired at this Hospital be of avail? Having devoted some special attention to the diseases of the heart, I determined to select the above subject. After some thought it seemed best to commence with the diseases of the valves, and then to consider hypertrophy and dilatation afterwards; as the consequences of valvular disease throw much light on the nature of hypertrophic change, and the enlargement of the cardiac cavities. We know that the simplest form of heart is a mere pulsatile sac contracting at intervals in rhythmic measure; and that as evolution proceeds, folds of the internal lining membrane are developed into valves by which the muscular force is economised. These valves prevent the backward flow of blood on the contraction of the muscular walls of the cavities. The blood no longer flows back or forwards on the muscular systole; but is forced onwards by these folding doors preventing regurgitation. When mammalia are reached it is found that each chamber of the heart has got its two sets of valves—those which arrest the backward flow into the ventricle after it has thrown its contents into the aorta; and those which prevent regurgitation into the auricle on the ventricular systole. These valve arrangements are very beautifully perfect. The three cusps at the base of the aorta and pulmonary artery carry each in their centre a small prominence called a corpus Arantii, a fibro-cartilaginous body from whence pass fibrous bands along the free edges of the valves. By such strengthening of the free edges of the valves the cusps are not readily ruptured; though violent effort throwing strain upon the vascular system at times leads to a cusp being torn down to its basal point of attachment. These corpora Arantii close the minute triangular orifice which would otherwise be left betwixt the valves when the three crescentic cusps are driven together by the aortic recoil. In the auriculo-ventricular valves we see curtains thrown across the ostia sufficiently large to completely prevent regurgitation; and in order to prevent their being washed backwards through the ostia on the ventricular contraction they are secured by tendinous cords to the interventricular septum and the solid muscular walls. These tendinous cords are not merely inserted at these points of contact; they have each attached to them a muscular papilla, and these papillæ contract synchronously with the ventricle, and draw the valvular curtains inwards during the systole. These valvular arrangements are exquisitely adapted to the fulfilment of their function—the prevention of the regurgitation of the blood when the ventricles close on their contents. The tricuspid valve is the least completely perfect of the four, and, when the right ventricle is greatly distended with blood, permits of leakage. This has been termed "the safety-valve action of the tricuspid," and it is held by some that this is an advantage, as it prevents over-distension of the right ventricle. This I question most gravely, as in the diving mammals and the herbivora there is found a muscular band called "the moderator band of Reil," which passes direct from the interventricular septum to the large outer flap of the tricuspid valve; and so holds the valve from yielding in the great stress put upon it in the long submersion of the sea-going mammal, and in the protracted flight of the herbivora from their carnivorous pursuers. But even with this comparatively imperfect valve, Oppolzer and Kürschner think regurgitation impossible without some contraction and reduction of size of the valvular vela by disease in them. As to the other three sets of valves, the vela and cusps are so perfect that they will permit of a certain amount of morbid change and diminution of size before regurgitation is possible. It is very important to remember this: as not rarely a long-persisting mitral murmur will disappear where there has been dilatation of the left ventricle with enlargement of the ostium; because when the ventricle and the ostium are restored to their normal dimensions, the valvular vela are once more sufficient to close the orifice. It may be laid down as an axiom that all the valves—the tricuspid scarcely excluded—are so complete that they can undergo some amount of morbid change without permitting of leakage; but if the disease progress further, insufficiency is the necessary consequence. Such being the function of the valves, it is obvious that their arrangements are such that strain upon them will lead to trophic changes in them. These exquisitely perfect arrangements are, probably in consequence of their very elaborateness, the subject of inflammatory changes of a more or less chronic character. Acute disease is almost confined to the mitral valve, and may extend from the aortic flap of the mitral valve to the aortic cusps themselves. There are cases where one is compelled to believe that the aortic valves are liable to acute disease especially in girls. In this difficulty in the present state of our knowledge we are driven to assume some original defect, or constitutional peculiarity. Dr. Peacock holds that congenital malformation is a factor in a large number of cases of aortic valvulitis. He found such malformation in eleven out of a total of forty-three cases observed.

Then there are ulcerative conditions of these valvular vela, especially of the mitral vela. Ulcerative endocarditis is usually found along with pyæmia, puerperal, or adynamic fevers. Here a destructive process exists, which may cut out a piece of a velum altogether, so that it may be washed away in the blood-current. But ulcerative endocarditis need not detain us here; it does not come within the scope of my lectures either in the way of prevention or treatment. A more chronic ulceration is found usually in the aortic flap of the mitral valve, when it is thrown against a prominent vegetation on an aortic cusp. An ulcer is formed at the point of contact, but we can exert no influence over this condition of things.

The truly important conditions for us, as practitioners, are the morbid changes, for which we may do something in the way of prevention or palliation, and that chiefly by our knowledge of the causes and course of the disease—with its natural history, in fact.

The first valve to be noted is clearly the aortic valve; and the consideration of its lesions will tell us much about the morbid changes in the other valves. As said above, the changes in the aortic valves are in the main of a chronic character. It is also broadly true that the form of aortic

(a) A course of Clinical Lectures delivered at the West London Hospital.

valvulitis found in young persons is usually that of aortic regurgitation; while in advanced life aortic obstruction is most commonly seen. The reasons for this are to some extent clear, and yet in other parts obscure. In younger subjects it would seem that when any trophic change in the valves is instituted it affects rather the free edges of the semilunar valves, and keeps along the fibrous bands extending from the corpora Arantii to the attachments of the cusps to the aortic walls. The consequence of this is that the cusps become diminished in size, though still comparatively flexible, and so offer but little obstruction to the onward flow of the blood at the ventricular systole; but are incompetent to arrest the backward flow of the blood on the aortic recoil. In older persons, as far as my observations have enabled me to form an opinion, when these chronic inflammatory changes are inaugurated in the aortic valves, it is the base of each semilunar segment which is first affected; and from thence the mischief extends through the body of each cusp. In older people, too, there is a great tendency to deposit earthy salts in any part affected by interstitial inflammation, the more too when the part is fibrous in its nature. Consequently, in aortic valvulitis in advanced life, we find these cusps, already chronically inflamed, have lime salts deposited in them, and so become indurated, or, as it has been termed, ossified; and the result is, they are thus rendered inflexible, and so offer a pronounced obstruction to flow of blood through them. Such is the morbid change wrought by aortic valvulitis in persons of middle age and advanced life. We see that the morbid process is different in the young and the aged; and we know that this is due to some extent to the freedom from calcareous deposits in the tissues of the young; and the decided tendency thereto in the tissues of older persons. The young are not, however, entirely exempt from such calcareous deposits. In addition to these changes in the valves themselves, it has appeared to me on investigation that certain changes go on in the arterial conus itself—usually hand in hand with the changes in the valves. My observations in various museums are not sufficient to warrant very positive statements, but I may say that the conclusions towards which they tend are as follows:—In cases of changes in the base of the cusps, that is, in obstructive aortic valvulitis, there appears to be pretty regularly a similar interstitial change in the arterial conus, which is contracted so that a condition of stenosis is produced; and betwixt this condition and the stiffened valves the obstruction to the forward flow of the blood on the ventricular systole is pronounced. On the other hand, where the trophic change has extended chiefly along the free edges of the cusps, and contraction of the semilunar segments been so produced, there is an absence of interstitial growth in the arterial conus, and a tendency to dilatation in it; so that the aortic ostium is enlarged, and the mutilated valves rendered still more incompetent, so that a decided condition of aortic insufficiency is established. Such are the broad impressions made upon my mind; and still further observation will, I believe, tend to establish them more strongly. Of course there are the well-marked types of each form of morbid change; and there are all varieties of combined change betwixt them. A blended form, giving the see-saw murmur, is more common than either of the extreme forms just described.

In considering these chronic inflammatory changes in the aortic valves, it must be vividly borne in mind that they are trophic changes of nutrition, mere modifications of normal nutrition—a more or less free growth of connective-tissue corpuscles. The more slowly these develope, and the longer the process, the more perfectly do the corresponding muscular changes go on, and the more chronic the disease. The more swiftly they occur, the more they approach the form of inflammation with which we are all familiar. The more rapid the growth, the more extensive the valvular deformity produced, and the quicker the general progress of the case. Thus the briefest cases usually occur in the comparatively young; the long, slow cases of aortic obstruction are found mainly in the old. Indeed, the trophic changes may be such that they can scarcely be called disease.

Some time ago, Dr. Wynne Foot described the condition of the right heart in a man who had long had chronically diseased lungs. Here the right heart was enlarged till its apex overlapped the left ventricle. Its walls were thick and its semilunar-valve cusps were altered. Each cusp was more developed; the corpora Arantii resembled those more pronounced forms seen on the aortic cusps. The pulmonary artery was as thick as the ordinary aorta; in fact, trophic changes had gone on, giving increased strength to the parts, corresponding to the increase in the muscular walls, but not extending to what we call chronic interstitial inflammation. In this case the modification of trophic changes had achieved the end, and no more; in valvulitis the nutritive changes are too rapid and too excessive—in fact, it is nutrition run riot. Dr. Foot's case illustrates what may be done in certain cases, but the more common result of increased trophic processes is what we term valvulitis. In these fibrous structures there is not so much an increase in the normal histological elements as in the growth of muscle—a true hyperplasia, but rather a growth of connective-tissue corpuscles, which strengthen the part truly, but which carry with them their invincible tendency to contraction, and so ultimately to distort the part. If we learn to look upon chronic valvulitis as an attempt to strengthen the valves when excessive strain is put upon them—a correlation of growth going on hand in hand with muscular hypertrophy—we will the more readily understand the nature of the morbid process. It is these modifications of normal nutrition which furnish us with the great bulk of aortic disease we meet with in practice. And it is these modifications about which it is necessary for us to be clear.

Having thus reviewed—all too briefly—the pathology of aortic valvulitis, we now come to its causation, and see how the two are linked together. We will find that strain is the great cause of valvulitis at the aortic orifice. Aortic valvulitis is very commonly found amidst great iron industries. It is very common in Leeds, where I first became familiar with it. Dr. Clifford Allbutt published in 1871 a pamphlet "On the Effects of Overwork and Strain on the Heart and Great Bloodvessels," which added greatly to our knowledge of the subject. It is found that a distinct strain is put upon the vascular system during the violent efforts made by the men who wield heavy hammers during the time the iron is hot upon the forge or anvil. What this strain is can be readily perceived by anyone who examines a "striker" at the end of each "heat," as it is technically termed. The heart is beating violently and the arteries are throbbing. During these violent efforts, not only are the arms in action, but the whole muscular system is contracted, in order to maintain such an attitude that the blows may be delivered with the maximum effect; so that there is a general obstruction to the flow of blood in the arteries. The consequence is that the heart hypertrophies, and thus contracts more powerfully; the blood-pressure in the arteries is heightened, and the aortic valves are violently closed on each arterial recoil. The consequence is, we next get aortic valvulitis. But from personal observations on various strikers, I am inclined to hold that there is a certain amount of muscular disturbance which precedes the valvulitis. This often is sufficient to induce the striker to abandon his vocation. In others, where the muscular compensation is readily furnished, the case goes on to the more grave and precarious condition of valvulitis. Where the muscle fails, it is better for the man as regards his prospects of life. In many of the cases of aortic valvulitis seen by me there has been the history of prolonged severe effort in various occupations other than "striking." In one man, an agriculturist, he had been famous for his prowess in pitching both hay and corn on to the waggons when carrying home the crops. Dr. Peacock has found aortic disease in nursemaids and other girls who have had to deal with unduly heavy weights.

This question of strain causing valvulitis is now fairly settled, and such causation accepted. Any doubts about such etiology are put at rest by the notorious fact of the immunity from disease in the valves of the right heart until increased strain is thrown upon them by disease in the left heart, and especially the mitral valve; or, more rarely, by conditions of chronic disease in the lungs leading to obstruction in the pulmonic circulation. In intra-uterine life, too, where the stress falls upon the right heart, it is this side which is found chiefly affected by disease. It is the violent closure of the aortic cusps which sets up trophic changes in their free edges, extending from their attachments to the corpora Arantii; the connective-tissue corpuscles are developed along the fibrous bands, ultimately contorting the cusps and permitting the valve to leak.

The aortic valvulitis so frequently seen in advanced life is also due to strain. Disease of the aortic valves in elderly persons is ordinarily associated with a gouty condition, or

with chronic Bright's disease; and we know that in these conditions there is a persistent high arterial tension, as revealed by the pulse and demonstrated by the sphygmograph. This long-continued high blood-pressure within the arteries causes the condition known as atheroma; where there is an abnormal growth of connective-tissue corpuscles in the arterial walls, and along with this hypertrophy of the left ventricle. Side by side with these changes aortic valvulitis is commonly found. The increased strain on the base of the aorta from the heightened recoil causes the well-known accentuation of the aortic second sound (the evidence of the violent closure), and also causes that thickening of the base of the semilunar segments spoken of above. It is here where the morbid process is essentially chronic that we find the thickening of the arterial conus, the true stenosis, with the deposit of lime salts in the neoplasmic growth. It is in cases of chronic renal disease, with a heightened arterial tension, that we find the bulk of our instances of aortic valvulitis in elderly persons. Thus we see that strain upon the cardiac valves is the chief cause of chronic disease in them. Of course we are compelled to admit that there is in the valves of some persons a greater tendency to become affected by strain than is the case with others.

In estimating the probable course and progress of aortic valvulitis, the most important matter is the rapidity with which the disease in the valves has established itself, because a muscular growth of a conservative character is the only means by which the valve lesion may be compensated. And for this muscular growth to be established, time is a necessary factor. Where the progress of the valvulitis is slow, as in the stenotic changes of the aged, the muscular growth is steadily developed, and an hypertrophied ventricle balances more or less completely the narrowed orifice. Here there is increased obstruction to be overcome; and that is usually effectually met by hypertrophic muscular growth. Under such circumstances the progress of the case is slow; and, if the nutrition be fairly good, the new equilibrium may be maintained for a great many years. Indeed, most authorities agree that this form of valvular disease carries with it the best prognosis of all forms of valvular disease of the heart. There is no regurgitation: or if existing it is to a very small extent, and so the ventricle is not exposed to any increase in the force which distends it. This is a most important matter as we shall see when we come to consider the changes in the muscular walls of the heart—the subject of the next lecture.

But when aortic valvulitis occurs in younger persons it is most apt to assume the form of regurgitation. Here the prognosis varies from that of aortic stenosis; because, first, there is a regurgitant current driven backward by the resilient aorta on its recoil, and thus adding materially to the force by which the ventricle is distended; and next, the distortion of the valves is more rapid here than in stenosis, and so there is less time for the compensatory muscular changes to be developed. The increase in the distending force tends to produce dilatation of the ventricular chamber, and so to necessitate a larger muscular growth for a new balance to be instituted; while the rapidity with which the valve mischief progresses makes great demands upon the conservative and reparative powers of the system. Consequently we find that there is a second factor of great importance, and that is, the vigour of the nutritive processes of the individual in whom the disease exists. Having first estimated the amount of disease, and, as far as possible, ascertained its duration; we come to the still more difficult part of our task, namely, calculating the powers of the individual. These will be found to vary widely in different organisms. In some the resisting power is very limited: while in others compensation is maintained successfully for years. Such a case is mentioned by Niemeyer, of a huntsman in the Greifswald; and Balfour states that he has known several cases where aortic regurgitation has existed for ten years. My own experience, so far as it goes, inclines me to hold with Dr. Peacock, that aortic regurgitation does not run a long course usually. I quite agree with the theory that it is the rapidity with which regurgitation is developed that affects the prognosis; and Dr. Balthazar Foster has calculated that where such regurgitation has arisen from traumatic rupture, the progress of the case is about four years and a half. In such cases the demand upon the left ventricle is sudden and impetuous. The regurgitation is considerable as well as instantaneous. Dr. Foster has pointed out that the progress of such cases of sudden rupture of the aortic valves from violent effort is largely influenced by the fact of which cusp is torn; if it is the cusp behind which there is no coronary vessel springing off, the prognosis as to duration of life is much better than if either of the other cusps is ruptured. This Dr. Foster made out by a brilliant feat in diagnosis, the correctness of which was established by the post-mortem examination. This rapidity of demand tasks the powers of the system very gravely, and the resisting powers of individuals vary considerably. Some, as we see, will resist the impact of aortic regurgitation for years, while others quickly succumb. With many there exists a strong impression that the resisting powers of women are less than those of men; and certainly there can be no question that conditions of morbid change in the heart, especially where the subject of muscular compensation is involved, are apt to be accompanied, or followed by, dilatation in women, with or without a certain amount of hypertrophy; while hypertrophy is the rule with men.

In forming our prognosis, then, in each case of aortic regurgitation, we must be guided by the time which has elapsed since the first commencement of the mischief; the progressive or stationary character of the valvulitis, on the one hand, and the reparative or resisting powers of the individual on the other.

It is quite clear that the prognosis may be profoundly modified by the plan of treatment adopted. If the nutritive powers of the individual can be maintained by good food, attention to the digestive organs, and the steady administration of iron and, if need be, cod-liver oil, then the chances of a new equilibrium being attained by muscular hypertrophy are good. How long it can be maintained is a question which does not admit of an answer by any rule of thumb; each case has its own features and its own characters. Much, too, may be done by the administration of digitalis, which is admissible in all cases of aortic stenosis; but in regurgitation where there is a large, thick, and powerful ventricle its exhibition is not indicated; though when the hypertrophy is failing it is often of great service. Its utility depends upon the stage of the case at which it is administered. In all cases the demands upon the individual must ever be reduced to a minimum. An irreparable injury has been inflicted upon the mechanism of the heart, and a new equilibrium been necessitated: under such circumstances the comparatively unstable nature of this new balance must never be forgotten; it can only be conserved by the most watchful care and consummate skill in averting all avoidable demand upon it.

So much for aortic valvulitis. The next valve to demand our attention is the mitral valve. Its lesions are not inferior in importance to those of the aortic valve; while they are more frequent. The mitral valve is much more liable to be the seat of acute inflammation than is the aortic valve. Especially is this the case in acute rheumatism. The great bulk of cases of permanent disease of the mitral valve are the consequence, the sequel of acute endocarditis accompanying rheumatic fever; then, but far beneath, scarlet fever and chorea. Unquestionably chronic mitral disease is not rarely due to the strain to which the mitral valve is subjected on the ventricular systole. It has to resist a force equal to the distension of the whole arterial system each time the left ventricle contracts upon its fluid contents; while the aortic valve merely sustains the force of the arterial recoil. The relations of aortic valvulitis with increased strain from the heightened arterial tension of chronic Bright's disease are now generally recognised; but some cases have come under my notice which tend to indicate that such increased arterial tension may also set up chronic change in the mitral valve. We are all familiar with the fact that mitral disease is no rare consequence of aortic disease, where a portion of the arterial recoil is thrown upon the mitral valve through the aortic incompetency. Here the valve is closed by the aortic systole, as well as the ventricular contraction; and Traube has pointed out how sinister is the effect of this double closure of the mitral valves at each cardiac revolution. Strain, then, we must admit, is a cause of mitral valvulitis.

But there is no question that the bulk of cases of mitral disease are due to an acute attack of endocarditis, usually associated with rheumatic fever. The inflammatory storm which then passes over the vela of the mitral valve leaves its consequences behind it for long—resultant sequelæ usually felt during the whole remaining existence of the

individual. There is no department of medicine where a careful observation of the changes wrought by acute disease can tell us more than is the case with the mitral valve when inflamed during temporary disease. It is a malady which rarely proves fatal at the time, is acute rheumatism: but its consequences are felt in a large proportion of cases as long as the individual survives. But it may be gravely questioned whether the information furnished to us by the study of the morbid changes so brought about, has been utilised in practice to the utmost. The fact is, the lessons so taught us by the revelations of the dead-house have exercised but a tithe of the influence which they ought, and will ere long, exercise. They teach a lesson as to the treatment of endocarditis which is as yet but very imperfectly appreciated. They indicate very distinctly what our line of practice should be; and it is a very different line from that which now obtains. It really amounts to a reversal of our present practice. This strong expression of opinion can, I think, be pretty clearly demonstrated and maintained by the facts of the case. It is necessary for this end to consider what are the histological conditions set up during an attack of acute endocarditis.

In the first place, the minute vessels of the valves are congested, and there is a growth of cells immediately around them; then this proliferation of young connective-tissue corpuscles extends throughout the fibrous structure of the valves. The endocardium is inflamed, vascular, and velvety with the excessive development of endothelial elements; especially on the ventricular surfaces of the valves, which come in contact with each other at each ventricular systole. The proliferation of connective-tissue corpuscles extends down to the insertion of the tendinous cords of the vela in their papillary muscles, and even into the muscular papillæ, which may be ultimately converted into fibrous structure. The tendency of pathological connective tissue is to contract; and this process of contraction goes on after the acute rheumatism has disappeared. It is not during the attack that the mischief is done; it is only set up during this brief period. The connective-tissue corpuscles then thrown off work out their effects subsequently; and we know only too well what these effects are. They are these. The contracting process either shrivels up the valves, especially along their free edges, rendering them insufficient, and so permitting of regurgitant leakage—a process aided by the shortening of the chordæ tendineæ till sometimes the valves and the musculi papillares meet; or may be the cords are elongated and permit the valves to wash backwards to some extent on the ventricular contraction. Or at other times a process of agglutination goes on, and the valves become soldered together by this growth of connective tissue, until the mitral valve is converted into a funnel-like projection into the cavity of the ventricle; or it may be that the two vela are converted into a sort of diaphragm with a slit in it—the "button-hole mitral." In either case such ruin is worked in the mechanism of the valve that it no longer fulfils its functions, but is converted into a rigid firm-walled ostium, obstructing the flow of blood from the auricle into the ventricle, or but imperfectly opposing its regurgitation on the ventricular systole. Whichever is the leading lesion, stenosis or incompetency, it is a serious matter. We know that there are all varieties and degrees of valve-mutilation so induced—from the very gravest forms soon leading to a fatal termination, from the obstruction thus set up in the vascular system, and the engorgement of the pulmonic circulation; to such slight changes that they do not impair the efficiency of the valve. We are, of course, more familiar with the graver than the slighter forms, both in practice and in the dead-house. We also know well that once a serious lesion is established in the mitral valve a whole train of sequelæ follow. And this is the case whether the mitral valve be primarily affected, or secondarily to pre-existing aortic disease. No matter how severe the disease in the aortic valves, so long as the mitral valve holds firm it is a question betwixt the left ventricle and the difficulties it has to encounter; and not rarely the ventricle succumbs suddenly, especially in aortic regurgitation. Why, will be apparent in the next lecture. Once the mitral valve is affected to the extent that it either offers an obstruction to the onward flow of the blood, or permits of its regurgitation on the ventricular systole, then a totally new aspect is assumed. This lesion at the mitral orifice causes *Rückwirkung*, as the Germans call it—*i.e.*, backward effects of the gravest character. If the lesion be not great there is congestion of the pulmonic circulation; the blood flowing through the lesser vascular system is met at the mitral orifice, either by an obstruction or by a back-flowing current of blood; and so the current is dammed more or less. There is fulness of the pulmonary vessels, whose calibre is enlarged and their walls thickened; and along with these changes enlargement of the right ventricle, with an increase in the thickness of its muscular walls, follows. By such compensatory growth the lesion at the mitral orifice is more or less completely and effectually compensated; but this is only in the most favourable cases. Much more commonly there is the *Rückwirkung* behind the tricuspid valve, involving the whole venous system. It will be more convenient to consider this "back working" in the next section relating to the valves of the right heart. At present we may more profitably consider what the lessons of the dead-house teach us as to the management of mitral valvulitis in practice.

It has been stated before that the practical lessons taught us by the morbid anatomy of mitral valvulitis are of the most important character. We know that during the acute inflammatory storm which passes over the surface of the valve there is an interstitial growth of connective-tissue corpuscles. This interstitial growth is set up by the acute endocarditis synchronous with the acute rheumatism. But—and this is the important matter—there are no grounds for holding the opinion that this interstitial growth, once set up, ceases with the articular rheumatism, though the endocardial murmur may disappear. On the contrary, we have every reason to believe, if our knowledge of pathological processes is to be trusted, that this interstitial cell-growth persists for some time after the general symptoms have passed away. When the active development of these connective-tissue corpuscles has come to an end, the contracting process follows; and mutilation of the valvular vela and their attachments is the necessary and unavoidable outcome.

I think it is not exceeding the fair interpretation of this morbid change to say, that we possess no means by which this contractile process can be controlled. It goes on without our being able to arrest it; as steadily as the contraction of a burn. No one now holds that we can influence this contracting action of connective-tissue corpuscles of pathological origin, by the exhibition of mercurials, or even iodide of potassium, supplemented by iodureted friction. Such faith, or rather credulity, pertains to a by-past time. But if nothing can be done during this contracting period: are we powerless to influence the course of mitral valvulitis? Certainly not. If we reflect properly on the lessons taught us by observation of the pathological process, we may premise that the consequential contractile process bears a definite relation to the amount and extent of the inflammatory storm and the interstitial cell-growth which accompanies it; and remains after it has passed away, as regards the acute condition at least. Probably the tissues of some persons are more irritable, more disposed to take on this sclerotic, or contracting action than are the like tissues of others; but this does not bear on the argument. The extent of the cell-growth is the great factor in the amount of the succeeding contractile process. The question next arises, can we exercise any influence over the primary part of the process—the cell-growth? We have every reason to hold that we can do so. In all interstitial inflammations, as well as other inflammations, to give the affected part physiological rest is the most effective way by which the morbid process can be beneficially influenced. If the mitral valve could be placed at complete rest, probably the cell-growth would cease with the decline of the acute endocarditis. But such complete rest of the mitral valve is unfortunately incompatible with life. If perfect rest is unattainable, the nearest practicable approach to it is surely the best thing to attempt. The mitral valve is functionally active every time the ventricle contracts; and the more vigorous the ventricular systole, the greater the strain upon the injured valve. I venture to think there is no fallacy in this argument. The value of physiological rest is as great to the inflamed mitral valve as to any other part of the body when the seat of abnormal processes. It is clearly our bounden duty under such circumstances to secure quiet, as far as is practically possible, for these injured valvular vela. And the means by which this is to be secured are simple and intelligible enough. We must avert all avoidable strain upon these structures until a state of trophic

quiescence is reached. If rest be essential to a broken bone, and movement is followed by a greater development of callus; it is no abuse of the reasoning faculty to assume that rest would be equally desirable for inflamed valves, and to infer that functional activity must exercise a mischievous influence. The more strain is thrown upon the inflamed mitral vela, the greater the cell-growth within their structure. It is not unfair even to suppose that by such cell-growth in the valves partial physiological rest is secured for them. If the velum be contracted and bound down to the musculi papillares and to its basal attachment; or even if the chordæ tendineæ do not disappear, but only shrink, and the contracted velum thus be put partially at rest, surely then functional quietude is practically attained. Or if stenosis be the direction taken by the morbid process, if the vela are soldered together, then physiological rest, more or less perfect, is equally secured. But such means of securing physiological rest involve most serious ulterior consequences. They involve the practical destruction of the valve; and the consequent embarrassment of the circulation.

It is clear that what we must do, not only at the time of acute endocarditis, but for that subsequent period when the interstitial cell-growth is going on, is to reduce to the minimum the call upon the vela of the mitral valve. In order to do this effectually, the body should be kept at absolute rest in bed; and, in addition to this, the activity of the vascular system should be lowered, and the blood-pressure in the arteries diminished, by the systematic and persistent administration of vascular depressants. By so doing, we will secure, in the most efficient manner at our disposal, the nearest approach to physiological rest for the mitral vela. We should not only lessen the number of ventricular contractions in the minute; but we would materially diminish the strain upon the valve at each ventricular systole. By so doing, we would certainly exercise an influence, and in all probability a pronounced influence, over that interstitial cell-growth—that development of pathological connective-tissue corpuscles, whose ulterior effects we have such good and valid reasons to dread. It does not require a long list of cases treated upon this plan to demonstrate its claims to our confidence; the question can be settled by our knowledge of pathological processes, and our capacity to reason upon that knowledge. To read the various articles that have been written upon the treatment of acute endocarditis, and to find that authority after authority based the claim of their treatment to our professional confidence upon the short time—the few days—which elapsed before their patients were discharged from the hospital, is enough to make one despair of the reasoning power of the species. If these physicians had kept clearly before their eyes the lessons of morbid anatomy, surely they would have recognised the fact that their action was just the most pernicious thing they could have done; that, in fact, if they had deliberately designed to prejudice the ultimate interests of their patients, they could have selected no line of treatment containing so many potential elements of success as the one they chose. It would almost seem that for some persons, and even highly educated persons too, some stern doom, some grim force, has debarred them from the exercise of their reasoning faculties. It is true that Dr. Sibson has observed the good effects of rest in the treatment of endocarditis, for he writes, "The whole chain of evidence points, then, irresistibly to the conclusion that the extent, severity, and permanent ill effects of endocarditis were much greater in the series of cases that were not rigidly treated by rest than in the series that were so treated." And this plan is advocated by other authorities. But even in Dr. Sibson's lengthy article on endocarditis I fail to find any evidence that the plan of absolute rest was carried beyond the time of the acute symptoms; though in his still more recondite essay on Pericarditis he says, "Rest and support of the affected joints should be strictly maintained for several days after the disappearance of the local inflammation." Yet even here he does not seem to realise fully the equal necessity for rest, that is, such rest as is practically attainable for the inflamed cardiac valves. The evidence which demonstrated the utility of rest at the time of the acute symptoms does not seem to have set up any further reasoning on the matter, or to have suggested the continuance of the plan, until there were good reasons for supposing that the trophic disturbances in the cardiac valves had ceased, and thus the resultant distortion been limited. And yet it is obvious that if we wish to restrict the growth of connective-tissue corpuscles, and with that the ultimate mutilation of the valves, the absolute rest must be maintained for longer than several days, and even several weeks; the time varying with, and being in proportion to, the severity of the inflammatory storm.

(*To be continued.*)

CLINICAL LECTURE ON DIABETES INSIPIDUS.

DELIVERED AT THE LONDON HOSPITAL.

By STEPHEN MACKENZIE, M.D., M.R.C.P.,
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(*Concluded from page* 238.)

It has been proved by numerous examinations that the kidneys are not primarily at fault. When they show departure from the normal they exhibit only signs of overwork.

Where diabetes insipidus is found associated with definite organic lesion in other parts of the central nervous system than the medulla—the two appearing to stand as cause and effect—we must believe that the lesion produces an influence on the medulla which causes it to inhibit the vaso-constrictor vessels of the kidney. In many cases there has been no gross lesion in the nervous centres to explain the disease. Microscopic research, which is actively engaged in investigating the tissue-changes in diabetes mellitus, will, it is hoped, soon clear up these cases. Our opportunities of examination are, however, few.

Diabetes insipidus is much more common in childhood than in adult life. Children rarely suffer from the mellitic variety. It occurs twice as often in the male as in the female, though probably in childhood the discrepancy between the sexes is not so great. As regards the *causes*, some of these have been alluded to in speaking of the pathology, but there are others it is important to mention. Hereditary influence is occasionally marked, several members of a family being affected. Most frequently, when heredity has been present in diabetes insipidus, the progenitor has been the subject of mellitic diabetes. Drunkenness is a not very uncommon cause of this disease, which generally succeeds a debauch. "A patient, whose case is related by Professor Haughton, of Dublin, attributed the commencement of *the thirst* to a carouse on lager-beer and brandy in New York during the hot weather; on the morning following his debauch, an intolerable thirst had seized him, from which he had never subsequently been free." Dr. Dickinson, from whom I borrow the case, adds, that whilst in its mode of origin this instance seems typical, it must be mentioned, as introducing an element of doubt, that the man had tertiary syphilis. Among other causes which have been credited with its production are mental emotion, strains and muscular efforts, and cold, as in drinking cold liquids when the body is heated. A good example of the former is quoted by Lancereaux. A woman, thirty-two years of age, who was abruptly apprised of the death of her husband, was thereupon seized with pain in the head, without convulsions or loss of consciousness, heat of skin, and inextinguishable thirst. She drank a pail of water that night, passed a proportionate amount of urine, and remained polyuric; the condition, however, once intermitted during a febrile attack at the menstrual period, and returned with its cessation. The urine ranged in quantity from five to fifteen litres, in specific gravity from 1001 to 1005. The disease has also been known to succeed many of the exanthemata. In our patient the exciting cause is not very obvious. There can be no doubt that the severe pain in the occipital region which ushered in his disease, and which has since often recurred and been attended with pyrexia, indicates some intracranial lesion. The patient has never had syphilis, and has not given way to habits of intemperance. It is possible that the injury to his back may have set up some change in his spinal cord, which has travelled up to his cerebello-medullary region, or that the shock of the accident may have induced some change in this situation in the first instance.

Diabetes insipidus sometimes commences abruptly, sometimes declares itself gradually. The subjects of the disease are generally wasted, very sensitive to cold, suffer from

epigastric pains and constipation, but otherwise get along very comfortably as long as their drink is unrestricted. When their drink is limited they become irritable, peevish, and uncomfortable, and their tongues become dry and red. Trousseau mentions the case of a patient who passed daily thirty-two litres of urine. He was subjected to almost total abstinence from drinks; and to quench his craving thirst he was given some ice or lemon to suck, allowing him to take food in accordance with the promptings of his appetite. The unfortunate young man resigned himself to this severe regimen, which he endured for eight months, although he suffered so cruelly from it that one day he seized the chamber-pot and drank the contents to the last drop! The quantity of urine while the patient submitted to this treatment markedly diminished; but he felt his strength decreasing, his sight failing, and his body wasting, and he asked to be allowed to leave the hospital.(a) Dr. Dickinson has had two patients who also drank their own urine. He says—"The act is almost pathognomonic. Water makes its exit from the body much as it went in; sometimes with a specific gravity under 1002, acquiring in its passage no more extraneous matter than is often found in the product of a mineral spring, and capable of quenching thirst, however open to æsthetic objection." The thirst is sometimes extreme, and exposes the sufferer to serious inconvenience. A case is mentioned where an extraordinary consumption of water was discovered in a humble French household, and traced to a child three years old, recently come home from nurse, who from her birth had been afflicted by uncontrollable thirst. She drank every day nearly two pails of water; and was eventually driven from home by the ill-treatment she received in consequence of this expensive habit. When she was twenty-two, a cobbler, unaware of her propensity, married her: he found that his earnings did not suffice to keep her in water, insomuch that he was fain to collect and liquefy snow and ice for her use. She drank four pails of water a day, of which the price was twelve sous. She made him the father of eleven children. When she was forty years old she was examined by a scientific commission, and drank in the presence of its members fourteen quarts of water within ten hours, and voided ten quarts of nearly colourless urine. Some polyuric patients are very tolerant of alcohol, and Trousseau quotes the case of a man who drank a litre of strong brandy within two hours, and daily took the same quantity without being in any way inconvenienced. He stated that from the commencement of his disease he had acquired an immunity from the effects of alcohol, and that on several occasions he took for a wager twenty litres of wine (twenty bottles), gaining his wager without producing any effect on his nervous system.

The appetite is variable: in some cases it is below that of health, but sometimes it is voracious. In our patient it has never, from the commencement of his illness, been excessive. Trousseau mentions the case of a polyuric patient who inspired with terror the keepers of those eating-houses where bread is allowed, without extra charge, to the extent of each consumer's wishes. After the patient had taken one or two meals at one of these eating-houses, he was presented with money on condition that he did not come back to dine.

As regards the urine, the quantity is sometimes enormous. Our patient passed on admission ten to eleven litres; but in some cases as much as thirty and forty litres has been voided. The urine is generally clear and bright when passed, but often has a disagreeable smell, and rapidly decomposes. It is generally faintly acid or neutral. Its specific gravity is always exceedingly low, generally standing in inverse ratio to the quantity. The specific gravity is said to be high in some cases, and, from the increased specific gravity being supposed to be due to excess of nitrogen excreted, the term "azoturia" has been applied to this class; but in these the quantity of urine is not usually so great. Some patients appear to pass more fluid by the kidney than they take into the system. Niemeyer ridicules such a statement, and attributes it to inexact observation. But, difficult as it is to explain the occurrence, some instances are well established. It was noticed by Heberden.(b) Sir Thomas Watson(c) mentions the case of a boy aged eleven years, whose drink was limited to a pint and a half, but who, without losing flesh, passed during the corresponding twenty-four hours ten pints and a half of urine. Sir Thomas had no doubt his injunctions as to the limitation of fluids imbibed was carried out. But he obtained evidence in another way that a quantity of fluid may leave the system by the kidney without causing loss of the body-weight, and as the deficiency must be made up in some way, it is supposed that fluid is absorbed by the body from the atmosphere, either by the skin or by the pulmonary mucous membrane. This boy was weighed immediately after he had emptied his bladder, and was found to weigh 3 st. 8 lbs. 0 oz. 3 dr. Three hours subsequently, having taken nothing in the interim, he weighed 3 st. 9 lbs. 0 oz. 2 dr. Then he voided sixteen ounces of urine, after which his weight was again 3 st. 8 lbs. 0 oz. 3 dr. Thus he must have gained about a pound from some source in that brief space of time. Dr. Dickinson gives similar experience in a young girl aged eight years. On many occasions, when her urine and drink were carefully measured, it was found that the egesta exceeded the ingesta. Thus the average of fluid drunk on eleven successive days was 7255 cubic centimetres, the quantity of urine passed being 7936 cubic centimetres. On some days, the quantity drunk exceeded the quantity ejected, but on a majority of days she drank less than she passed. From the number of days over which the investigation extended, it could not be that the fluid taken in was retained for some time, thus causing the fluid taken on a previous day to be discharged on the succeeding one, thereby increasing the quantity for the latter, and making it appear that the patient passed more than she drank. But Dr. Dickinson obtained more precise evidence that a patient may gain weight without eating or drinking, apparently by absorption of water from the atmosphere. On four occasions immediately after her dinner she was made to empty her bladder, and thus weighed. She was then kept without eating, drinking, or passing water, and weighed when she could hold out no longer. It was always found that she had gained, though variously in amount. In the first observation she gained in three hours fifteen and a half ounces; in the second, in five hours and twenty minutes she gained nineteen ounces and three-quarters; in the third, in three hours and a quarter she gained only a quarter of an ounce; in the fourth, she gained, in three hours and a half, three ounces and three-quarters. It thus seems clear that patients may gain moisture from the atmosphere, and pass more urine than they imbibe fluids.

Though the specific gravity of the urine is so low, the amount of solids actually excreted is more than made up for by the large amount of urine passed. This is particularly the case as regards urea, the quantity being usually decidedly increased. This is probably merely due to the filtration of a large quantity of water through the system, for if a healthy person will drink a very large quantity of water, and at the same time satisfy his appetite in a natural manner, he will excrete an augmented quantity of urea. In the patient the subject of this lecture the urea has never been superabundant, always being below the quantity he should pass. A man of his weight should pass from 27 to 30 grammes per diem, instead of which the quantity he passed averaged about 19 to 20 grammes, and was once as low as 13 grammes, and this, too, when he was passing the largest quantity of urine. I attribute this deficiency in the excretion of urea to the smallness of his appetite, and especially to the small amount of nitrogenous food he takes. Though his urine has fallen from 11,000 to 2500 cubic centimetres, with proportionate increase of specific gravity, the quantity of urea excreted has remained almost stationary. It is certainly no unfavourable sign in his case, for all his symptoms are ameliorated, and he has gained a stone and a half of flesh. Dr. Dickinson has shown that the uric acid usually seems diminished or absent, that the phosphoric acid equals the standard of health, and that the earthy phosphates are notably increased—a point of much interest in association with the nervous origin of the disease. In some cases, one of which I have recently had in the same ward, the excess of excretion of phosphates predominates over the polyuria, and to this condition the name "phosphatic diabetes" has been applied. Inosite has been found in the urine, but it

(a) Trousseau's "Clinical Medicine," vol. iii., page 530.

(b) "Novi urinam in diabete bis modum potionum implevisse." Gulielmi Heberden, "Commentarii de Morborum Historia et Curatione," page 125.

(c) "Lectures on the Principles and Practice of Physic," fourth edition vol. ii., page 686.

has been found by Strauss in the urine of healthy persons made to drink large quantities of fluid. It has also been found in mellitic diabetes.

Diabetes insipidus is of uncertain duration, its course being determined by the lesion upon which it is dependent. Where the cause is tubercle, glioma, or severe brain lesion, its course will be somewhat rapid; but when due to some minute structural lesion, the disease may last many years, and not materially shorten the patient's life. I have mentioned to you one case where a woman had the disease for years, and bore a large family. Such cases might be multiplied. The disease may be, thus, very protracted, and, provided the patient has free access to drink, he or she suffers but little. It often happens that the course of the disease is much modified, and even arrested, by some intercurrent disorder; but sometimes a patient passes through such a disease without any modification of the polyuria. Phthisis—so common a mode of termination in diabetes mellitus—is not common in the insipid disease, though Trousseau appeared to think it is. Sometimes death is preceded by great anorexia, diarrhœa, vomiting, wasting, and progressive exhaustion, and after death no cause in such cases has as yet been discovered.

We come, in conclusion, to the treatment of this disease. Niemeyer says, in connexion, with this subject and disease—"It is always suspicious when numerous remedies are recommended for a disease; in such cases, usually, none of them have any special effect on the course and termination of the affection." You will find most authors speak somewhat despairingly of treatment, and this you will have been prepared for by my having told you that the disease may endure for a great number of years. And since as long as the patient can satisfy his thirst and hunger the affection is an annoyance rather than a serious disease, you may feel inclined to rest contented with attending to the general health, and treating any derangement of the digestive system or other symptoms as they arise. But it seems to me desirable that we should not rest without previously trying if the disease cannot be cured or markedly abated, for though the effects may be slow in making their appearance, the increased flow of fluid through the system means increased wear and tear of the whole vital mechanism.

Dietetic treatment, so valuable in mellitic diabetes, is useless, and even injurious, in the insipid disease; and the reason is obvious. In diabetes mellitus we have to do with a functional derangement of the liver. "The brain misdirects the liver, the liver misappropriates the food." In diabetes insipidus the essential feature of the disease consists not in any malassimilation of food, but in paralysis of the vaso-constrictor nerves of the kidney, by which too much blood is brought to these organs, and the pressure being reduced in the arteries, the capillaries have to bear the pressure of the systemic arterial force, and this greatly exceeding the pressure in the uriniferous tubules, rapid and excessive filtration of water results. It may be generally stated that in insipid diabetes an amylaceous agrees better than a nitrogenous diet—the reverse of what occurs with mellitic diabetes; but patients do best with a mixed vegetable and meat diet. The remarks about dieting apply equally to other remedies serviceable in diabetes mellitus. Opium and its alkaloids do harm in insipid diabetes by deranging the digestive functions. Belladonna, bromide of potassium, iron, strychnia, jaborandi, arsenic, ergot, cod-liver oil, have no important influence on the secretion of urine in this disease, though some of them, alone or in combination, do good by improving the general health. Külz(d) has reported two cases of diabetes insipidus cured by the application of the constant current daily to the neck and spinal column. Dr. Harry Kennedy has lately reported most excellent results following the administration of dilute nitric acid. He gives five cases(e) in which cure or great amelioration followed the use of this drug given in doses of from one to six drachms daily. This treatment certainly deserves further trial.

The remedy, however, which I wish to press upon your notice, and which has been so successful in the present case, is *valerian*. Professor Trousseau is the great advocate of this treatment, and he gave valerian in the form of the extract in doses of from ten to thirty grammes (two and a half to seven drachms) in the twenty-four hours. The larger dose caused troublesome symptoms, and he contented himself later with twelve-gramme doses. M. Bouchard has found valerian useful in insipid diabetes, and, according to his observation, it does good by lessening the excretion of urea. He finds that the diminution in the quantity of urine is only secondary to the diminution of the secretion of urea, and he considers the action of valerian conservative, as it arrests waste. He states that among certain Indians of Lower California and Mexico, the warriors, before undertaking an expedition, train themselves by putting themselves for a month on a *régime* of valerian in all its forms in order the better to support fatigue.(f) In the present case I have given powdered valerian in doses of thirty grains, increased to sixty grains, three times a day. This the patient has taken without nausea or other inconvenience, and with the result of reducing his urine from ten or eleven litres to two and a half litres; and I have little doubt that we shall bring down the quantity by another litre to the standard of health. How far the cure will be permanent it is, of course, impossible to say at present, but the great improvement in the patient's general health and his increase in flesh, with the absence of any sign of visceral disease, promise well for his future. Valerian, like other remedies, will not always succeed, and unfortunately we do not at present know how to distinguish the cases likely to benefit by its administration. It is, however, always worthy of trial in this disease.

(d) *Centralblatt für die Med. Wissenschaften*, 1875, xxix., 481.
(e) *Practitioner*, February, 1878.

ORIGINAL COMMUNICATIONS.

ON THE DIFFERENCE BETWEEN THE AXILLARY TEMPERATURES ON THE TWO SIDES IN PHTHISIS;

WITH 880 OBSERVATIONS.

By ALEXANDER M. McALDOWIE, M.B.,
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A LOCAL increase of temperature in an inflamed part has always been recognised, and, indeed, is evident on the most superficial examination. Until a comparatively recent date, the general opinion, grounded on Hunter's experiments, was that the inflamed part was entirely passive as regards the increase of temperature, which was due solely to the influx of blood, and that an internal organ, since its temperature was the same as that of the aortic blood, could not be made warmer by inflammation. Becquerel and Breschet in 1835 performed experiments to prove that an inflamed part was actively calorific, but it was reserved for Simon to give exact demonstration of this fact, which is now universally accepted. It is much more recently, however, that a difference in temperature between the two sides of the body has been detected in cases of paralysis, where it is of importance from a diagnostic point of view, in localising the seat of the brain lesion; and, still more lately, between the two sides of the thorax in inflammatory affections within the chest.

It has been known to physicians for some time that the axillary temperature differed on the two sides in many cases of phthisis, but, as far as I can discover, Dr. Charteris was the first to call the attention of the profession to this fact, in the *Lancet* for May 13, 1876. In that article he says:—"I was not aware until very lately, neither do I find it recorded in the most recent works on the subject, that the temperature varies in the side affected. It would be premature as yet to mention this otherwise than incidentally, but, if confirmed by further observations, its importance as a diagnostic and prognostic is very evident. The side on which there are marked evidences of mischief has a higher temperature in the axilla than the side which is free from disease. In some cases this was as high as a degree, in others varying from four to six points. The difference was most apparent in the evenings, when the temperature was higher; but even in the mornings there was a slight distinction." The following figures give the results of the thermometric observations in both axillæ in forty-two cases of phthisis which have been under treatment

(f) *Journal de Méd. et de Chir. Pratiques*, November, 1873. Abstracted in *London Medical Record*, vol. i. 1873, page 814.

at various periods during the past fifteen months. The patients were all inmates of the North Staffordshire Infirmary, and the number of experiments varied in the different cases from one or two up to more than 130, extending in several cases over a period of more than three months. Simon observes:—"Not only is it the case that the finest differences of temperature have to be accurately observed, but every alleged great excess of local temperature must at first be accepted with mistrust." (a) The following temperatures were carefully recorded in every instance. When any great difference between the two sides was noted, the observation was repeated for verification.

The total number of observations was 880, and the average difference between the axillæ was 0·63° Fahr. The right side was higher than the left in 388 instances, the left the higher in 387, while the sides were equal 105 times; 437 of the observations were taken in the morning, and gave an average difference of 0·68°; the remaining 443 were made in the evening, with a variation of 0·58°. In sixty-two observations there was more than a degree of difference between the sides, in twenty-two instances it was two degrees or more, and five times it was as much as three degrees. We would naturally expect the difference to be much greater when the temperature was very elevated than when it was but little above the normal; but the results obtained do not support this theory. Thus, 570 experiments were made when the temperature was above 100°, and 310 when it was below that figure; and the average difference between the sides in the higher temperature was only 0·04° greater than in the lower. In the former it was 0·65°, in the latter 0·61°.

In examining the subject in detail it will be convenient to classify the cases into three groups, according to the stage of the disease, the three stages corresponding to the formation of tubercle, to inflammation and softening, and to excavation. In the first class are arranged those cases where physical examination revealed only a very slight deviation from the normal condition; in the second, those in which dulness and tubular breathing were found; and in the third, those in which cavernous sounds were discovered. These groups will also naturally be subdivided into cases in which both lungs were equally affected, and those in which the disease predominated in one organ.

1. *Cases of Commenciug Tuberculosis.*—The number of cases in this class experimented on was three, and the number of experiments seventy. In two of the patients the breathing was slightly harsh in both apices; in the third, abnormal respiratory sounds could be detected only under the right clavicle. The average difference between the axillary temperatures in these cases was 0·93°. In the two cases where both apices were affected, the right side was higher than the left in twenty-six observations, the left the higher in nine, while the sides were equal twice. In the cases where the stethoscope revealed lesion of the right apex alone, the temperature in the right axilla was higher than in the left eleven times, in the left higher than in the right seventeen, while it was the same in both five times.

2. *Cases in which both Consolidation and Softening existed.*—(*a.*) Those in which both lungs were nearly similarly affected: Seven cases are included in this class, whose temperatures were taken under both arms eighty-three times, and yielded a mean variation of 0·59°. The right side was more elevated than the left forty-four times; the reverse occurred sixty-two times; while the sides were equal on twelve occasions. (*b.*) When examination revealed consolidation of one apex with the respiration normal or only harsh in the other: The number of cases tested was fifteen, and the number of observations on these 175. These gave an average difference of 0·53°. In eleven patients where the affection was situated chiefly in the right apex the temperature was higher in the right axilla in forty-one observations, in the left in sixty-two, while the sides were similar in nineteen. In the remaining four cases the left lung was principally affected, and in these the right side was the higher in twenty-seven instances, the left in twenty-one, and the temperature was the same on both sides five times.

3. *Advanced Cases of Phthisis where Cavities existed in One or Both Lungs.*—(*a.*) When both lungs were almost equally involved: The temperatures of eleven patients were taken 368 times, with a mean difference between the sides of 0 56°. In 165 instances the right side was the higher, in 152 the left, and in fifty-one experiments no difference was observed. (*b.*) In this subdivision are six cases in which excavation of one lung was far advanced, while slight dulness or harsh breathing alone could be detected in the opposite apex. An average variation between the sides of 0·54° was noted in 184 experiments. In five of the patients the cavities were situated in the left lung, and in these the right side was the higher sixty-eight times, the left ninety-four, and the temperatures were similar in both axillæ ten times. In the remaining case the right organ was the seat of the excavation, and in it the temperature was more elevated under the right arm six times, under the left five times, while they were equal once.

From the above analysis it will be seen that the temperature in phthisis varies on the two sides indefinitely, and that no precise rule can be formulated as to the comparative temperatures of the sides in a case of phthisis at any stage of the disease. I regret that there were so few cases tested in the early stage, during the formation of tubercle, as these are the only cases where the thermometer is necessary for diagnosis. Cases of consumption, however, as a rule, do not come into the hospital until the disease is well developed, and when its symptoms are unmistakable.

These observations do not support the theory that the side in which the disease predominates has always a higher temperature than the other. Thus the thermometer was employed on 359 occasions on cases in which one lung was nearly free from disease, while the other was extensively involved. In 162 instances the temperature of the side which was more affected exceeded that of the other; but in exactly the same number of observations the side which was but slightly diseased showed the greater elevation, while the sides were equal thirty-five times. Moreover, the average difference was fully as great when both lungs were equally affected as when the disease was much farther advanced on one side. In the former the average was 0·58°, in the latter 0·54°.

Consolidation generally raises the temperature more than excavation, as in 117 observations where there was marked solidification of one lung, with cavities in the other, the consolidated side was the higher in seventy-six, while the other was the higher in only twenty-seven instances.

The side on which the thermometer registers the higher temperature in the evening shows very frequently a greater depression in the morning than the other, thus exhibiting a much greater range of temperature than the opposite side.

In several cases the temperature was observed to range very high under one arm for nearly a week, followed by a depression which lasted for several days. A similar elevation would then be observed either on the same or on the opposite side, lasting for an equal period, and succeeded also by a fall of temperature. These were probably caused by the occurrence of circumscribed inflammation in one lung.

The following cases are appended, as they show very fairly the variation between the axillary temperatures met with in pulmonary consumption.

Case 1.—William B., aged forty-one, stonemason. Family history good. Patient always enjoyed good health until eight weeks before admission, when he was exposed to cold and damp, and suffered from cough with profuse frothy expectoration. No rusty sputa. Has lost much flesh. On admission, patient pale and emaciated; cough slight; expectoration scanty, muco-purulent; night-sweats; appetite bad; no dulness over either lung. Breathing harsh, with a few moist râles over left apex; inspiration rather wavy over the right apex, but the expiration was not prolonged. Breathing harsh in both supra-scapular regions; no râles. In this case thermometric observations were made thirteen times in the morning with a mean difference of 0·88°, and the same number of times in the evening with an average of 0·6°. The right side ranged higher than the left fifteen times, the left higher ten times, and they were equal once.

Temperature.

	Morning.		Evening.	
	Right axilla.	Left axilla.	Right axilla.	Left axilla.
July 3 . .	102°	100°	102·2°	101°
,, 4 . .	101·4	101	—	—
,, 5 . .	101·4	101·8	102	102·2
,, 6 . .	100	101·4	102·4	101·8
,, 7 . .	100	98	102	101
,, 8 . .	100	101	101	100·2
,, 9 . .	100·6	101	101·2	102·2
,, 10 . .	100·4	100	101·4	101·8
,, 11 . .	101	99·8	100·4	101
,, 12 . .	100·6	100	102	101·6

(a) Holmes' "System of Surgery," vol. i., page 17.

	Morning. Right axilla.	Left axilla.	Evening. Right axilla.	Left axilla.
July 13	102°	101°	102·4°	101·8°
„ 14	100·8	101	101	101
„ 15	102	101·2	100	101·2

Case 2.—Ann M., aged eighteen. Mother died of consumption. The cough began gradually about four years ago, and the patient has suffered from it more or less ever since. Has been in the hospital three times before. Has never had hæmoptysis. Great emaciation; night-sweats; fingers clubbed; cough severe; expectoration profuse and purulent. Left Lung: Percussion note tympanitic beneath the clavicle, quite dull over third and fourth ribs. Dulness behind over the whole of the upper lobe. Loud cavernous breathing and coarse gurgling, etc., over all the upper lobe. Chest expansion limited on the left side. Right Lung: Breathing puerile over the whole lung, coarse in the supra-scapular region; percussion note clear. The temperature of this patient was taken ninety-seven times, when the temperature was above 100° with an average variation of 0·79°, and twenty-six times when it was below that figure with an average of 0·42°. The mean difference between the sides in the morning was 0·48°, and in the evening 0·73°. The side on which the cavities existed was the higher seventy-seven times, the reverse was noticed thirty-eight times, while the sides were equal in eight observations. The patient left the hospital unimproved, but was readmitted three months afterwards, when the following condition of the lungs was noted:—Physical signs on the left side much the same as before, but dulness over the right apex with moist râles. The patient died about a fortnight after admission. At the post-mortem the upper lobe of the left lung was found completely excavated by large cavities, while the lower lobe contained several large caseous deposits. The apex of the right lung was consolidated and contained several small recent cavities. During the second period she was in the hospital the temperature was very high, ranging from 101° to 103·2°. Six observations were made in the morning with an average difference of 0·53°, and eight in the evening with an average of 0·4°. The right side was the higher ten times, the left four.

Temperature.

	Morning. Right axilla.	Left axilla.	Evening. Right axilla.	Left axilla.
Feb. 6	99·6°	100°	99·8°	100°
„ 7	100·2	101·4	99·6	100
„ 8	101·8	103·4	100·4	100
„ 9	101·2	101·4	100	104
„ 10	100·2	100·6	100	100·4
„ 11	100·2	100·6	99·6	99
„ 12	99·2	99·8	99·4	99·8
„ 13	98·8	99	99·4	100
„ 14	100·2	100·4	98·6	100
„ 15	101	100·4	98·6	99·4
„ 16	99·8	101	99	98·6
„ 17	102·8	103·8	99	99·2
„ 18	100·2	101·4	97·8	99·8
„ 19	100·2	100·6	100·2	99·6
„ 20	102·6	103·4	100	101·2
„ 21	99	99	99·2	99·6
„ 22	101·6	100·6	99	100
„ 23	100	99·4	100·4	99·8
„ 24	101·8	101·2	100·8	99·8
„ 25	100·4	100	101	100·6
„ 26	101·6	100·8	98·4	98·8

Case 3.—James C., aged twenty-two, postman. No family history of phthisis could be elicited. The patient had suffered from cough for about ten months. He had never been confined to bed, but had been unable to work for more than four months. Cough very severe; expectoration copious, purulent, occasionally streaked with blood. Never had profuse hæmoptysis. Night-sweats. Patient was very pale and emaciated; enlarged cervical and submaxillary glands. Fingers clubbed. The physical signs in this case were, slight dulness over the right apex in front and behind with cavernous breathing and gurgling; tympanitic note on percussion over the left apex, with amphoric respiration and coarse gurgling. This patient remained under observation for nearly six months, until his death, during which period he had several severe attacks of hæmoptysis. The thermometer was used under both arms sixty-two times in the morning with an average difference of 0·62°, and sixty-five times in the evening with an average of 0·46°. The temperature of the right side was above that of the left sixty-four times, the left was the higher thirty-eight times, and the sides were the same fifteen times.

Temperature.

	Morning. Right axilla.	Left axilla.	Evening. Right axilla.	Left axilla.
Jan. 24	98·6°	99·2°	101·4°	100·6°
„ 25	100·2	99·2	101·4	101
„ 26	98·2	100	101·2	101·4
„ 27	98	98	101	100·6
„ 28	100·4	99·6	101·8	102·2
„ 29	99·4	99·4	102·2	101·6
„ 30	99·6	99·8	101·4	101·2
„ 31	99·2	98·6	100·4	100·2
Feb. 1	99	98·4	101	101·2
„ 2	100·2	100·6	99·4	99
„ 3	99·6	98·2	97·6	98·2
„ 4	98	98·2	99·2	99·4
„ 5	98·4	98	102	102·4
„ 6	99	99·2	99·8	100·2
„ 7	98	98	102	101·8
„ 8	100·8	100·4	102·2	102
„ 9	98·4	98	101	101·2
„ 10	98·2	98·4	99·8	100
„ 11	99·6	99·4	102·8	102
„ 12	100·4	100·6	101	102·2
„ 13	100	100·6	101·2	101·8

The analytical study of the observations recorded above leads us to conclude that the deductions recently formed by a reviewer of several treatises on the temperature in phthisis and tuberculosis may be very appropriately referred to the variation between the sides:—"But while thermometry seems as yet unable to assist materially in the discrimination of the various processes which go to constitute the affections clinically recognised as phthisis, and while it cannot define certain types of tubercular fever and mark them off from other affections, or even discriminate the temperature-course in certain cases of phthisis from that found in healthy subjects, there can be no doubt of its immense value in diagnosis."(b)

Stoke-on-Trent.

REMARKS ON THE ORIGIN OF FEVER, ETC.;

WITH A DESCRIPTION OF AN EPIDEMIC OF DIPHTHERIA.

By ALEXANDER YULE, M.D.

There are many and various opinions on the origin of fever, and I hope that there will therefore be found excuse for me in presuming to offer an opinion on so difficult a subject. In the remarks that I shall make I shall endeavour to show that fevers may arise in two principal ways:—

1. We shall try to show that it is probable that all diseases originally arose from a few simple types, of which the more complex (and amongst them the zymotic diseases) are examples, being all variations of a few simple types; and that during the lapse of generations, the variation of the simple type being repeated by hereditary predisposition, the various diseases became established.

2. Hereditary transmission of fever, the hereditary predisposition having been acquired from the ancestor having been infected by fever.

To these it may be added that fevers exist in a latent form sometimes. But how far in such diseases—for example, typhoid fever, etc.—there occur undeveloped cases it is not easy to determine. In regard to the subject of the origin of fevers, I shall not preserve the order in which they are put down, but introduce the methods of origin as may be found most convenient.

A commonly assigned source of fever is that it is due to bad sanitary conditions. Thus typhoid fever is said to arise from decomposing animal and vegetable matter, etc. That may be so; for sanitary states of the worst possible kind have in some cases existed for many years, and not within the memory of man have they given rise to an epidemic; and only when one arises are they taken notice of. To the bad sanitary condition the origin of the fever is then attributed. True enough; but, somehow or other, fever poison has reached these unsanitary parts, and there, finding a congenial soil for multiplication,

(b) *British and Foreign Medico-Chirurgical Review*, 1877, page 269.

spreads the disease far and wide. Thus, decomposing fæcal matter, etc., I should not even consider to be an exciting cause, say of fever, but an indirect cause; and secondary, in so far as that the fever poison, by some means or other, reached there and multiplied, being originally derived from some one who had suffered from fever, and perhaps, though rarely, from the same in a latent form.

Diseases have afflicted mankind from the earliest recorded times, and the descriptions left of them enable us to recognise them at the present day. Civilisation has continued to extend over the whole world, and it has influenced in a measure alike vast communities of human beings. The conditions under which civilised communities live have in this way become more or less similar; and this would, in a measure, account for the simultaneous, or nearly simultaneous, appearance of similar or of new diseases amongst them.

I shall make a few remarks on an epidemic of diphtheria that occurred in the neighbourhood of Haslemere, and I shall suppose that diphtheria is originally merely a variation of simple tonsillitis; and, to illustrate this point, I shall afterwards give a description of that disease. Diphtheria is a comparatively new disease, no descriptions of it having been given until modern times. Had it existed in former times as it does now, there is no doubt but that the observers of former times would have handed down a description of it. We shall suppose that the considerable fever and disturbance of the system that frequently arise in a simple case of tonsillitis have, under certain circumstances, caused an exudation of an infectious nature, in some cases so slight as to be imperceptible, and only to be recognised as simple tonsillitis, in reality being diphtheria. In this way we may suppose that the disease, diphtheria, has arisen by stages slow and imperceptible, until, on an outbreak of the affection, its infectious nature and symptoms being for the first time recognised, the disease was supposed to be a new one; and so indeed it was, being originally only a variation of tonsillitis. Accordingly we are led to believe that the progenitor of diphtheria was tonsillitis; and even now, by the behaviour of the latter disease in some outbreaks of diphtheria, a relationship may be observed. Then, if diphtheria is a variation of tonsillitis, by the law of hereditary predisposition we have the tendency to the variation transmitted and a new disease established. Applying the doctrine of variation to other diseases, scarlet fever originally may have been a variation of roseola, or some such eruption, the variation being impressed on the system by hereditary influence. The tendency to the disease would then be acquired, which, under certain favouring circumstances, would show itself, and by contagion and infection be propagated. Thus mankind in general may be said to inherit a tendency to all the diseases of their forefathers. In this way we may look upon progressive development through the continued influences of civilisation and hereditary tendency, producing, even within the records of man, new diseases, which may propagate themselves, being impressed on the system, and having an hereditary tendency to repetition. For example, in the case of scarlatina, or other diseases that have arisen in this way *de novo*, the connexion between them and their progenitors would not be evident, for the influence would be so gradual, be extended over so long a period, that an isolated case, apparently so arising, would not be confirmed by subsequent observation. I shall instance a few more fevers—say simple continued fever, which may have given rise to typhus and typhoid fever respectively. The individual circumstances surrounding the subjects of these fevers may have determined the nature of them, and thus typhoid fever may have developed from continued or simple fever, complicated with diarrhœa, and typhus fever where the complication of the simpler type was of cerebral origin. I shall make a few remarks on two common tropical fevers, one of them mostly confined to certain localities in the tropics. The first is remittent fever, which is common all over the tropics. Remittent and yellow fever may be due to the law of hereditary transmission and variation just mentioned. In reference to the fact that yellow fever only prevails in certain parts of the tropics, and remittent fever all over them, it might appear that this circumstance would tell against the fact of yellow fever being originally a variation of remittent fever. As the remittent fevers of different localities differ much, so it may be that only in certain kinds of remittent fever is the variation possible that would eventuate in yellow fever. Remittent fever evidently arises from malaria; and so clear is that fact, that were our fevers derived from external sources, independent of contagion and infection, proofs of their so arising would soon be placed on grounds not admitting of a doubt. Yellow fever, we think, is a fever of itself, and not produced directly by malaria, but originally a variation of remittent fever. That in decomposing vegetable matter a poison is generated that will produce fever, is undeniable. In a congenial soil the poison multiplies, and as the air in the tropics is as full of germs as that in temperate climes, it may be believed that the poison is taken up by them and conveyed in the air, and being inhaled, gives rise to fever. It is said that at night the malarious poison is most active, and that it is close to the ground. That circumstance may be explained by the influence of lessened heat and stillness of the air, which would thereby be less likely to carry away the germs that have been in contact with the vegetable matter that produces the poison. Likewise a low white mist may often be seen at night over pestilent places, and this mist must be full of fever poison and germs, in a state, more or less, of stagnation. The connexion between remittent fever and changes in vegetable matter is so evident that it is accepted by the profession generally; and, even in temperate climes, ague is not supposed to be caused by anything but malaria. I shall now attempt to show that yellow fever is a variation of remittent fever *plus* an animal poison. Thus we may presume that some of the various forms of remittent fever have originated this disease, and, once originated and established, that it spread as zymotic fevers do. Yellow fever cannot exist but at certain temperatures, and that would be an argument to show that a certain degree of cold renders inactive or destroys the poison of this fever. The poison, too, has all the characteristics of those fever poisons that are seen in temperate climes, and may be carried in clothing, etc.—a circumstance in harmony with the behaviour of fevers in temperate climates, but not witnessed in the case of remittent fever. When one has had remittent fever—say ague—the disease may return, even when there is no malarious poison to inhale, which forms a contrast to fevers whose origin is of an animal nature; for these seldom repeat themselves, and, when they do so, only at distant intervals; and in almost all these cases the disease arises from fresh infection from some one suffering from fever. I shall not go into explanations of the law of variation in reference to other diseases, but merely remark that the idea may be carried out in reference to many other of the zymotic diseases, such as small-pox, etc. One other disease, which in some respects is unique, I shall say a few words about: that is, true syphilis. If the law of variation be applied to this disease, we may suppose that it has arisen originally from some severe simple sore which acquired a contagious character, generating an animal poison. The disease had, likely, for some time existed before its true nature had been recognised, and, once originated from a simple sore, the variation repeated itself, and has never been stamped out, the malignant form propagating its own kind.

Man, in his primitive state, we may suppose to have been subject to few diseases, such as those that arose from cold, want of food, etc. As time went on, we may suppose him to have become changed, and to have acquired hereditary tendencies, and in the lapse of ages our fevers, scrofulas, etc., may have arisen in a very simple manner; and only as man became civilised were differences between different complaints recognised, each one of our diseases being a variation of some simple type, changed by slow and imperceptible degrees. Allowing that fevers arise from hereditary predisposition, it is likewise clear that there must be exciting causes, and what these may be it is difficult to surmise. As a general rule, it may be supposed that, in the first place, an epidemic of fever may arise from infection or contagion spreading from one case in some of the many ways in which that may take place. In some obscure cases a latent case of fever may have been the starting point of the epidemic. Sometimes cases of fever occur simultaneously, or nearly so, in the same locality, or even at remote localities. This may depend upon atmospheric influences acting upon a number of people alike conditioned and hereditarily predisposed. To go a step further, that state of atmosphere or those other conditions that originally gave rise to the disease of which the fever is a variation may be the exciting cause; and thus the simultaneous outbreaks of epidemic diseases may be explained.

In regard to the spread of infectious diseases, I may remark that when anyone becomes affected with zymotic disease, the whole body gives forth zymotic poison, and the germs are taken up by the atmosphere. Much of the fever poison

after its exit from the body may be destroyed, and much may remain in a latent form, and under favouring conditions may develope itself. The discharges from the bowels, etc., even in cases of scarlatina, as in other zymotic diseases, probably contain the poison; and these developing germs in sewers or elsewhere, an epidemic of fever may thus be originated. So long as fever germs remain in a drain or sewer, and do not by a slow form of leakage reach the dwellings of people and undergo a peculiar change through contact with air supplied gradually and in limited amount, facts show that fever poison is innocuous. For were it otherwise, all those that are employed in sewers, etc., would be subject to many infectious and contagious diseases. It is equally clear that complete ventilation will destroy the poison of fever, and there is no more potent agent for disinfecting purposes where fever exists. In decomposing vegetable and animal matter, fever often lurks and remains dormant until circumstances arise calling forth its poisonous manifestations. Were antiseptics more commonly used than they are in the treatment of fever, much danger from the spread of fever by infection or contagion would be obviated. Thus the air the patient breathed might be rendered antiseptic without being too irritating. I think if oxygen gas were disengaged slowly and continuously in the sick-room the patient would be all the better for it, and it would help to destroy all fever germs. As in fever there is increased oxidation as well as consumption of nitrogenous matters destined for the nourishment of the nerves, etc., that pabulum—viz., oxygen—would be afforded until the disease had worn itself out. Oxygen gas is a stimulant to the healthy system (and a stimulant is sometimes useful in fever); but that effect might not be produced, seeing that there is consumed by the tissues an excess over the amount supplied by the air; and an increased supply of oxygen being afforded to the system, the fever would consume that instead of causing increased action in the tissues. Frequent spongings or ablutions, or even occasional baths on antiseptic principles, would no doubt be of advantage. The blankets, etc., might be treated antiseptically; in fact, every method should be used to destroy the fever poison as it emanated from the body. To a certain extent no doubt this is done; but were antiseptic measures to be thoroughly carried out in the treatment of fevers, the frequency of epidemics would be diminished, and the mortality in cases so treated perhaps lessened.

I shall now give a description of some cases of diphtheria, with remarks intended to show that from cases presenting anomalous symptoms of diphtheria an epidemic of that disease arose. There is a family of the name of B., in this neighbourhood, whose relations are very numerous. To begin with them—there was G. S., who, in the month of June, 1877, had a sore throat; and soon after, another, E. B., who frequently visited the first, had in turn a sore throat. These sisters soon got well, for they appeared to have had only an attack of quinsy, to which they were subject. These cases, I am inclined to think, were latent diphtheria; and they had a sequence as if they had infected each other. On July 14, 1877, a relation of one of these, A. B, was attended by me for diphtheria. He had been living about a mile from Haslemere, and came to my house complaining of sore throat on the date mentioned. Diphtheritic patches were evident on the throat. He removed from his lodgings to his relations in Fernhurst, and there went through an attack of diphtheria. There had been cases of diphtheria in Haslemere; but there is no reason to think that he had been at all exposed to infection or contagion, but he had been in constant communication with the sisters just mentioned, whom he used to visit. About the same time, July 14, I visited a case near the cottage to which A. B. had gone: E. S., aged thirteen, was suffering from a sore throat and an herpetic eruption on her lips. I examined her throat, and discovered no signs of diphtheria, the tonsils being merely red and swollen. She had been ill a day or so previous to my visit. This girl had been in communication with the B.'s first mentioned. She got well quickly, and was not confined to bed. The next case, in the same house, was S. S., aged ten, who had a sore throat and considerable fever, but on examining her throat no signs of membranes were visible. As I was attending a case of diphtheria near by, I thought it as well to recommend that the S. family should be isolated for further observation. No particular treatment was adopted in these cases, as they were so mild. The whole family, six in number, had the disease; one, a stranger, escaped. The mother was the only one that showed well-marked symptoms of the disease.

This series of cases may illustrate what I presume occurs in many instances at the commencement of an epidemic of diphtheria. Probably many fevers arise at first, one may say, in a latent form, and only when severe cases show themselves is the danger appreciated. Diphtheria is a disease more or less of modern times, and during this epidemic many cases of sore throat, without other symptoms than those of simple tonsillitis, were observed; and in other cases, which showed afterwards that they had been those of unmistakable diphtheria, the primary symptoms were even less severe than those occurring in ordinary sore throat. The symptoms of diphtheria in ordinary cases are very clear; but cases do arise that do not present the well-recognised symptoms of diphtheria, but are yet capable of giving rise to a severe form of the disease.

There was another series of cases in the same neighbourhood. A relation of the family first affected, F. B., a married woman, and her children, all had the disease. She had been in the habit of frequently visiting the house where A. B. was, even though advised against doing so. One of her children caught the disease, and she and the others in course of time became affected. The husband, though in constant attendance upon the sick, did not catch the disease. He had had, a very short time before the others of the family became affected, a sore throat which was of a very common character, so that we might suppose that the case was one of latent diphtheria, and that the husband had communicated the disease to the family. These cases occurred in July and August; and, besides these, there were other cases distributed over the district, and which had no connexion, so far as origin went, with the cases mentioned. In March, 1878, and in the beginning of April, there were several cases. In one family there died a boy aged ten; the rest of the family had suffered from simple sore throats, and none of them had been confined to bed. These cases occurred at no great distance from those first described. The house where they occurred was situated about a hundred yards back from the Fernhurst-road, and was separated by a copse from the houses where the cases first described took place; so that this was the nearest house, towards the Fernhurst-road, from Van Common, where the first cases occurred. In another cottage across the Fernhurst-road four other cases occurred, and one died. As we have said before, all fever poisons are very subtle, and the way in which they extend and are carried to parts distant from their original location is difficult to trace, and it is not improbable that the disease extended from the cottages in Van Common.

(To be continued.)

GASTRO-ENTEROTOMY.—This operation has recently been performed with success by Mr. Maunder on a lady of rank. When lumbar colotomy is inadmissible, Mr. Maunder holds that this is the proper operation to be performed.

CEREBRAL THERMOMETRY.—At the annual meeting of the American Neurological Association, Dr. Gray, of Brooklyn, read a paper, having for its object to show that temperature, as determined by thermometers applied to the surface of the scalp, is a valuable aid in the diagnosis of brain disease. The thermometers are arranged in a belt which surrounds the head, the temperature being taken at "stations" where the coverings of the brain are thinnest. Dr. Seguin's surface-thermometers were employed, so modified that pressure did not vary the elevation of the mercury, and also made self-registering. If the temperature was elevated more than 2° or 2·5 Fahr. above the normal, an abnormal condition of the cranial contents was to be suspected. Dr. Gray had examined a large number of cases, and in some had verified his diagnosis post-mortem. Dr. Webber could not understand how the change in the temperature of the brain should be so localised when it was not immediately connected with the skull or the scalp. Dr. Gray stated that the thermometer could indicate the temperature of the cerebral surface, because both the skull (which was a thin layer of bone at places) and the scalp were good conductors of heat. Dr. Seguin thought that *delicate* cerebral thermometry was not of much value, but that the limits put upon it by Dr. Gray rendered it capable of being of some service. Dr. A. Hamilton thought it probable that the functional disturbances of the scalp would explain the variation in temperature.—*New York Med. Record*, July 13.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GUY'S HOSPITAL.

NEPHRITIC ABSCESS—OPENED BY LUMBAR INCISION—GREAT RELIEF—BRONCHITIS—DEATH.

(Under the care of Mr. BRYANT.)
[Reported by Mr. F. Hitch.]

Mary J., aged forty-two, was admitted into Lydia ward on November 28, 1877, under Mr. Bryant's care. Her family history was good, as also was her own. She had had small-pox and scarlatina, and was accustomed to a cough every winter, with expectoration, but did not spit blood. She was a married woman, and the mother of eight children, seven of whom were living. Her last child died two years before admission. The labour was long, lasting from 2 a.m. on Sunday until 7 p.m. the next day. There was hæmorrhage during the whole time, and she was unconscious for several hours. Instruments were used to extract the child. Her catamenia since that time had been very irregular, pale, and extremely small in quantity. She had become much weaker since her confinement. Her water had become thick, and there was also much pain accompanying micturition. When admitted, the patient was a healthy-looking woman, but weak and rather thin. On examination she had no noticeable abdominal enlargement, except a slight one behind and in the region of right kidney, behind which there was considerable tenderness on pressure. Urine normal in colour, specific gravity 1011, albuminous, having a large deposit, which proved to be nothing but pus. The pus was tolerably pure, and was not mixed with mucus. No renal casts were visible under the microscope.

December 5.—On tolerably firm pressure, half-way between the umbilicus and anterior superior spine of ilium, a not very well defined lump was felt extending through to the lumbar region. Pain was felt at the anterior end of the lump and in the lumbar region. The lump could be moved between the fingers placed in front and in the loin. The urine was abundantly loaded with pus, the proportion of which had been increasing. The amount of urine had been decreasing in quantity.

6th.—A glass filled with urine was, on being left to settle, opaque with pus to within about half an inch of the top.

7th.—Swelling scarcely so apparent. The patient had ether administered, and Mr. Bryant made an oblique incision in the lumbar region, about three inches long, above the posterior part of the crest of ilium, at the junction of the lower third with the middle third of the distance between it and the last rib. The subperitoneal fat was cut down upon, and a director passed into the kidney, when about two ounces and a half of pus were evacuated. Afterwards the finger was passed into the wound, and Mr. Bryant considered the finger penetrated into the pelvis of the kidney. The cavity was then washed out with a lotion composed of three drachms of the compound tincture of iodine to a pint of water, a drainage-tube introduced and fixed by means of a silk ligature, and the wound strapped and dressed.

8th.—She vomited a little in the night, but did not sleep. She thought the pain was less since the operation. The pus in the urine had greatly decreased. The wound looked well, and there was very little discharge.

10th.—Pus had disappeared from the urine; there was slight discharge of pus from wound.

12th.—She felt pretty well; no bad symptoms, except that her temperature was a little high.

13th.—Temperature 104°. She had great retching, without vomiting; bowels were very much relaxed; one pint and two ounces of urine were excreted, specific gravity 1026.

14th.—Patient complained of burning heat over abdominal parietes, which could be distinguished easily with the hand. Temperature 102·8°. She was ordered pil. opii in one-grain doses. Urine ten ounces, specific gravity 1026.

15th.—Temperature 102·8°.

16th.—She was much worse during the night, breathing with difficulty; complained of great pain in side. She died about noon.

Post-mortem by Dr. Goodhart.—The ascending colon and cæcum were intimately adherent over the kidney and psoas muscle. The bowel was rather contracted. The supra-renal capsules were healthy, but the right was somewhat tough, embedded in fibrous tissue. The left kidney was large and weighed about nine ounces, white mottled, and contained many cysts. The other was small and embedded in a tough mass of tissue; capsule firmly adherent and dense. The pelvis opened into the abscess described. There was a still unopened cyst in its lower part. The ureter was evidently dilated, so also the renal pelvis as far as the brim of the pelvis, where it became matted up in a thick mass of fibrous tissue connected with the right ovary; it was traced along and found pervious to this part; then for an inch it was lost, being damaged in extraction; below the missing part it was again pervious, but not dilated. There was no broad ligament on this side nor yet on the other. All the parts were matted up together, and the ovaries were not found without difficulty. The uterus was healthy, rather large, and transverse. The bladder was small, its mucous membrane red and velvety, in a state of subacute cystitis. All the mischief looked like some old inflammation in both broad ligaments, leading to puckering of the ureters and so to renal hydro- and then to pyo-nephrosis.

LONDON HOSPITAL.

ABSCESS OF THE LIVER PRECEDED BY DYSENTERY—DEATH.

(Under the care of Dr. STEPHEN MACKENZIE.)

W. F., aged twenty-six, was admitted on January 6, 1877. Patient had been at sea for three years, and had sailed to India, the Persian Gulf, etc. About fifteen months before admission he had dysentery, but not severely. It lasted three weeks, but he was only really laid up for two days. He states that he never had more than this one attack of dysentery, and has otherwise had good health. He acknowledges to syphilis, however. Between five and six weeks before admission he was seized with chilliness and shivering, but this hardly amounted to a distinct rigor. About half an hour later diarrhœa set in, and he had during the first fortnight about ten to eleven motions daily. He had little or no pain, but a good deal of straining at stool. At first the motions were like blood and slime. Since then each motion has given him pain; he has had very frequent desire to go to stool, and when there has had much tenesmus. For about a fortnight he has had from twelve to fifteen motions a day. Two days before admission he felt his stomach "swollen" and heavy, but he has had no griping or severe pain. He has had a good deal of thirst, and his appetite has become gradually impaired. Yesterday he had headache and singing in his ears. He had to give up work a fortnight ago, and since then has spent the greater part of each day in bed.

Patient is a strongly-built man, and seems well nourished. He has dark hair and eyes. His face is flushed, his skin is rather hot and glazed on the cheeks, but elsewhere is dry, though not harsh. He does not perspire much. His tongue is coated, flabby, and indented at the edges. His teeth are dark, his gums firm. He speaks in rather a hesitating manner, but gives an intelligent history of himself. Heart's impulse in normal position; no murmur. No abnormal signs in lungs. Liver-dulness commences an inch and a half below the nipple, and extends about one inch below the edge of ribs. It can be felt below the ribs, and percussion over its free edge causes tenderness and excites pain. There is also tenderness on pressure over the region of the spleen. The abdomen is slightly distended, and gives a tympanitic note on percussion. Nothing abnormal detected on rectal examination, except a somewhat dry condition of the mucous membrane. Ordered an exclusively milk diet, and five grains of Dover's powder three times a day.

January 7.—Says he has had ten motions since admission yesterday. Has no pain to-day. Tongue rather clean, but very patchy-looking. Pulse 104.

8th.—Has had six or seven stools in the night. Has not so much pain or straining. Stools loose, brown, fæculent, generally free from mucus and blood, but sometimes traces of blood are present. He lies with his knees drawn up, and complains of pain in his abdomen and of difficulty of breathing. His abdomen is distended, but not sufficiently to efface the natural depressions. All over abdomen, reso-

nance on percussion almost amounting to tympanites. Distended intestines push up into the thorax on the left side. Liver-dulness extends from the fifth intercostal space to the lower margin of the ribs, but cannot be felt below; there is great tenderness in hepatic region, however, and it is impossible to make sure of the inferior limit of the liver. No abnormal signs in heart or lungs. Skin hot and dry.

10th.—Has passed three motions during the last twenty-four hours. There is no alteration in character of stools. He keeps his knees drawn up, and lies on his back. His pain is principally over the hepatic region. His breath is short and quick.

11th.—Three motions since yesterday afternoon. Abdomen distended; not greatly tympanitic; no fluctuation can be made out. Great tenderness on pressure in the right hypochondriac region. The integument of the lower part of right side of chest in axillary region is œdematous, and the same condition extends to the right hypochondrium. Pulse regular and soft. Tongue coated.

13th.—Semi-delirious; has an anxious expression; perspires a good deal; temperature 100·5°. Integument of right side of thorax and hypochondrium œdematous and slightly red. Died.

Autopsy.—Dysenteric ulceration of mucous membrane of large intestine; solitary abscess of medium size in right lobe of liver; right pleurisy; general peritonitis; heart fairly contracted; no enlargement of spleen.

Remarks.—The above is a characteristic case of so-called "tropical abscess of the liver." The symptoms were a little obscured by the peritonitis, however, and when the abscess pointed, the patient was so prostrate that to have punctured it would only have been to bring discredit on the operation.

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Medical Times and Gazette.

SATURDAY, SEPTEMBER 7, 1878.

THE DEVELOPMENT OF THE FILARIA SANGUINIS HOMINIS.

Our readers are already familiar with the very interesting discoveries that have recently been made by several observers regarding the *Filaria sanguinis hominis*. As long ago as 1866, Dr. Wucherer of Bahia discovered the immature form of the parasite in specimens of chylous urine, and within a recent period many important observations on the embryonic form as found in the blood and fluids of the body, or on the sexually mature form as found in the tissues, have been made by Dr. Patrick Manson in China, by Dr. Bancroft in Australia, by Dr. T. R. Lewis in India, and by Dr. Sonsino in Egypt. The connexion of this parasite with certain diseases prevalent in tropical and sub-tropical climates, and chiefly with the affection known as nævoid elephantiasis or lymph-scrotum, has been already pointed out. The latest interesting fact announced by Dr. P. Manson was that he had found reason to believe that the mosquito (*Culex mosquito*) acts as an intermediate host in the life-history of the hæmatozoon. From his observations he concluded that the genetic cycle is as follows:—The embryonic forms of the filaria as met with in the blood of man are sucked up in great numbers along with that fluid by the female mosquitos, within whose body they undergo further development, several stages of which Dr. Manson has observed and described (*Chinese Customs Medical Reports*, 14th issue). A few days after the mosquito has gorged itself with blood, it usually betakes itself to water, where it soon discharges its ova and dies. About the time of its death, the filariæ, according to Dr. Manson's observations, have acquired marvellous power and activity, and are able, he supposes, to escape from their temporary and moribund nurse into the water. By this medium, he further concludes, they are brought into contact with the human tissues, and then, either by piercing the integuments or by working their way through the alimentary canal, they reach their resting-place in the tissues. There they receive their final development, their progeny appearing again in the embryonic form so commonly observed in the blood and other fluids of the body. This much has already been made public, the subject having been brought prominently before the profession last winter by Dr. Spencer Cobbold, who had the observations of Manson and others to work upon.

Our object in recapitulating these statements is to impress upon our readers that more recent observations would seem to disprove or to render very doubtful the theory that the mosquito acts in the manner just mentioned, as the particular intermediate host of the *Filaria sanguinis hominis*. After the announcement of Dr. Manson's conclusions, Dr. T. R. Lewis again devoted his attention to the subject, so as to ascertain whether observations in India would corroborate those made by Dr. Manson in China. In the recently published *Proceedings* of the March meeting of the Asiatic Society of Bengal, Dr. Lewis gives the following as the general result, so far as he had proceeded in the investigation, of many observations and experiments:—"In the meantime, I cannot say as a result of direct observation that the mosquito serves as the intermediate host to the development of the *Filaria sanguinis hominis* or other nematoid hæmatozoon." He was able to find many filariæ in the stomach of the mosquitos when the latter were examined shortly after feeding, but they gradually showed signs of digestion and disintegration. At about the third day every indication of life had disappeared from many of the specimens, while after the third or fourth day he was not able in any instance to find active or living entozoa in the stomach or any part of the alimentary canal of the mosquitos, those which remained having undergone more or less fatty degeneration. After the fourth or fifth day even the last-mentioned traces of entozoa could very rarely be detected, the inference being that the parasites had either succumbed to the digestive action of the insect's stomach, or had been disposed of along with the excreta. Dr. Lewis, however, takes care to premise that his remarks refer solely to the results of his own personal observations made in India up to the date of his communication, it being

quite possible, in his opinion, that a more extended knowledge of the subject might modify the conclusions naturally flowing from what he had personally observed. Soon after the meeting at which Dr. Lewis's paper was read, he again had opportunities of examining many mosquitos under favourable conditions for watching the development or destruction of the hæmatozoa in the alimentary tract of the mosquito. The results of these later observations he gives as an addendum to his paper published in the *Proceedings* mentioned above. He now found that although a great number of the ingested hæmatozoa were digested in the mosquito's stomach, a few, on the other hand, actually perforated the walls of that organ and passed outward, undergoing developmental changes in the thoracic and abdominal tissues. He is thus disposed, although the links connecting the earlier phases of the development are still incomplete so far as his personal observation has gone, to anticipate that observers in India will soon be able to satisfy themselves that, in most particulars at least, Dr. Manson's observations on the developmental changes undergone by the entozoa in the mosquito will apply to India as well as to China. It may here be remarked that Dr. Manson himself found that very few of the embryo parasites went on to the stage of the mosquito. By far the greater number, he says, were disintegrated or expelled in the undeveloped state; and after examining hundreds of mosquitos, he succeeded in finding what he describes as the final stage of the development of the parasite within the mosquito in four instances only. As far as actual observation has gone, it would therefore appear that it is only in exceptional instances that the parasite reaches even this stage of development in the mosquito. And even in regard to such instances as he has observed, Dr. Lewis is by no means certain that we are justified as yet in concluding that the mosquito is the particular intermediary host of the filaria, inasmuch as the most advanced stages of the entozoon observed in the insect are still very different from the mature forms of the human parasite. "Assuming," he says, "that of the various parasitic forms which have been seen, several are actually transitional stages in the development of one and the same entozoon, it is to be noted that even the most advanced stage hitherto observed is still a very immature one—no trace of reproductive organs, for example, being distinguishable,—and every attempt hitherto made by myself to obtain a more advanced condition has proved unsuccessful. Further observation, however, may overcome or explain this want of success."

INDIAN MEDICAL BOARDS.

Now and again, some case of hardship results from the action of a departmental institution of general government, and while the sufferer and his friends legitimately complain, their reproaches and remonstrances are echoed by many, who equally object to the same department, but who have no real grievance to complain of in their own cases. There has lately been much angry discussion in the Indian papers on the subject of "Medical Boards" at the ports of embarkation, probably carried on in the main by those who for personal (and sometimes for sentimental) reasons object to the controlling authority of the Medical Board, but who do not take fully into consideration the reasons why such Boards exist, and the influence for good they generally exercise. Almost all sick-leave men, for instance, naturally object to appear for further examination at Calcutta or Bombay, after their cases have been fully investigated by the medical officers of regiments or corps at the up-country stations they have lately quitted, and they fail to see how a hurried examination, combined with the perusal of the documents they have brought with them, can possibly enable the Medical Board to pass an authoritative opinion as to the necessity of a voyage to England, which has been recommended by medical men who have studied their medical history by the bedside, day by day, and week after week. And occasionally some sad case happens where a patient is sent back by the decision of a Board at the port of embarkation, and he returns to his up-country station to die. His friends are bitterly hurt and aggrieved; and no doubt the medical attendant who recommended that the patient should be sent home has also a right to be indignant. But, sad as such an instance may be, we must not forget that the public generally have more interest in the maintenance of these Boards than they are apt to remember when their thoughts are occupied by the story of a special grievance. It is a mistake to denounce the system because those who administer it may sometimes err.

These Boards were hardly intended to give the patient medical advice, nor to approve or judge the medical treatment which the patient had already received. They are Administrative Boards, and one of their duties is to guard the public purse. It is "the public" which pays the passage home of a sick officer, and it is but right that some check should exist upon unnecessary expenditure. Probably if Medical Boards at the ports of embarkation were abolished, many more applications for a passage home at the public expense would have to be granted than is now the case. There have been instances where military men have confused the interests of the "Service" with the interests of the State, and if commanding officers could sign sick certificates we doubt whether they might not be tempted to do so, as the readiest way of getting rid, "for the good of the Service," of a troublesome subordinate. We hesitate to suppose that a medical officer would oblige his commanding officer by making his "diagnosis" coincide with a purely military view of the case, but we are perfectly well aware that medical officers have occasionally been asked to subordinate professional judgment to Service requirements. Even if we suppose that a medical officer would invariably resist and resent interference of this nature, it does not follow that his own judgment is infallible; nor is it certain that he would always be as deaf to the pleadings of a sick friend as he should be to dictation. When a patient prayed for a home voyage instead of a trip to a hill sanatorium, is it not possible that the medical attendant might give way? Would he at such a time consider duly the public interest and the taxpayers' purse? Most likely he would not; and there is very little reason why he should. His sympathies are with his patient, his friend, and the Service and he has nothing to do with finance. But the Board is in a totally different position, and with it the money question grows into importance. The line, of course, cannot be drawn hard and fast, for the regimental surgeon cannot be supposed to be utterly reckless on the question of expense; nor can the Board be indifferent as to the chances of a patient's recovery; but still each authority has its own line of action to consider with a special care. It has been suggested that "Divisional Boards" might with advantage replace the Boards at the ports of embarkation; but we doubt whether this would be an improvement. It seems to us that it is an advantage to have the final passing Boards at the ports. It is possible that the medical officers of a Divisional Board would be more exposed to military influences than those of a Calcutta or Bombay Board could usually be, and it is probable that professional irascibility would be more intensified if cases were criticised and opinions disregarded by members of Divisional Boards, collected from the medical men "doing duty" now with one corps and then with another, and who might have served a short time before as juniors with the very men whose opinions they could be called upon to criticise as members of a Board

at another station. It must not be forgotten, either, that the necessity of appearing before a final Board has other advantages. It gives an opportunity for the patient to improve on his way down-country, and it necessitates that he should behave himself as a patient until he embarks. It is possible that a patient leaving Lahore with his final certificate might be tempted to disregard medical advice on his way down-country, or at Calcutta. We have warrant for repeating, "Infirmity doth still neglect all office, whereto our health is bound," and Medical Boards are intended for *sick* officers and gentlemen. We must say that while we deprecate undue economy, and detest the notion that it should ever be allowed to stand in the way of the most rapid means of recovery, we still consider that, in the public interest, it would be an unwise step to abolish indiscriminately the Boards at the ports of embarkation in India.

Since the last was written we learn—not to our surprise—that these Boards have been discontinued.

CORONERS.

The admirable address Dr. Douglas Maclagan made to the British Medical Association at Bath, to which we have already alluded, brought vividly before the members of the Association the question of Coroner *versus* Procurator-fiscal—the English as opposed to the Scottish system of inquiry into cases of sudden death from whatever cause. The parallel he drew was not flattering to us here in England, but we have no reason to dispute its justice. As the learned Professor pointed out, the Coroner and his court have become an antiquated institution, valuable, no doubt, in days gone by, when every man knew his neighbour, and when the Coroner was really the representative of the Crown which his title implies, but a mechanism which could well at the present time be dispensed with. Looking at the Coroner's court as composed nowadays, it seems a perfect burlesque of a judicial institution. The Coroner himself is elected in the most absurd manner, as was shown some years ago in a disputed election for West Middlesex. His jury is gathered at the will of his officer; his medical evidence is often procured in the same way, to some extent with the understanding that the odd shilling in the guinea goes to the understrapper. And then what does the court sit upon? A dead body! No actual criminal or suspected person is before the court, nor can any such person, except by express permission, when an important case is undergoing investigation (as it is called), be represented by counsel. Moreover, as is well known, the Coroner has no actual power; he can commit, but it is the magistrate who under takes the strict judicial investigation, who has the real power of dismissing or committing a person actually before him. The magistrate's behests are obeyed; the Coroner's are simply, save with regard to committal, ignored. In fact, the Coroner's court, as an instrument of any value at all, seems nowadays destined only to furnish paragraphs in the daily or Sunday papers; but that it may be fearfully abused was well shown in the notorious Bravo case, and that it may be made a source of unnecessary annoyance was also seen in the inquest held on the late Sir Charles Lyell.

In Scotland all this kind of preliminary work—not in cases of sudden death only, but in all criminal cases—is undertaken by a public prosecutor, the Procurator-fiscal as he is called. This functionary has for his guidance not only the law of the land, to which, of course, he must conform, but he has the advantage of a carefully prepared code of instructions, drawn up by the Lord Advocate, and issued from the Crown Office to every Procurator-fiscal. When any circumstance showing a death to be unexpected or ill explained, comes to the knowledge of the Procurator-fiscal, he is bound at once to make inquiry; and, unless this is *primâ facie* satisfactory, he has to proceed to take a precognition. Where a death is not clearly accounted for (for instance, by the testimony of the medical man who knew the case), he has to get a written report from a duly qualified medical man; and where a post-mortem examination is necessary, two medical men are always employed. The whole of the documents are then forwarded to the office of the Crown agent in Edinburgh, and are by him at once put into the hands of the Advocate Depute in charge of the district in which the case occurred. If the Advocate Depute is satisfied that there is no suspicion of crime, he marks on the paper, "No proceedings," and the case is at an end; and it is now the duty of the Procurator-fiscal to furnish the Registrar of the district with the due certificate of the cause of death, that it may be entered in his books. If the Advocate Depute is of opinion that there is a suspicion in the case, he sends it back to the Procurator-fiscal for further investigation, or, if anyone be in custody, he orders him to be committed until liberated in due course of law. If there be doubt or difficulty as to how the case is to be dealt with, the Advocate Depute brings it before the other Crown officers, who are the Lord Advocate, the Solicitor-General, and other three Advocates Depute; and as these officials meet for consultation generally twice a week, no time need be lost. The result of this consultation may, of course, be to put an end to the proceedings; or, on the other hand, to order the case to be completed; and when this has been done with this view, the whole documents *in causâ*, precognitions of witnesses, and scientific reports, are returned to the Advocate Depute, who, in consultation with the other Crown counsel, if necessary, draws up the indictment and attends at the trial as counsel for the prosecution. In cases which, either from their *locus* or from their importance, are tried at the High Court of Justiciary, the Lord Advocate himself, or the Solicitor-General, or both in conjunction with the Advocate Depute, conduct the case in court, the Crown agent and the Procurator-fiscal, with whom the case originated, officiating as solicitors for the prosecution.

Thus it will be seen that in Scotland the duties of the medical practitioner engaged in medico-legal cases are, to a great extent, consultative. He does not usurp legal functions which are not kindred to his ordinary avocations; he speaks only when he can speak with authority, and not when he can be called to account by the meanest lawyer's clerk. Which is better for our professional status anyone can judge.

But the great objection made to the Scottish system in England is that the investigations are secret. Undoubtedly the system has both its advantages and its disadvantages, just as that in force here has; but, on the whole, as Dr. Maclagan shows, and as we think, the balance in favour of justice is on the Scottish side—it is fairer both to the suspected person and to the interests of justice.

In certain of the States of America, reforms—which are much more easily accomplished than with us—have already been effected as regards the investigation of cases of sudden death. There too the duties of the medical and legal workmen have been effectually defined and separated. As Dr. Draper, whose communication we publish in another column, says, "the double-headed monstrosity called a Coroner, and the medley train called a Coroner's jury, are already half forgotten here in Massachusetts."

According to the Massachusetts plan, as hereafter more fully set forth, the Medical Examiner, as the new public medical officer is called, is summoned to investigate cases of death which have occurred suddenly or by violence. He applies himself at once and simply to determine the cause of the death—a purely medical question. He makes an autopsy

to enable him to reach a conclusion intelligently and scientifically. In cases of poisoning he secures the aid of a chemist. Having concluded his investigation, he certifies the cause of the death to the local Registrar of Vital Statistics. If, in the course of his inquiry, he comes upon facts or appearances that raise a question of criminal accountability in connexion with the death, he not only files a certificate of the cause of the death with the Registrar, but also makes a report of his autopsy, with a formal expression of his opinion as to the character of the violence in the case; this report he files with a Justice of the district, and at this point ends his official relation with the case. The Justice, by virtue of his position, expert in examining witnesses, in sifting evidence, and in forming judgment without bias, proceeds to hold an inquest, to determine the "material circumstances" attending the death—to solve, in other words, the question of criminal responsibility. The Medical Examiner, therefore, is concerned in answering the question, "What caused this person's death?" The designated judicial officer applies himself to determine the additional question, "By whom and under what circumstances was this person's death caused?"

In Professor Maclagan's address, and in the letter we herewith publish, are fully set out the merits and demerits of these working systems of medico-legal investigation. Which is the worst is easily decided; and we trust that Mr. Cross, in his promised Bill as regards Coroners, will duly take cognisance of facts.

THE TREATMENT OF ERYSIPELAS BY CARBOLIC ACID INJECTIONS.

This method, first suggested in 1874 by Professor Hueter, of Greifswald, has been tested and elaborated in his Clinic with most excellent results. A summary of a paper by his son, Dr. Hermann Hueter, in the *Berliner Klin. Wochenschrift*, Nos. 24, 25, 1878, will put our readers in possession of the latest particulars on the subject. We may premise that the strength of the carbolic acid solution injected is 3 per cent., prepared as follows:—Carbolic acid, spirits of wine, of each 1·5 grammes; distilled water, 50 grammes. A Pravaz's syringe is used, and the largest number of simultaneous injections in any one case has been twelve. It is found that one injection into an erysipelatous patch arrests the disease over an area the size of "half a card," by which we presume a visiting-card is meant. Beyond this area, there is scarcely any visible effect; hence, if the patch is very large, the danger of carbolic acid poisoning may be too great for the whole diseased surface to be injected. Dr. Hueter, therefore, lays the greatest stress on nipping erysipelas in the bud, by watching for its earliest symptoms; and the nurses and attendants in Professor Hueter's clinic are carefully instructed in its diagnosis, so as to call the surgeon's attention at once to rigors, nausea, vomiting, or any other change in the patient's state which may be the prelude to the rash itself. In this way a small area only, instead of a large one, has to be treated, and the surgeon is practically certain of being able to control the disease. Dr. Hueter's own observations lead him to conclude that the more severe the initial symptoms, the earlier the rash appears, and *vice versâ*.

The cases in which erysipelas has been detected are treated as follows: Attention is first directed to the wound itself. If the surface is healthy and unaltered (which is unusual), it is merely thoroughly washed with 3 per cent. carbolic solution. If, however, it is in any part coated with a grey, perhaps still somewhat transparent film, or appears diphtheritic, or pulpy, the affected parts are removed by swabbing with 5 to 8 per cent. solution of chloride of zinc; and this is done in *every* case where the erysipelas starts from a hollow wound.

After this the erysipelatous skin itself is injected at various spots; and if detected early, two or three syringefuls of carbolic solution suffice. If the injection has to be repeated very often on the same patch, the canula is sometimes left in while the syringe is being refilled, and a second injection is made at the same place, trusting to the known great diffusive power of the carbolic acid. If the erysipelas is complicated with lymphangitis, and lymphadenitis, the red lines on the skin and in the neighbourhood of the swollen glands are rubbed with unguentum hydrargyri, and sometimes the edges of the rash itself are thickly smeared with the same ointment.

Lastly, the wound and the reddened skin are wrapped up in a dressing of wet carbolic wool, which is changed two or three times daily until all redness has disappeared. The wound is then antiseptically treated.

The results of this system are most satisfactory. The erysipelas loses its spreading character after the first injections, and in mild cases is, so to speak, destroyed. Severer cases require a second or third series of injections to prevent the skin re-reddening after it has become pale.

Dr. Hueter gives the short details of the seventeen cases of erysipelas treated in the Greifswald surgical clinic, from May, 1877, to April, 1878. The average duration of each case was two days and a quarter (the longest lasted ten days), and there were no deaths; only one case—the longest—was a complicated one, of a phlegmonous character, with subcutaneous sloughing, not, however, due to the injection. Carbolic acid poisoning only once occurred, and was limited to discoloration of the urine, the patient's general state being unaffected. The advantages of the method of using carbolic acid injections as at present carried out are clearly seen by contrasting the results of the year 1876, when the method was in its infancy, with those of 1877-78. In the former year there were thirty cases treated (and even this number was a great reduction on former years), fourteen recovered without complication, and sixteen were severe cases, of which four died. The average duration of each was six days and nine-tenths.

In conclusion Dr. Hueter points out that any reduction in the number and duration of cases of erysipelas in a hospital is a distinct gain for the other patients, who thus run less chance of infection than they would otherwise do. A short case of erysipelas is less likely to lead to the dissemination of "germs," and to their lurking in corners and crevices to spread the disease at some future time, than a long one.

THE WEEK.

TOPICS OF THE DAY.

The memorial to the late Professor Parkes at University College, in the shape of a museum of hygiene, is rapidly approaching completion, and before long it will be thrown open to the public on certain days, free of charge. Books, specimens of sanitary apparatus, drawings, plans, etc., have been readily presented in furtherance of the object, and Dr. Poore, of Wimpole-street, one of the honorary secretaries, has undertaken to furnish all information as to articles suitable for presentation, or to receive any practical suggestions. As we have already given in detail the eight heads under which the different sections are grouped, it will not be necessary to recapitulate them, but we may quote from the circular put forward by the executive committee, of which Sir William Jenner is chairman, the expression of an expectation that the museum will, "by methodically displaying in the most convenient manner select illustrations of every department of hygiene, acquire national interest as a standard

repertory of the latest sanitary improvements, and as a pattern for facilitating the formation of similar collections at other educational centres."

An extraordinary meeting of the British Medical Association was held at Birmingham last week. Dr. Falconer, of Bath, the President of the Association, occupied the chair. The object of the meeting was to confirm a resolution passed at a general meeting of the Association held at Bath on August 8, to the effect that no female shall be eligible for election as a member of the Association. This resolution was unanimously confirmed on the motion of Dr. Wade, seconded by Dr. Bartolomé.

The programme of the Social Science Congress, which is to be held at Cheltenham on October 23 next, has just been published, and in this it is announced that the Health Department will consider the importance of complete disinfection, the better regulation of house-building, the best mode of improving the sanitary condition of existing houses, and how best to overcome the difficulties of overcrowding among the necessitous classes.

Nearly ten years ago the Windsor Town Council was warned that, under the Thames Conservancy Act, they must no longer allow their sewage to drain into the river; and after many difficulties they have now completed a new drainage system. A contract has been entered into with Mr. Hillé for the treatment of the sewage in accordance with his process, on a piece of land acquired at Old Windsor, about two miles distant, and adjoining the Castle Sewage Farm. Here the combined system of precipitation and filtration will be carried out. Under the direction of Mr. Hawkesley, C.E., a new outfall sewer from the point where the existing sewers concentrate to Old Windsor has been constructed under considerable difficulty, and at an expense of about £40,000. Mr. Hillé, who is to be paid a royalty of £50 a year, will manage the works for a short time at his own charge, and will then hand them over in full operation to the Town Council. The abstraction of the Windsor sewage from the Thames will very nearly complete the task of purifying it above the in-takes of the Metropolitan Water Companies.

We have much pleasure in being able to record the following action on the part of the Dean of the Medical Faculty of the University of Tübingen, Germany. A letter, couched in the following terms, was addressed to him:—"Honoured Sir,—I take the liberty of informing you, in confidence, that I have several candidates for the degree of doctor of medicine; but they do not feel inclined to risk the unavoidable expense unless they can obtain the guarantee of receiving the doctor's diploma. I can assure you that all my candidates are properly qualified according to the English law. Several of them have been already in practice for years, and for that reason experience some scruple at submitting to an examination. Each candidate, however, will send you a legalised copy of the diploma in his possession, together with the amount of the usual honorarium (and something extra to be added). Further, each of my candidates will submit some thesis; or, if it should be deemed advisable, would undergo some modified examination of a practical character—but in the English language. Clients come to me to be prepared for the examination, and, as a rule, I can guarantee that such candidates will be possessed of the qualifications required. But for that reason I can send up no candidate unless I am previously assured that the diploma shall be granted them. Will you have the goodness to take my communication into consideration, and to name the precise sum for which you stipulate? For this I would feel greatly obliged, while you would render an important service to the candidates." The Dean has had this letter printed and circulated, with the observation that, "by giving publicity to this letter, the Faculty trust to be relieved, in common with all other faculties of all other German universities, of further solicitations of this character."

A severe outbreak of cholera is reported to have taken place in the Lucknow Poor-house, which might have proved of a very serious character but for the prompt measures taken by the authorities to arrest it. Directly the disease appeared, the inmates were moved to another locality, but cholera still showed itself among them in an epidemic form; it was then proposed to break up the poor-house as the only means of saving the lives of those who were still uninfected. The Local Government having telegraphed their assent to this arrangement, the inhabitants of the poor-house, about 400 in number, were discharged with a month's subsistence allowance. Had these prompt measures not have been taken, probably the whole of the inmates would have died, as this class of persons are usually too enfeebled to resist disease effectually.

A fever epidemic is raging severely in North Derbyshire, particularly in the district surrounding Chesterfield. All the schools have been closed at Dronfield by order of the authorities, and it is intended to adopt a similar course at Clay-cross, at which place twenty deaths have occurred in a short space of time. The spread of this disease in Derbyshire is still attributed to the indifference of people attending funerals, who catch the fever, and carry it into their own families. Several fatal cases at Clay-cross have been traced to this circumstance, and steps are about to be taken with a view to prevent the indiscriminate assembling of people at the funerals of persons who have died of fever.

Some time ago the Holborn Board of Guardians, being called upon to deal with a serious outbreak of small-pox in a crowded portion of their union, were extremely perplexed as to what they ought to do with non-pauper small-pox patients. The outbreak was amongst poor people, who were unable to meet the expense of so disastrous a disease as small-pox, and who lived in places much too crowded to admit of anything like isolation; but still they were not paupers. The medical officer sent the patients in question to the hospital. The Board approved, but appealed to the Local Government Board for advice. They have recently received the following reply, dated the 24th ult.:—"I am directed by the Board to inform the Guardians of the Holborn Union that the Board has been in communication with the vestries of the parish of St. James and St. John, Clerkenwell, on the subject of your letter. I am directed to state that, unfortunately, in the present state of the law it is not a matter of legal obligation on sanitary authorities, such as vestries or their officers, to arrange for the removal of persons suffering from infectious and contagious diseases to a hospital, or to provide hospitals for such persons; and the Board are not prepared to say that there was anything illegal in the action taken by the medical officer of health under the circumstances referred to. At the same time, the Board cannot but express their regret that more satisfactory measures than those at present adopted have not been taken to facilitate and insure the removal to hospital of non-pauper cases suffering from infectious diseases.—I am, etc., J. F. Rotton, Assistant-Secretary."

The sixth meeting of the Board of Delegates of the Hospital Saturday Fund was held on Saturday last at St. Mary's Hospital, Paddington, for the purpose of receiving the report of the Council as to the arrangements made for this year's collection. The Chairman reminded the meeting that the following Saturday (this day) was the date appointed

for the collection; and, from the favour with which the movement had been taken up by the public, he had reason to hope that the amount subscribed this year would exceed the largest yet realised. Arrangements had been made for the counting of the money, and Messrs. Hoare had consented to receive any amounts required to be paid in up to eleven o'clock p.m. The expenditure to date was stated to be £900, leaving a balance in hand of £36.

It is officially stated at Rustchuk that on the 27th ult. the Russian army south of the Balkans had 14,300 sick; the force north of the Balkans, 1950; and the Reserve troops, 4200; making a total of 20,450 men on the sick-list. It is expected that only 7000 of the lightest cases will be left in Turkey by the 10th inst., the others being sent back to Russia.

THE CARMICHAEL SCHOOL OF MEDICINE, DUBLIN.

The directors of this institution are about to move the School from its present position in North Brunswick-street to a more convenient and central site in Aungier-strect, on the south side of Dublin. They have been led to take this step owing to the uncertain nature of the relations between the School and the adjoining House of Industry Hospitals—the largest hospital establishment in Dublin. These hospitals contain 312 beds—viz., the Richmond, for surgical cases, 110; the Whitworth, for non-infectious medical cases, 82; and the Hardwicke, for fevers, 120. The Carmichael School of Medicine was founded in the year 1829, by Ephraim MacDowel, Richard Carmichael, and Robert Adams, Surgeons to the Richmond Hospital, under the title of the Richmond Hospital School of Medicine. The object of its founders was to supplement the clinical instruction given in the Hospital by the various courses of systematic lectures required by the several licensing bodies, and thus to combine in a single institution a complete system of medical education. Subsequently, Mr. Carmichael endowed a most valuable prize fund, and bequeathed a large sum of money to the School, whereby the proprietors were enabled to purchase a site on the grounds of the adjoining hospitals, and to erect an elegant and commodious building. In consideration of this munificent bequest the School has since been called the Carmichael School. The directors, having found it impossible to cement the connexion between the Hospital and the School, have been obliged to remove it to the south side of the city, to the immediate neighbourhood of the Meath, Adelaide, and Mercer's Hospitals, with all of which the School will be connected through members of its staff of lecturers. A new dissecting-room, lecture-theatre, chemical and physiological laboratories, museums, and offices, will shortly be constructed on the most approved modern principles; but in the meantime the work of the winter session will be carried on in the newly acquired premises in Aungier-street. The staff of the School, which in future will be known as "The Carmichael College of Medicine and Surgery," has been enlarged, and the different chairs have been remodelled. The Lecturers on Medicine are Drs. S. Gordon, President of the King and Queen's College of Physicians, and J. W. Moore, Physician to the Meath and Cork-street (Fever) Hospitals; those on Surgery are Messrs. J. K. Barton, Surgeon to the Adelaide Hospital, and A. H. Corley, Surgeon to the Richmond Hospital; those on Midwifery are Drs. Jennings and A. V. Macan, the latter gynæcologist to the City of Dublin Hospital. Dr. R. J. Harvey will, as heretofore, lecture on Physiology; Professor Tichborne on Chemistry; Drs. Stoney and Gunn on Anatomy; Dr. G. F. Duffey, Physician to Mercer's Hospital, on Materia Medica; Mr. Auchinleck on Medical Jurisprudence; Mr. Blakeley on Botany; Dr. Fitzgerald on Ophthalmic Surgery; Dr. S. Woodhouse on Pathological Anatomy. There will also be a large and efficient staff of Demonstrators of Anatomy, including Messrs. Lambert Ormsby and Kendal Franks, late of the Royal College of Surgeons' School.

HEALTH OF BIRMINGHAM.

The report of Dr. Alfred Hill, the Medical Officer of Health to the important town of Birmingham, on the health of that borough for the year 1877, shows that the death-rate per 1000 of the population was 23·95, against rates of 24·8, 26·8, 26·3, and 22·4, in the years 1873-4-5-6 respectively. The principal cause of the rise in the death-rate above that of last year he attributes to the greater fatality of measles, whooping-cough, heart disease, old age, and violence. Further, although this death-rate compares unfavourably with that for 1876, it is, nevertheless, with this exception, lower than the rate which prevailed in any year back to 1872. The number of cases of small-pox reported during the year was fifty, and the deaths therefrom eight. Dr. Hill mainly attributes the comparative freedom of the borough from this disease to the efficient and very general system of vaccination which now prevails there. The disadvantage resulting from the disinclination on the part of persons, both lay and medical, as to the reporting of cases of zymotic disease, is warmly commented on by Dr. Hill, who relates an instance of three cases of small-pox occurring in one house, information of which only reached him by accident, where a life was lost which might probably have been saved if early intelligence of the outbreak had been conveyed to him. But we cannot quite agree with Dr. Hill in his censure on the members of the medical profession in Birmingham for abstaining from communicating outbreaks of infectious diseases; that legislation is urgently needed which shall render it compulsory on the householder or head of the family, to give this information, we quite admit, but the duties and position of the medical attendant should, in our opinion, exonerate him from having this extra labour thrust upon him, more especially as the persons we have indicated are decidedly the proper channels through which the reports should reach the local authorities.

REMOTE CLIMATES AS HEALTH-RESORTS.

From the report on Japan, in Dr. Dobell's "Reports on Diseases of the Chest," vol. iii., it appears that, whilst from the middle of June to that of September the weather in that country is very damp, hot, and depressing, from October to May it is extremely changeable, sudden and great variations of temperature being of frequent occurrence. These climatic conditions account for the frequency of catarrhs, pleurisy, pneumonia, and subacute rheumatic affections. Rheumatic fever, however, is extremely rare, and true valvular disease is exceptional. But temporary cardiac murmurs are extraordinarily common, and are oftenest associated with Kak'ke (beriberi), which also is a frequent cause of hydrops pericardii, hydrothorax, and œdema pulmonale. Phthisis is one of the chief scourges of Japan, and is found in all parts of the country. Contrary to what is observed in Japan, primary chest affections (thoracic aneurism excepted) are, on the whole, rare in China. The comparatively few acute cases which are met with are not generally severe; and phthisis, although not very uncommon, is of a very chronic nature. In British Kaffraria the reverse is the case. There cases of phthisis, at least in colonial-born persons, are more rapid, and give less hope of amelioration by treatment or change of climate than in home-born persons; no patient in whom the disease is much advanced should be recommended to go there. In the report on Canada we read that Colorado is now much frequented by consumptive patients from Canada and the United States.

There the disease, even in an advanced stage, appears to receive a check and remain *in statu quo*. But advanced cases which enter Colorado and improve, can never again leave it without imminent risk. With regard to Australia, it is said, on the one hand, that the native-born of Victoria are remarkably free from phthisis, and that the Australian Alps are a most beneficial health-resort for consumptive people. But, on the other hand, all patients, other than the well-to-do, should be discouraged from going to Australia, and, since other high mountains can be more easily reached, it is injudicious to subject phthisical patients, in an advanced stage of the disease, to a voyage half round the globe.

SANITARY PRECAUTIONS IN HUDDERSFIELD.

The Medical Officer of Health for the borough of Huddersfield (Dr. J. Spottiswoode Cameron), in a recent report on the health of the district, presented to the Sanitary Committee, advocates the system of a house-to-house visitation as a means of obtaining important information as to the sanitary condition of the whole town. This has already been tried in one district at Huddersfield, and its necessity is amply vouched by the results obtained. In seventy-three houses four sinks were found disconnected from the drain, twenty-eight had syphon taps, and the remaining forty-one were either entirely untrapped, or had only the useless bell-trap at the top. Forty-one houses, therefore, in this district, or more than 56 per cent., were found to be practically directly connected with the town sewers, and they contained a population numbering 182 persons, who would all have been exposed to the contagion of fever had any outbreak of typhoid occurred in the district. By Clause 67 of a local Act, obtained in 1876, the notification of all outbreaks of infectious diseases is rendered compulsory in Huddersfield, and Dr. Cameron gives it as his opinion that the Act is of service indirectly as well as directly, as it renders the friends of patients who are unwilling to have them removed more careful about isolation, and educates people generally to a sense of the importance of separation, and their own responsibility in case of the spread of disease.

THE YELLOW FEVER EPIDEMIC IN AMERICA.

This alarming epidemic shows no signs of abatement. Last week we gave the telegrams of August 27, and on the 30th it was reported from New Orleans that the weather was bad, and the epidemic still increasing. On the 29th there were 70 deaths from the fever at Memphis, and on the same day 129 fresh cases with 17 deaths were reported from Vicksburg; but at Grenada a more hopeful state of matters prevailed. On September 3 it was announced from New Orleans that the mortality during the preceding week—the fourth since the outbreak of the epidemic—had exceeded 1000. On the 2nd it was estimated there were 1700 persons then ill of the fever at Vicksburg, and the number was rapidly increasing. On that day (the 2nd inst.) 18 deaths were reported from Vicksburg, and 53 from Memphis. Fatal cases were also reported at Louisville and at Baton Rouge. The latest telegrams from New Orleans—those of the 4th inst.—give the saddest tale of all. Besides reporting fresh outbreaks at new centres from which the inhabitants are flying to avoid the epidemic, they announce that on Tuesday, the 3rd inst., there were 327 fresh cases and 83 deaths at New Orleans, at Vicksburg 36 deaths, and at Memphis 84 deaths. In several houses in the last-named city there have been discovered dead unburied bodies. Many physicians and members of the volunteer relief societies have fallen victims to their courageous devotion, but their places are being supplied by others from New York and other towns, and large subscriptions continue to be raised in all parts of the country for the distressed Southern States.

THE INQUEST ON THE SITTINGBOURNE ACCIDENT.

By one of those anomalies which often crop up on such occasions, no one seems to have asked the question, at the inquest held on those who met their death at Sittingbourne, why a heavy train, drawn by a powerful engine, which itself cut its way through the opposing obstacle, should have suffered so severely. Colonel Rich indicated that, had full steam been on, the impetus of the train would, in all probability, have driven through the opposing trucks with nothing beyond an extra shake. Such a thing has been done before. But a danger-signal was made, steam was turned off, and the brake—non-continuous—applied. In this way the impetus of the engine was lessened, but not removed or annihilated. To understand the true bearing of such conditions it is necessary to know the mode in which these trains are made up. First come, next to the engine, one or more third class carriages, without any intermediate brake-van; after that, carriages of various classes, until the luggage-van is reached. In this, or close to this, is the first brake strictly belonging to the train. But beyond, on ordinary occasions, is another portion of the "make-up," consisting as before of carriages of various classes with their luggage-van and brake behind. With a heavy train, full of passengers and their unreasonable luggage, the slightest impediment to the train must produce an impetus from behind of greater or less strength, according to the weight of the passengers and luggage-van. The result may be easily calculated, and it simply amounts to a smash in some intermediate portion of the train. Were the weights more equally distributed, such a result would be much more unlikely to occur.

ROYAL COLLEGE OF SURGEONS IN IRELAND: THE NEW DENTAL DIPLOMA.

The President and Council announced by advertisement in the Dublin daily papers of last week their intention to elect on Thursday, the 5th inst., six examiners for the new diploma in dental surgery, three of whom are to be Fellows of the College, and three dentists registered under the "Dentists Act, 1878." We have not yet learned the result of the election; but we cannot express approval of the method adopted by the College to secure examiners for the new diploma. It would have been more judicious, we think, for the Council of the College to have nominated the Court of Examiners for the first year at all events. Afterwards the examiners might have been selected from a number of voluntary candidates for the office. As it is, we fear that the leaders of the dental profession in Dublin will not come forward as candidates for the examinerships, and so there is a risk that the Board will be composed of comparatively junior men—a contingency which will not tend to reassure the profession or the public as to the character of the new qualification proposed to be granted under the College seal. The first examinations for the diploma in dental surgery are fixed for Saturday, September 7 (to-day), and Monday, Tuesday, and Wednesday, September 9, 10, and 11.

THE FIRST COSTAL CARTILAGE IN PHTHISIS.

The statement of Freund, that ossification of the cartilages of the first ribs is usual in phthisis, has opened a new tract to speculation. Thus, considering that the ossification of the first rib interferes with the proper expansion of the lung apex, and may result in tubercular disease of the lung, Dr. Amburger (Dr. Dobell's "Reports on Diseases of the Chest," vol. iii.), describes a means of ascertaining the movability of the first rib. However, in Dr. Reginald Thompson's experience as Pathologist to the Brompton Hospital for Consumption, the cartilages are remarkably soft in phthisis. This statement may, at least in this country, lessen "the special utility of

ascertaining the movability of the first rib in cases of young persons predisposed to phthisis, and in the examination of recruits for military service."

A WEEK OF HORRORS.

We had not finished writing about the Sittingbourne "accident" when the still more disastrous details of the sinking of the *Princess Alice*, with a loss of as yet untold lives, reached us. Suffice it to say that not less than 500 lives have been lost—probably a higher figure would be nearer the mark.

DENTAL REGISTRATION.

Dentists Act (1878).

It would seem that the General Medical Council have really taken in hand the duties imposed on them by the Dentists Act passed this session. The following schedules have been forwarded to us by the Registrar, Mr. Miller:—

I.—Persons Entitled to be Registered in the Dentists' Register.

Section VI.—Any person is entitled to be registered under this Act who

(A) Is a licentiate in dental surgery or dentistry of any of the medical authorities; or,

(B) Is entitled, as hereinafter mentioned, to be registered as a foreign or colonial dentist; or,

(C) Was at the passing of this Act—that is, July 22, 1878—*bonâ fide* engaged in the practice of dentistry or dental surgery, either separately or in conjunction with the practice of medicine, surgery, or pharmacy.

A person who claims to be registered under Clause (A) of Section VI. must, by the subjoined Section VII. of the Act, produce or send to the General Registrar the document conferring or evidencing his licence or qualification, with a statement of his name and address, and the other particulars required for registration, as set forth in the accompanying form.

A person who claims to be registered under Clause (B) of Section VI. must state, in the accompanying form, the particulars required by the subjoined Sections VIII., IX., X., of the Act.

A person who claims to be registered under Clause (C) of Section VI. must state, in the accompanying form, his name and address, whether he has practised dentistry or dental surgery separately or in conjunction with the practice of medicine, surgery, or pharmacy, and must also sign the declaration in the annexed Schedule to the Dentists Act (1878); and the Registrar may, if he sees fit, require such declaration to be affirmed in manner provided by Chapter 62 of the Act of the fifth and sixth years of the reign of King William the Fourth.

II.—Sections of the Dentists Act (1878) relating to Registration.

Section VII.—Where a person entitled to be registered under this Act produces or sends to the General Registrar the document conferring or evidencing his licence or qualification, with a statement of his name and address, and the other particulars, if any, required for registration, and pays the registration fee, he shall be registered in the Dentists' Register.

A person resident in the United Kingdom shall not be disqualified for being registered under this Act by reason that he is not a British subject; and a British subject shall not be disqualified for being registered under this Act by reason of his being resident or engaged in practice beyond the limits of the United Kingdom.

Section VIII.—Where a person who either is not domiciled in the United Kingdom, or has practised for more than ten years elsewhere than in the United Kingdom, or in the case of persons practising in the United Kingdom at the time of the passing of this Act for not less than ten years either in the United Kingdom or elsewhere, shows that he holds some recognised certificate (as hereinafter defined) granted in a British possession, and that he is of good character, such person shall, upon payment of the registration fee, be entitled, without examination in the United Kingdom, to be registered as a colonial dentist in the Dentists' Register.

Section IX.—Where a person who is not a British subject, or who has practised for more than ten years elsewhere than in the United Kingdom, or in the case of persons practising in the United Kingdom at the time of the passing of this Act for not less than ten years either in the United Kingdom or elsewhere, shows that he obtained some recognised certificate (as hereinafter defined) granted in a foreign country, and that he is of good character, and either continues to hold such certificate, or has not been deprived thereof for any cause which disqualifies him for being registered under this Act, such person shall, upon payment of the registration fee, be entitled, without examination in the United Kingdom, to be registered as a foreign dentist in the Dentists' Register.

Section X.—The certificate granted in a British possession or in a foreign country, which is to be deemed such a recognised certificate as is required for the purposes of this Act, shall be such certificate, diploma, membership, degree, licence, letters testimonial, or other title, status, or document as may be recognised for the time being by the General Council as entitling the holder thereof to practise dentistry or dental surgery in such possession or country, and as furnishing sufficient guarantees of the possession of the requisite knowledge and skill for the efficient practice of dentistry or dental surgery.

III.—Registration Fees.

The fee for those who apply to be registered before January 1, 1879, is £2; and for those who apply on or after that date, £5.

No registration under Clause (C) can be effected after August 1, 1879.

IV.—Registrar, and Office for Registration.

W. J. C. Miller, B.A., Registrar of the General Medical Council, Medical Council Office, 315, Oxford-street, London, W.

Particulars to be Supplied by Applicants under Clause (A) of Section VI. of the Dentists Act (1878).

I request to be registered as a dentist under Clause (A) of Section VI. of the Dentists Act (1878), for which purpose I submit the following particulars:—

Qualification, with date thereof _____

Medical authority by whom granted _____

Name in full _____

Address _____

Date _____

Provided the foregoing details are satisfactory, applicants may be registered on transmitting this paper, duly filled up and signed, together with the registration fee, to the Registrar of the General Medical Council, W. J. C. Miller, Medical Council Office, 315, Oxford-street, London, W.

Particulars to be Supplied by Applicants under Clause (B) of Section VI. of the Dentists Act (1878).

I request to be registered as a dentist under Clause (B) of Section VI. of the Dentists Act (1878), for which purpose I submit the following particulars:—

Qualification, with date thereof _____

Medical authority by whom granted _____

Date of commencement of practice _____

Country (or countries) wherein the practice has been carried on _____

Evidence of good character _____

Name in full _____

Address _____

Date _____

Applicants under Clause (B) of Section VI. cannot, by the provisions of Section X., be registered until their certificates have been approved or recognised by the General Medical Council; but, with a view to their application being submitted to the Council, they should transmit this paper, duly filled up and signed, together with the registration fee, to the Registrar of the General Medical Council, W. J. C. Miller, Medical Council Office, 315, Oxford-street, London, W.

Particulars to be Supplied by Applicants under Clause (C) of Section VI. of the Dentists Act (1878).

I request to be registered as a dentist under Clause (C) of Section VI. of the Dentists Act (1878), for which purpose I submit the following particulars:—

Whether practising dentistry separately, or in conjunction with the practice of medicine, surgery, or pharmacy _____

Declaration required to be made by a person who claims to be registered under the Dentists Act (1878) on the ground that he was *bonâ fide* engaged in the practice of dentistry at the date of the passing of the Dentists Act (1878).

I [here insert name, in full], residing at [here insert address, in full], hereby declare that I was *bonâ fide* engaged in the practice of dentistry at _____ at the date of the passing of the Dentists Act (1878).

(Signed) _____

(Witness) _____

Date _____

Note.—Any person who wilfully procures or attempts to procure himself to be registered under this Act by making or producing, or causing to be made or produced, any false or fraudulent representation or declaration, either verbally or in writing, and any person aiding and assisting him therein, is liable under the Dentists Act (1878) to imprisonment for twelve months.

Provided the foregoing details are satisfactory, applicants may be registered on transmitting this paper, duly filled up and signed, together with the registration fee, to the Registrar of the General Medical Council, W. C. J. Miller, Medical Council Office, 315, Oxford-street, London, W.

A new asylum for the insane has just been opened at Mavisbank, near Edinburgh. The institution is meant for the reception of patients of the wealthier classes, and from the extent of its grounds (covering about 120 acres) and the arrangements of the establishment, it seems well fitted for this purpose. From thirty to fifty patients can be received. The asylum is the property of a joint-stock company. The superintendence is in the hands of Dr. James A. Philip, M.A., late of Lincoln Lunatic Hospital.

THE

DUTIES OF CORONER IN MASSACHUSETTS.

Sir,—As a contribution to the interesting discussion at present going forward in England concerning the coroner's office and the need for its reform, I venture to send the accompanying copy of a law which has been in successful operation in this State of Massachusetts during the last six months. You will observe that this law aims to meet the requirements, which are especially obvious to medical men, with regard to deaths by violence. The name and office of coroner, with very much that they have always implied, are abolished: and a permanent divorce is effected between functions purely medical or anatomical, and functions purely legal in their character. The officers representing these functions may, and do, work in harmony; but the double-headed monstrosity called a coroner, and the medley train called a coroner's jury, are already half-forgotten here in Massachusetts.

The medical examiner, as the new public medical officer is called, is summoned to investigate cases of death which have occurred suddenly or by violence. He applies himself at once and simply to determine the cause of the death—a purely medical question. He makes an autopsy to enable him to reach a conclusion intelligently and scientifically. In cases of poisoning, he secures the aid of a chemist. Having concluded his investigation, he certifies the cause of the death to the local registrar of vital statistics. If, in the course of his inquiry, he comes upon facts or appearances that raise a question of criminal accountability in connexion with the death, he not only files a certificate of the cause of the death with the registrar, but also makes a report of his autopsy, with a formal expression of his opinion as to the character of the violence in the case; this report he files with a justice of the district, and at this point ends his official relation with the case. The justice, by virtue of his position, expert in examining witnesses, in sifting evidence, and in forming judgment without bias, proceeds to hold an inquest, to determine the "material circumstances" attending the death—to solve, in other words, the question of criminal responsibility. The medical examiner, therefore, is concerned in answering the question, "What caused this person's death?" The designated judicial officer applies himself to determine the additional question, "By whom and under what circumstances was this person's death caused?"

Such is the theory of this new Massachusetts statute. In practice it has worked smoothly and successfully, because it is direct, simple, and intelligible. Medical questions and legal questions are kept apart, as they should be; yet the medical officer and the judicial officer work in complete harmony of purpose towards the same end—the preservation of public health, morality, and justice.

I am, &c., F. W. Draper, M.D.,
Medical Examiner for Suffolk County, Massachusetts.
Boston, Massachusetts, U.S.A.

[Chap. 200.]

An Act to abolish the office of Coroner and to provide for Medical Examinations and Inquests in cases of Death by Violence.

Be it enacted, etc., as follows:—

Sect. 1.—The offices of coroner and special coroner are hereby abolished.

Sect. 2.—The governor shall nominate and by and with the advice and consent of the council shall appoint, in the county of Suffolk not exceeding two, and in each other county not exceeding the number to be designated by the county commissioners as hereinafter provided, able and discreet men, learned in the science of medicine, to be medical examiners; and every such nomination shall be made at least seven days prior to such appointment.

Sect. 3.—In the county of Suffolk each medical officer shall receive, in full for all services performed by him, an annual salary of $3000, to be paid quarterly from the treasury of said county; and in other counties they shall receive for a view without an autopsy, $4; for a view and autopsy, $30; and travel at the rate of 5c. per mile to and from the place of the view.

Sect. 4.—Medical examiners shall hold their offices for the term of seven years from the time of appointment, but shall be liable to removal from office at any time by the governor and council for cause shown.

Sect. 5.—Each medical examiner, before entering upon the duties of his office, shall be sworn and give bond, with sureties in the sum of $5000, to the treasurer of the county, conditioned for the faithful performance of the duties of his office. If a medical examiner neglects or refuses to give bond as herein required, for the period of thirty days after his appointment, the same shall be void and another shall be made instead thereof.

Sect. 6.—The county commissioners in each county shall, as soon as may be after the passage of this act, divide their several counties into suitable districts for the appointment of one medical examiner in each district under this Act; and when such division is made, shall at once certify their action to the secretary of the Commonwealth, who shall lay such certificate before the governor and council; but nothing herein shall prevent any medical examiner from acting as such in any part of his county.

Sect. 7.—Medical examiners shall make examinations as hereinafter provided, upon the view of the dead bodies of such persons only as are supposed to have come to their death by violence.

Sect. 8.—Whenever a medical examiner has notice that there has been found or is lying within his county, the dead body of a person who is supposed to have come to his death by violence, he shall forthwith repair to the place where such body lies and take charge of the same; and if on view thereof and personal inquiry into the cause and manner of the death, he deems a further examination necessary, he shall, upon being thereto authorised in writing by the district attorney, mayor, or select men of the district, city, or town where such body lies, in the presence of two or more discreet persons, whose attendance he may compel by subpœna if necessary, make an autopsy, and then and there carefully reduce or cause to be reduced to writing every fact and circumstance tending to show the condition of the body, and the cause and manner of death, together with the names and addresses of said witnesses, which record he shall subscribe. Before making such autopsy he shall call the attention of said witnesses to the position and appearance of the body.

Sect. 9.—If upon such view, personal inquiry, or autopsy he shall be of opinion that the death was caused by violence, he shall at once notify the district attorney and a justice of the district, police or municipal court for district or city in which the body lies, or a trial justice, and shall file a duly attested copy of the record of his autopsy in such court, or with such justice, and a like copy with such district attorney; and shall in all cases certify to the clerk or registrar having the custody of the records of births, marriages, and deaths in the city or town in which the person deceased came to his death, the name and residence of the person deceased, if known, or a description of his person, as full as may be for identification, when the name and residence cannot be ascertained, together with the cause and manner in and by which the person deceased came to his death.

Sect. 10.—The court or trial justice shall thereupon hold an inquest, which may be private, in which case any or all persons other than those required to be present by the provisions of this chapter, may be excluded from the place where the same is held; and said court or trial justice may also direct the witnesses to be kept separate, so that they cannot converse with each other until they have been examined. The district attorney, or some person designated by him, may attend the inquest and may examine all witnesses. An inquest shall be held in all cases of death by accident upon any railroad; and the district attorney or the attorney-general may direct an inquest to be held in the case of any other casualty from which the death of any person results, if in his opinion such inquest is necessary or expedient.

Sect. 11.—The justice or district attorney may issue subpœnas for witnesses, returnable before such court or trial justice. The persons served with such process shall be allowed the same fees, and their attendance may be enforced in the same manner, and they shall be subject to the same penalties, as if served with a subpœna in behalf of the Commonwealth in a criminal prosecution pending in said court, or before said trial justice.

Sect. 12.—The presiding justice or trial justice shall, after hearing the testimony, draw up and sign a report in which he shall find and certify when, where, and by what means the person deceased came to his death, his name if known, and all material circumstances attending his death; and if it appears that his death resulted wholly or in part from the unlawful act of any other person, he shall further state, if known to him, the name of such person and of any person whose unlawful act contributed to such death, which report he shall file with the records of the superior court in the county wherein the inquest is held.

Sect. 13.—If the justice finds that murder, manslaughter, or an assault has been committed, he may bind over, as in criminal prosecutions, such witnesses as he deems necessary, or as the district attorney may designate, to appear and testify at the court in which an indictment for such an offence may be found or presented.

Sect. 14.—If a person charged by the report with the commission of any offence is not in custody, the justice shall forthwith issue process for his apprehension, and such process shall be made returnable before any court or magistrate having jurisdiction in the premises, who shall proceed therein in the manner required by law; but nothing herein shall prevent any justice from issuing such process before the finding of such report if it be otherwise lawful to issue the same.

Sect. 15.—If the medical examiner reports that the death was not caused by violence, and the district attorney or the attorney-general shall be of a contrary opinion, either the district attorney or the attorney-general may direct an inquest to be held in accordance with the provisions of this Act, notwithstanding the report, at which inquest he, or some person designated by him, shall be present and examine all the witnesses.

Sect. 16.—The medical examiner may, if he deems it necessary, call a chemist to aid in the examination of the body or of substances supposed to have caused or contributed to the death, and such chemist shall be entitled to such compensation for his services as the medical examiner certifies to be just and reasonable, the same being audited and allowed in the manner herein provided. The clerk or amanuensis, if any, employed to reduce to writing the results of the medical examination or autopsy, shall be allowed for his services $2 per day.

Sect. 17.—When a medical examiner views or makes an examination of the dead body of a stranger, he shall cause the body to be decently buried; and if he certifies that he has made careful inquiry, and that to the best of his knowledge and belief the person found dead is a stranger, having no settlement in any city or town of this Commonwealth, his fees, with the actual expense of burial, shall be paid from the Treasury of the Commonwealth. In all other cases the expense of the burial shall be paid by the city or town, and all other expenses by the county wherein the body is found.

Sect. 18.—When services are rendered in bringing to land the dead body of a person found in any of the harbours, rivers, or waters of the Commonwealth, the medical examiner may allow such compensation for said services as he deems reasonable; but this provision shall not entitle any person to compensation for services rendered in searching for such dead body.

Sect. 19.—In all cases arising under the provisions of this Act, the medical examiner shall take charge of any money or other personal property of the deceased found upon or near the body, and deliver the same to the person or persons entitled to its custody or possession; but if

not claimed by such person within sixty days, then to a public administrator, to be administered upon according to law.

Sect. 20.—Any medical examiner who shall fraudulently neglect or refuse to deliver such property to such person within three days after due demand upon him therefor, shall be punished by imprisonment in the gaol or house of correction not exceeding two years, or by fine not exceeding $500.

Sect. 21.—The medical examiner shall return an account of the expenses of each view or autopsy, including his fees, to the county commissioners having jurisdiction over the place where the examination or view is held, or in the county of Suffolk to the auditor of the city of Boston, and shall annex thereto the written authority under which the autopsy was made. Such commissioners or auditor shall audit such accounts and certify to the treasurer of the Commonwealth, or the treasurer of the county, as the case may be, what items therein are deemed just and reasonable, which shall be paid by said treasurer to the person entitled to receive the same.

Sect. 22.—Whenever any sheriff is a party to a suit or proceeding, or otherwise disqualified to act therein, the sheriff or a deputy-sheriff of any adjoining county may serve and execute all writs and precepts and perform all duties of such sheriff which he is disqualified to perform, and may serve and execute all such writs and precepts wherein any county, town, parish, religious society, or school district is a party or interested, notwithstanding he is at the time a member of such corporation.

Sect. 23.—Whenever a vacancy occurs in the office of sheriff in any county, the senior deputy-sheriff in service shall perform all the duties required by law to be performed by the sheriff, until the office of sheriff is filled in the manner required by law, giving bond as now required by law of sheriffs. And in case of such vacancy, the deputies of the sheriff vacating the office shall continue to have and exercise the power of deputy-sheriffs until said office is filled as aforesaid.

Sect. 24.—Sections 75, 76, and 77 of chapter 17, section 100 of chapter 63, and section 18 of chapter 163 of the General Statutes, are hereby amended by substituting for the word "coroner," wherever the same occurs, the words "medical examiner," and for the word "coroners" the words "medical examiners." The second clause of section 52 and sections 74, 78, 79, and 80 of chapter 17 of the General Statutes, chapter 175 of the General Statutes, chapter 113 of the Acts of the year 1861, chapter 172 of the Acts of the year 1862, chapter 28 of the Acts of the year 1864, chapter 241 of the Acts of the year 1871, and chapter 115 of the Acts of the year 1876, and all other Acts and parts of Acts inconsistent herewith, are hereby repealed.

Sect. 25.—For the purposes of the appointment and qualification of medical examiners and the action of the county commissioners herein provided for, this Act shall take effect upon its passage, and shall take full effect on the first day of July next.—[*Approved May* 9, 1877.]

FROM ABROAD.

Chloral as an Anæsthetic for Children.

Dr. Bouchut, in a paper in the *Gazette des Hopitaux* (August 13), states that since he first announced, in 1869, the anæsthetic properties of choral in the surgery of childhood, and its value in bad cases of chorea, daily experience has confirmed the accuracy of his affirmations. More than 10,000 cases now testify to this, as for the last nine years from four to eight patients have taken this medicine in anæsthetic doses. Perhaps the same good effects might be obtained also in adults, but it is found that they cannot be got to swallow a sufficient dose without producing vomiting. Infants, however, take the chloral in sufficient doses readily, and do not eject it. According to age, from one to four grammes are given, not exceeding three grammes, however, in children under three years of age, and two grammes may be given between two and five years without danger. The whole quantity is to be given at a single dose in 100 grammes of a highly sweetened vehicle. Half an hour after, the children are asleep; and an hour after, they are insensible. The insensibility lasts from three to six hours, and on awakening from it no disagreeable effects are experienced, the children taking their food and playing as usual. The same dose may be repeated the next and following days if required; and in chorea some children take these doses for a month together without inconvenience, as much as from 100 to 125 grammes having been taken in the month. Exceptionally, the anæsthesia is preceded by a stage of excitement, but so rarely that it has not been met with more than ten times in 10,000 cases. This means being so certain, and never being attended or followed by any accident, Dr. Bouchut always employs it for all operations on children, however trivial, the only inconvenience being that they continue to sleep three or four hours afterwards. These results are of great importance when it is remembered what difficulty and resistance are met with during operations on children. If there were any danger attending the use of this means, its employment in such cases should never be thought of; but there is absolutely none. The anæsthetic effect may also be produced by administering the same dose as an enema; but as this may be ejected, and the anæsthetic effect not be produced, it is better to use the chloral as a suppository, made with the *baume de cacoa* melted with a fourth of spermaceti, which is essential to the incorporation of the chloral. This, however, is a bad mode of administration if the chloral has to be continued for a long time, as after three or four introductions the mucous membrane of the rectum becomes irritated, and a painful tenesmus is produced. But, after even long administration by the mouth, no gastro-enteritis is produced in children, no loss of appetite, foul tongue, or pain, etc.—a tolerance taking place in them which is not observed in the adult.

Colour-Blindness.

At the Suffolk District Medical Society, Dr. Joy Jeffries recently read a paper (*Boston Med. and Surg. Jour.*, July 25) upon the "Relative Frequency of Colour-Blindness in Males and Females," in which he passes in review the opinions that have been recorded on the subject, and adds the results of his own investigations. In a former communication he referred to the generally prevalent opinion that females are less often the subjects of colour-blindness than males, and that consequently their better perception of colours rendered them preferable as railway *employés*. This opinion he regarded as probably incorrect, arising from women having been less perfectly tested than males. The conclusion, however, of his prcsent paper is that it is well founded, and that females are very much less liable to this optical defect.

One reason Dr. Jeffries had for doubting the correctness of the general opinion was the defective mode of testing adopted until of late, the observed persons being called upon to name the colours shown, which females from habit were enabled to do with greater facility than males, and hence fewer of them seemed deficient in colour-perception. The method adopted by Prof. Holmgren, that of sorting of coloured worsteds, is a very superior test, as it does not call upon the examined person to name a colour, and the eye alone, not memory, guides the hand. Dr. Dor, testing in this way 611 women in Berlin, found only three colour-blind—0·82 per cent., or one in 122. Dr. Hansen, of Copenhagen, found no colour-blind among fifty female railroad *employés*. Of 413 school children, from nine to fifteen years of age, examined in this way by Dr. Dare, of Kragerö, in Norway, ten colour-blind were found among 205 boys, and eleven with imperfect colour-perception; while of 208 girls none were found colour-blind, and only five with imperfect perception. He suggests that "the better colour-perception of the female sex, as acquired and developed by many generations of handling coloured objects, is essentially sexual, or only inherited by the female descendants." And in this point of view Dr. Jeffries points out how frequently the defect has been known to be hereditary; but although its transmission in the male line alone is frequent, yet cases of the reverse arc on record. Dr. Pliny Earle reported, out of sixty-one relatives (thirty-two males and twenty-nine females), twenty cases of colour-blindness, two of these being females. Again, Cunier, in the first volume of the *Annales d'Oculistique*, reports the case of a lady who was colour-blind. Her mother and two sisters were the same, while her brother was free from the defect. This lady had six children, one son not colour-blind, and five daughters affected like herself. The eldest daughter had four children, two of them girls colour-blind. The second daughter had a boy and a girl, the latter colour-blind. The fifth left a boy, myopic but not colour-blind.

"We thus have the remarkable instance of colour-blindness appearing only in the females of a family for four gencrations. Heredity has here apparently acted without reference to or directly against the accumulated effects of generations of exercise with colours. My own experience agrees with that of Prof. Wilson, of Edinburgh, namely, that hardly a person affected with colour-blindness will be found who cannot remember or mention one or more relatives with similar defect of vision. It has seemed to me to act as any other family peculiarity or mark; for instance, skipping one, to appear again in the succeeding generation, etc. It is certainly a very curious fact that if generations of exercise with colours is eliminating colour-blindness from females, this should not have checked its transmission through females exclusively for four generations."

In Dr. Jeffries' own examinations, he used the coloured worsteds, and found among 1021 students and instructors at Harvard University and other colleges that there were forty-six colour-blind, or about one in twenty-two, which corresponds with the average experience of European ob-

servers. Of the 302 girls at Wellesley College, he found but one who was colour-blind, her mother having been so likewise; and the result so surprised him that he engaged in a lengthened investigation, which he is now pursuing, examining all the girls in the public schools of Boston. Thus far he reports that in three such schools, having 1025 pupils from eight to twenty-two years of age, he has only found one girl with colour-blindness, her mother also having the same defect; while, as already stated, among 1021 male students he found that one in twenty-two had this defect.

"As to the value of these results, I admit that it of course depends on the exactitude of my observations. I would therefore say that, from familiarity with the test, I feel perfectly sure that I detected colour-blindness where it existed. I always pushed the test much farther than would seem necessary, often thereby causing remark and question from the bystanders. Although seemingly tedious and monotonous from the tax on the eye and ear and voice of the examiner, I found my tests of great psychological interest, frequently shared in by educated observers. Since this paper was read at the Society, I have received the reports of Dr. Hermann Cohn and Hugo Martius, of Breslau, who the past winter have been engaged in the examination of school children for colour-blindness. They employed the same method as myself and Prof. Holmgren, and their results agree with mine above given. Among 2761 boys, they found seventy-six, or 2·7 per cent., colour-blind; while among 2318 girls they found only one, or 0·04 per cent. This defect, therefore, seems a very rare one among females. Colour-blindness occurred twice as often among Jewish children as among Christian. The single case among girls which Dr. Cohn found, was one of red-green and blue-yellow blindness, quite atypical."

The so-called Intra-uterine Rickets.

In his *Archives de Tocologie* for August, Prof. Depaul terminates as follows a series of articles which he has contributed under the following title:—"On a Special Disease of the Osseous System developed during Intra-uterine Life, and which is generally described—erroneously, in my opinion—under the name of Rickets."

"If I have given to the facts which precede their true interpretation, I believe that I may sum up the most important points in the following conclusions:—1. The changes which the skeleton may undergo during intra-uterine life have very different origins. 2. Those which are generally described as congenital rickets do not seem to originate in the same way as those which characterise rickets which is developed after birth. 3. The form and direction of the curvatures, the intimate structure of the bones, etc., all unite in establishing a very marked line of demarcation. 4. While in the disease developed during fœtal life all is explained by the absence or the irregularity of the deposits of the calcareous matter, in true rickets the morbid condition attacks bones already in great part constituted, disturbs for the time the regular progress of their development, and subjects them to a notable softening, which may be regarded as the primary cause of the deviations which they undergo. 5. The moral emotions of the mother, as well as her imagination, exert no direct influence on the vices of conformation in question. A superstition and credulity which no longer belong to our epoch could alone propagate and maintain a contrary opinion. 6. Nor can we attach them to lesions of the nervous centre and the consequent muscular contractions, although it appears to me to be incontestable that a great number of congenital osseous deviations have such an origin. 7. According to the facts recorded by science, the health of the mother is entirely unconnected with their development. In not a single case has the existence of scrofula, rickets, or syphilis been proved. 8. It is, however, well to note that on several occasions the disease has manifested itself in twin pregnancies, and this circumstance is probably not unconnected with its production. 9. The cases which have been recorded as examples of congenital fractures have been ill interpreted. They are but a variety of one and the same lesion, and are explained by the complete but limited absence of the deposit of calcareous substance, which, on the contrary, at certain points may take place in an exuberant manner, constituting the enlargements which have been erroneously adduced in proof of a process of consolidation. 10. The changes in the skeleton which form the object of this essay are far more frequent than is generally believed. At the present time I know of nearly forty cases, and do not doubt that further search would add to the number. 11. Not only are they of serious import by the changes which they induce in the conformation of the limbs, but they may, by causing deformity of the chest, impede the mechanical phenomena of respiration, and, by depriving the brain of suitable protection, expose it to lesions which will not permit of the establishment of extra-uterine life."

REVIEWS.

Du Mercure, Action Physiologique et Thérapeutique. Par le Dr. H. Hallopeau, Médecin des Hôpitaux. Paris: J. B. Baillière et Fils. 1878. Pp. 275.

The Physiological and Therapeutic Action of Mercury. By Dr. H. Hallopeau, Physician to the Paris Hospitals. Paris. 1878.

This work is divided into three parts. In the first the author gives a summary of what may be called the rise and progress of mercury as a drug, and of the chief uses which our fathers in medicine made of it. From the beginning of the fifteenth century onwards the question of the value of mercury has been one which has always been more or less debated. There have been days even within the memory of living men when mercury was almost the all-healer; and there have been days like our own, when perhaps it fell into unmerited neglect. It is the object of physiological medicine to set the use of mercury on a sound basis: hence the second part of Dr. Hallopeau's essay takes up the relations of the drug to the functions of the healthy organism, and deals with its absorption, circulation, and elimination, its different modes of action, local and general; its effects in small and in poisonous doses; and its special influence on the various organs of the body. We were interested to learn Dr. Hallopeau's views on the cholagogue action of mercury, but this question he seems to us to have handled with less ability than some others in the book. He states that "mercury has an undoubted cholagogue action on the liver, as proved by clinical evidence" (*sic*), but he fails to see that what is true of one salt of a metal is not necessarily so of another, and that because the perchloride stimulates the liver there is no reason why the subchloride should. He appears not to have heard of the very careful researches of Röhrig, and Rutherford and Vignal on this subject, for he does not mention them, though he refers to the earlier Edinburgh Commission. We would recommend Dr. Rutherford's report in the *British Medical Journal*, July 7, 1877, as well worthy of his attention. The question whether calomel as such is a cholagogue, is of practical importance, for if, as Mialhe asserted, it is only by partial conversion into the perchloride of mercury that it acts on the liver, why not give the perchloride straight off?

The third part enters into the therapeutic action of mercury, locally as applied to the skin, and generally as introduced either by the mouth, by rubbing in, or by hypodermic injection. The chief interest of the use of mercury nowadays naturally centres in syphilis; but we may observe in passing that the nearly obsolete though time-honoured custom (it dates back further than A.D. 1575) of trying to overcome intestinal obstruction by making the patient swallow half a pound or more of metallic mercury, has, according to Hallopeau, caused at least two deaths in modern times—one by perforation of the intestine, and the other by acute mercurialism. The question whether mercury has or has not any antiphlogistic action—a question still by no means satisfactorily answered—is scarcely treated by Dr. Hallopeau as carefully as we should like. Even an examination of the records of the old physicians might throw some light on the subject. Our author contents himself with doubting, without denying the reputed action of mercury in inflammations. As to syphilis, on the other hand, he is sensible enough to recognise its value to the full; and he even goes so far as to say: "Il n'y a plus guère, en effect, d'antimercurialistes; l'antimercurialisme a vécu! l'antimercurialisme est mort!"

The subject of hypodermic injections in the treatment of syphilis is excellently summarised by Dr. Hallopeau, and this is perhaps the most valuable part of his book. His general conclusion is, that if it were not for the local effects of the injections in some cases, the abscesses, sloughs, and

severe pain which they produce, the hypodermic treatment would be superior to any other. At present it fails for that reason.

The very excellent bibliography at the end of this book will be of the greatest assistance to future investigators of mercury. It embraces nearly every work exclusively dealing with the medical uses of the drug, from the time of Dioscorides up to the year 1877! A large collection of mercurial formulæ also adds to the completeness of this extremely creditable treatise.

De la Valeur Thérapeutique des Courants Continus. Par le Dr. L. J. Teissier, ancien interne des hôpitaux de Lyon. Paris: J. B. Baillière et Fils. 1878. Pp. 176.

The Therapeutic Value of Continuous Currents. By Dr. L. J. Teissier, formerly resident in the Lyons hospitals. Paris: J. B. Baillière and Son. 1878. Pp. 176.

Dr. Teissier sets out with the intention of examining "what is the true value of galvanic electricity as a mode of treatment, what we can expect from it at present, and what we may hope to obtain from it in the future." He first discusses at considerable length the physiological properties of the constant current, insisting especially on "polar influence," the action inherent in the nature and special properties of each pole, as of far greater importance than the mere direction in which the current passes (ascending and descending currents), and he supports his argument by reference to Chauveau's researches on unipolar excitation.

In the second part of the book all the various therapeutic applications of the constant current are passed in review, and Dr. Teissier comes to the conclusion that its curative power has been "excessively exaggerated." The following he considers its legitimate applications:—In central spinal paralyses due to chronic myelitis; in peripheral paralyses, especially those due to lead-poisoning; and generally in peripheral paralyses where the induced current fails to excite contraction. In non-hysterical spasms, especially of a painful character, tic-douloureux, etc., and also in twitchings of the palpebral or ocular muscles. As an anæsthetic—*e.g.*, in neuralgia—there is no doubt whatever of the value of the constant current; on the other hand, the only affections of the special senses amenable to it, in spite of contrary statements, are "nutritive alterations of the transparent media of the eye." The most marked effects of the current, however, are those on the circulation and the general nutrition of the body, especially in relation to muscular atrophy, whether of central or peripheral origin. How it acts is still unknown. Dr. Teissier points out that the effect of the constant current on the acoustic nerve in health and disease requires to be worked at, and also its influence on mental diseases. As to locomotor ataxy, he agrees with Jaccoud that "after all, we must acknowledge that posterior sclerosis is one of the lesions most rebellious to electricity, and that the utmost the latter can do is to alleviate the symptoms for the moment." The treatment of aneurism by electro-puncture has much space devoted to it, and Dr. Teissier describes some original experiments tending to prove that the positive pole alone should ever be introduced into the sac, and that coagulation only takes place around this pole.

We can strongly recommend this work to our readers, not only as an excellent compendium, but also for the illustrative cases of treatment it contains, one of which, a case of diabetes insipidus, "cured by feeble and permanent constant currents," is especially interesting. Dr. Teissier is up in all the recent literature of the subject, not only French and English, but German.

Dr. Dobell's Reports on Diseases of the Chest. Vol. III.

This volume contains upwards of 400 pages, which are apportioned between the following countries:—Japan, 24 pages; China, 15; British Kaffraria, 11; Canada, 6; Australia, 8; Spain, 6; Italy, 35; Russia, 28; United States of America, 18; France, 105; United Kingdom of Great Britain and Ireland, 68; Austria and Hungary, 53; Germany, 33.

These Reports consist of extremely brief extracts, and should be looked upon as nothing but a catalogue of references. It is, therefore, impossible to attempt even an incomplete analysis of the volume in which they are collected. Moreover, since the original articles from which they have been taken were most of them published in the medical periodicals, such an analysis would be nearly devoid of novelty.

As an evidence of patient research and laborious analysis, the volume reflects the greatest credit upon the sub-editors. The *raison d'être* of the work is more obscure. The Reports cannot be patronised by the general medical public, and those who may be specially interested in diseases of the chest are not likely to be satisfied with a selection of abstracts which has been made for them according to the judgment or fancy of another. One exhaustive and concise "Year-book" is sufficient for the whole scientific world, and it is to be found in the marvellous *Canstatt*, which is within the reach of all in our libraries, and is actually in the hands of many original workers in this country. "Dr. Dobell's Reports" does not wear a thriving look, and we should not be surprised if the series were to die from neglect with the present volume.

GENERAL CORRESPONDENCE.

ARMY MEDICAL SERVICE IN INDIA.

[To the Editor of the Medical Times and Gazette.]

Sir,—You some time ago published at considerable length the views of Mr. Macnamara on Army Medical matters, and no doubt if his suggestions were to be followed out—with regard to excluding men who, through birth or position, have not had the same opportunities in early life of becoming true gentlemen with those of their fellow-students who have been brought up in a better position—the Army Medical Department would present to young doctors a much more pleasant life than it does at present. But, in all that has been written on the subject, I have failed to detect what my experience tells me is the chief drawback to entrance into and service in the Army Medical Department, and that is, the knowledge of having to leave one's relatives and friends for five years' service in (I should say) the worst country in the world, on very small pay, and with no advantage whatever to be derived therefrom. I have met and conversed with many surgeons in India, all of whom agreed in saying they hated India, and derived no advantage from it; while, on the other hand, surgeons-major, who draw more than twice the pay, and have the same expenses, are only too anxious to serve in India, and even to remain there beyond their period of five years. Now, the present Warrant so provides that only six in any one year can ever hope to attain that rank, so that it dooms to service in India, for at least half of the entire service, the majority of those entering under its provisions at that period when the pay is smallest, saves the Indian Government the necessity of paying even the increased rate of £435 to surgeons over six years' service, and gets the work done for an absurdly low figure. Had the Director-General refused to send men serving under the Royal Warrant of April, 1876, to India till they had completed five or six years in the Department, I believe it would have saved him the great trouble he has been caused by the failure of the last Warrant, which, as far as I can see, benefits, or could benefit, no one but the Indian Government, who obtained under its fair promises a number of surgeons, whom they now treat in a spirit of arrogance, by utterly ignoring their claim to increased pay under their Warrant. India, as I have just tried to show, is the chief cause of failure in obtaining candidates; and if she must be supplied with cheap medical attendance, could it not be made the rule, as in the West Indian stations, that the first term of service should be for only three years? The second term would then be after six years' service, when the surgeon would draw his increased pay; and this compromise might prove acceptable to both parties concerned.

I am, &c., Surgeon.

Misnomers.—These seem inevitably to attach themselves to the accounts given by even the best informed travellers. In a series of papers in the *Wiener Med. Woch.*, by Dr. Wölfler, one of Prof. Billroth's assistants, entitled "Recollections of Travel," he speaks of the treatment of knee-joint disease which he witnessed, as having occurred at "St. Ormud's Hospital for Children, London."

MEDICAL NEWS.

APOTHECARIES' HALL, LONDON.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, August 29 :—

Baber, Henry Aitkens, Pinhoe, near Exeter.
Dixon, William Edward, Compton-road, Canonbury.
James, James Thomas, Llwyisyack, Llandovery.
Womersley, Joshua King, Grove House, Norwich.

The following gentlemen also on the same day passed their Primary Professional Examination : —

Beresford, Charles William, University College.
Farrer, Robert Thompson, Leeds School of Medicine.
Flanagan, Harold E. B., Guy's Hospital.
Lunn, Ernest C., St. Thomas's Hospital.
Rowland, Hugh P., Guy's Hospital.
Tew, James Scott, University College.
Wheeler, Albert, Middlesex Hospital.
Wight, Ernest O., St. Mary's Hospital.
Wood, Charles, University College.

At the recent examination for the prizes in Materia Medica and Pharmaceutical Chemistry, annually given by the Society to medical students, the successful candidates were—

First—Emerson, Thomas B. F., St. Mary's Hospital.
Second—Shaw, John, St. Thomas's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to our Publishing-office, as early as possible, information as to all new Appointments that take place.

BATTLE, W. H., M.R.C.S., L.S.A.—House-Physician to St. Thomas's Hospital.

CASTLE, H., M.R.C.S., L.S.A.—Assistant House-Surgeon to St. Thomas's Hospital.

GIMLETTE, G. H. D., M.R.C.S., L.S.A.—House-Physician to St. Thomas's Hospital.

GROOME, W. W., M.R.C.S., L.S.A.—Assistant House-Physician to St. Thomas's Hospital.

HASLAM, W. F., M.R.C.S., L.S.A.—House-Surgeon to St. Thomas's Hospital.

SMITH, H. U., M.B. Lond., M.R.C.S.—House-Surgeon to St. Thomas's Hospital.

TAKAKI, K., L.R.C.P., M.R.C.S.—Senior Assistant House-Physician to St. Thomas's Hospital.

TYRRELL, W., L.R.C.P., M.R.C.S.—Resident Accoucheur to St. Thomas's Hospital.

NAVAL, MILITARY, &c., APPOINTMENTS.

WAR OFFICE.—Surgeon Augustus Hewett resigns his commission.

BIRTHS.

BOWEN.—On August 21, at Wrentham, Suffolk, the wife of Edward Bowen, L.R.C.P., M.R.C.S.E., of a daughter.

BUCK.—On September 2, at 77, Camden-road, the wife of Alfred H. Buck, M.R.C.S., L.R.C.P., of a daughter.

CROWFOOT.—On September 2, at Beccles, the wife of W. M. Crowfoot, M.B., of a son.

GANGE.—On August 26, at Faversham, the wife of Frederick A. Gange, M.D., of a son.

GROSVENOR.—On August 28, at 121, Ladbroke-grove, Kensington-park, W., the wife of George Fox Grosvenor, M.D., of a daughter.

GROVES.—On August 28, at 1, Campsbourne-place, Hornsey, the wife of Hervey E. Groves, M.R.C.S. Eng., of a son.

HOLLIS.—On August 30, at Brighton, the wife of W. Ainslie Hollis, M.D., of a son.

KINGSFORD.—On August 31, at Upper Clapton, the wife of C. D. Kingsford, M.D., of a daughter.

MARSHALL.—On August 28, at 143, Grange-road, Bermondsey, the wife of J. Marshall, M.R.C.S.E., prematurely, of a son.

MOSS.—On August 31, at Thornbury, Isle of Wight, the wife of Herbert Campbell Moss, M.B., of a daughter.

PARROTT.—On August 25, at The Thorn, Hayes, the wife of Edward J. Parrott, M.R.C.S., of a daughter.

MARRIAGES.

CRICHTON—UNWIN.—On August 29, at Surbiton, Surrey, George Crichton, M.A., M.B., of Twickenham, to Agnes Sophia, third surviving daughter of the late J. Ragget Unwin, F.R.C.S., of Brixton.

CROSS—COOKSEY.—On August 31, at Northfield parish church, the Rev. G. F. B. Cross, M.A., of Small Heath, eldest son of Richard Cross, M.D., J.P., of Scarborough, to Sara E. Suckling, elder daughter of H. R. Cooksey, J.P., of Edgbaston.

HOLDSWORTH—DAY.—On August 28, at Sherburn, Samuel Rayner Holdsworth, L.R.C.P. Edin., eldest son of Samuel Holdsworth, M.D., Burneytops House, Wakefield, to Marianne, second daughter of Wm. Day, Esq., of Eversley, Garth.

MONRO—NUGENT.—On September 3, at St. George's, Hanover-square, Russell H. Monro, Esq., of Colton Lodge, Yorkshire, eldest son of Henry Monro, M.D., to Emily Julia, youngest daughter of Sir George Nugent, Bart., and the Hon. Lady Nugent.

PHILLIPS—SWAINE.—On August 28, at Prittlewell, Edward England Phillips, L.R.C.P., M.R.C.S., L.S.A., of Broadwater House, Southend, to Emily Mary, eldest daughter of the late George William Swaine, Esq.

ROWETT—RITTERBRANDT.—On August 31, at Paddington, Richard Rowett, of Rangoon, British Burmah, son of Richard Rowett, of Polperro, Cornwall, to Ellen Antonia, only daughter of L. A. Ritterbrandt, M.D., of London.

WRIGHT—REDDIE.—On August 27, at Edinburgh, J. Henderson Wright, M.B., C.M. Lond., to Nellie Alice Charlotte Hamilton, younger daughter of the late Robert Minsheid Reddie, of Shanghai.

DEATHS.

BLOMFIELD, ANDREW MUSKETT, M.R.C.S. Eng., Surgeon-Major, Bombay Army, at 3, Verulam-buildings, Gray's-inn, on August 30, aged 47.

CAMPBELL, ISABELLA HENANSON SCOTT, wife of Charles H. Campbell, M.D., at 17, Belgrave-terrace, Torquay, on August 28.

JONES, RICHARD, F.R.C.S., at Brackley, on September 2, in his 78th year.

ROSE, JOSEPH FRANKLIN, M.R.C.S., late of Gloucester-crescent, Hyde-park, at 39, Windsor-road, Ealing, on August 27, aged 72.

SHARP, HEWEY DOCKYER, F.R.C.S., at 41, Kensington-park-gardens, W., on August 28, in his 82nd year.

VISE, WILLIAM FOSTER, M.R.C.S., L.S.A., of Spalding, Lincolnshire, on August 30, aged 35.

MUNRO, ALEXANDER, M.D., at Holgate Villa, near York, on August 27.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Burton-on-Trent Union.—Mr. David Woods has resigned the Lullington District; area 2907; population 620; salary £10 per annum.

Drayton Union.—The Workhouse and Drayton District are vacant by the death of Mr. William S. Meek; salary for the Workhouse £25 per annum; area 14,178; population 5644; salary £27 per annum.

Holbeck Union.—Mr. Joseph Metcalfe Nicholson has resigned the Workhouse and the South District; salary for Workhouse £30 per annum; area 2023; population 4452; salary £20 per annum.

Wirral Union.—The Upton District is vacant by the death of Mr. Henry Day; area 12,310; population 4731; salary £30 per annum.

APPOINTMENTS.

Linton Union.—Frederick Bennett, M.R.C.S. Eng. and L.S.A., to the Workhouse and the Linton District.

Machynlleth Union.—John Davies, M.R.C.S. Eng., to the Llanbrynmair District.

West Derby Union.—John Bark, M.R.C.S. and L.A.C. Lond., to the Kirkdale District.

Devonport Borough.—Mr. Robert Oxland, F.C.S., appointed Analyst; remuneration by fees.

Kendal Borough.—Mr. Louis Siebold, F.C.S., appointed Analyst for the Borough; remuneration by fees.

City of Norwich.—Mr. William Gustavus Crook appointed Analyst for the City for one year; remuneration by fees.

Westmoreland County.—Mr. Louis Siebold, F.C.S., appointed Analyst for the County; remuneration by fees.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BRIXTON, STREATHAM, AND HERNE-HILL DISPENSARY.—Resident House-Surgeon. Candidates must be unmarried and possess both medical and surgical qualifications. For particulars apply to the Secretary at the Dispensary, Water-lane, Brixton, S.W.

ESSEX AND COLCHESTER HOSPITAL.—House-Surgeon and Apothecary. Candidates must be legally qualified to practise medicine and surgery, duly registered, and unmarried. Applications, with testimonials as to moral character, etc., to the Committee, at the Board-room, on or before September 12.

GENERAL INFIRMARY AT LEEDS.—House-Surgeon. Candidates must possess a medical qualification, and be Members or Licentiates of a British College of Surgeons. Copies of testimonials to Dr. Heaton, at the Infirmary, Leeds, on or before September 12.

LEICESTER INFIRMARY AND FEVER HOUSE.—House-Surgeon and Apothecary. Candidates must be Fellows or Members of the College of Surgeons of London, Edinburgh, or Dublin; also Licentiates of the Royal College of Physicians, London, or of the Apothecaries' Company of London, and duly registered. Original testimonials to the Secretary, 24, Friar-lane, Leicester, on or before September 28.

MANCHESTER ROYAL INFIRMARY, DISPENSARY, AND LUNATIC HOSPITAL.—Honorary Assistant-Physician. Candidates must be Fellows or Members of the Royal College of Physicians in London, and must have a diploma from some University requiring examination for its degrees. Applications, with diplomas, original testimonials, and a certificate of age, to the Chairman of the Board, on or before September 21.

ROYAL COLLEGE OF SURGEONS.—At the half-yearly examination in Arts, etc., for the diplomas of Fellow and Member of the College, conducted by the College of Preceptors at Burlington House, and just brought to a close, 412 candidates presented themselves—viz., 130 for the Fellowship, and 282 for the Membership. Owing to the great number of papers to be read, the result cannot be known for some time; but it will be stated soon enough for the successful candidates to commence their professional studies in the session commencing October next. The Library and Museum were closed on Monday last, and will be reopened on Tuesday, October 1.

The American Dermatological Association held its second annual meeting at New York in the last week of August. The meeting extended over three days, and a long programme of professional and business matters had to be gone through.

Glycerine in Constipation.—Dr. Hanson, of Michigan, writes:—"I do not remember seeing in any of the journals any notice made of the use of glycerine as an injection for the relief of a constipated condition of the bowels. For the past two years I have been in the habit of using it in all classes of cases where I desired to produce evacuation of the bowels by enema, whether in acute disease or habitual constipation. I use one part of glycerine to six, eight, or ten parts of tepid water, and find it act more pleasantly and efficiently than any other agent I ever used for that purpose.—*New York Med. Record*, July 13.

Whooping-Cough in Japan.—Pertussis shares with diphtheria in the favour of inventors in therapeutics. The list of remedies said to cut short this disease, or at least to promote its speedy cure, is as lengthy as it is varied. Notwithstanding so many curative recommendations, it may very possibly be to the Japanese that we are indebted for the best suggestion in reference to pertussis. They resignedly call it the "hundred-day cough"; and their children, in nearly all cases in which they are not confined to the house, appear to get well without any impairment of health.—*Dr. Dobell's "Reports on Diseases of the Chest," vol.* iii.

The Cæsarian Operation.—As the result of examining the accounts of twenty-two cases of Cæsarian section performed along the linea alba, published between 1814 and 1868, Dr. Uhde, of Brunswick, finds (*Deutsche Med. Woch.*, August 17) that in twenty of these the woman died and in two she recovered. In twelve she was a primipara, in six a multipara, and in four this was not indicated. The two women who recovered (both of whom bore living children) were aged respectively forty-one and thirty-six years of age. Of the children delivered, nine were males and eight females, the sex not being stated in five. Of these, nine were delivered dead, and thirteen alive.

Action of Alkaloids on the Respiration.—In the report on Italy in Dr. Dobell's "Reports on Diseases of the Chest," vol. iii., Professor C. Peyrani's experiments on the action of some alkaloids on the respiration are related. The drugs were hypodermically injected into frogs and rabbits, and the results were as follows. In neither kind of animals, conisine, solanine, narcotine, or cinchonine had any marked effect; piperine did not affect the temperature, but it accelerated the circulation in both animals, and the respiration in rabbits. In both frogs and rabbits the temperature was increased and the circulation abated by codeine, which also slowed the respiration in rabbits. Digitaline, nicotine, and cantharidine increased the temperature in frogs and lowered it in rabbits; in both digitaline and nicotine diminished the cardiac velocity, and in rabbits accelerated the respiration. Cantharidine in both these kinds of animals accelerated the circulation, and in rabbits slowed the circulation.

Army Medical Services and Mutual Aid Societies.—At the recent International Army Medical Service Congress, held at Paris, to which the various governments sent as official delegates their most distinguished army surgeons, Surgeon-General Longmore, C.B., moved the following resolution, which was carried unanimously:—"The chief medical officer of an army, during a campaign, being responsible to the commander-in-chief and to the country for all that relates to the interests of the sick and wounded of the army, it is absolutely necessary that all the *personnel* constituting the medical service on the fields of battle and in the hospitals, without excepting the *personnel* of the aid societies, should be subjected to his authority." The following resolutions were also passed unanimously:—"1. Aid societies should only be employed, and can only be so usefully, in fixed hospitals. Their principal function consists in providing supplies of every description to meet the wants of military surgery. 2. The *personnel* of these societies should on no account be recruited from among persons or medical men subjected to the laws of recruital in operation in their country. 3. Although not submitted to any law of recruital, the *personnel* of the aid societies employed in the time of war should be subjected to military law, and should be expected to serve until the end of the war. 4. Aid societies ought to be brought in relation with the commanding officer only through the medium of the chief medical officer of the army, or the chief medical officers of the army corps. 5. The subordination of military surgery to another authority, or the existence of parallel services not dependent upon the principal medical officer, are incompatible with a good organisation of the medical services, and with the protection which the State owes to its sick and wounded soldiers. The direction of the military medical service ought to belong, as it does in almost all modern armies, exclusively to the chief medical officer of the army, acting under the authority of the commander-in-chief."

The Treatment of Diphtheria.—During the last twelve months most varied suggestions for the treatment of diphtheria have been contributed by practitioners in the different parts of the world. Such profuseness and diversity of remedies, while evidencing powerless therapeutics, show that many physicians still pursue anti-diphtheritics. Those believers should be referred to the following lines by M. Sanne, on the treatment of diphtheria:—"We ought constantly to bear in mind that there is no specific treatment of diphtheria, and that there are no means of preventing the formation of the false membranes. Since these are the result, not the cause, of the constitutional infection, their destruction is only indicated when their bulk constitutes a mechanical obstacle to respiration or deglutition."—*Dr. Dobell's "Reports on Diseases of the Chest," vol.* iii.

The Jumping Frenchmen in Maine.—At the annual meeting of the American Neurological Association, Dr. Beard stated that he was in the midst of an investigation with reference to automatism of involuntary life, and for the reliability of the phenomena of which he gave an account he was willing to hold himself personally responsible. There were in the northern part of Maine, among the lumber-men, a large number of Canadian Frenchmen, who were called "jumpers" or "jumping Frenchmen," from the habit which they had, apparently hereditary, of jumping or striking on any sudden excitation. For example, if one of the jumpers was told he might jump a number of feet, he was not able to resist the order, even though he was jumping into danger, as into a pond. Sometimes severe accidents had occurred in that way. If a number of them were sitting in a room smoking, and a person suddenly entered and told them to throw away their pipes, they threw them away without reference to the risk of breaking them. If, when walking the street, one of the jumpers was told to strike a third party, he was unable to resist, and would strike with whatever he had in his hand, and would strike his best friend, even though death would be the result. The men seemed to be entirely deficient in inhibitory power under sudden excitation. They acted much as though mesmerised, or as entranced persons acted when under the control of the operator. They cannot usually speak the English language, but when suddenly addressed in it they automatically reply in English instantly. This automatism is a very great inconvenience to the men, but they are entirely unable to control themselves. It is not an epidemic, but a fixed state or habit affecting a large number of these people lifelong, and remaining in families. Dr. Beard regarded the phenomena as an extreme illustration of what we all are—that is, they possessed far less inhibitory power than we all possessed. —*New York Med. Record*, July 13.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. J. Perrot Prince, Kimberley.—Received, with thanks.

F. V. M. A.—You had better apply to the Secretary, Burlington House, London, W.

Citizen.—The numbers of births, deaths, and marriages in the French capital during the past year, according to official statistics, were respectively 55,041 births, 47,509 deaths, and 18,032 marriages. The last is the smallest number entered under the head of marriages during the past ten years.

A Member of a Sanitary Board, Norfolk.—The Torquay drainage scheme just successfully carried out was devised by Sir Joseph Bazalgette, and approved by Sir John Hawkshaw. The cost has been £65,000.

Materfamilias.—The best known hospital for children is probably that in New Ormond-street.

Noteworthy.—At the meeting of the General Council at Marseilles, last week, the suggestion of a philanthropic society was approved for the erection in departmental hospitals of a secret ward for the reception of unmarried women, five months or upwards advanced in pregnancy. It was stated that at Rome, Vienna, Prague, and Berlin such an arrangement had worked well.

Meteorologist.—The Meteorological Department of the Government of India was established as a coherent system with a central head in 1875. Previous to that time the meteorological departments of different provinces and districts were distinct, and, as a rule, quite independent of each other. In 1875, Mr. Blandford was requested to report on the administration of the various meteorological observatories throughout India, and to submit a scheme for their reorganisation. The scheme subsequently recommended was sanctioned by the Government of India in September in that year. At the time of the establishment of the new department there were eighty-four observatories in India and its dependencies (exclusive of Ceylon). There are ninety-five observatories working in connexion with the department, distributed in three classes—three first-class, twenty-one second-class, and seventy-one third-class.

Connoisseurs of Drinking-Water.—The Turks (says Mr. Wrench, the Vice-Consul, in his report on Constantinople) are as great *connoisseurs* of drinking-water as Western Europeans are of wine. To suit particular tastes, the water-sellers at Constantinople supply the beverage by the names of the sources from whence it has been taken. The water of the "bends" or catchment-basin of the rain-water, known locally by the name of "Texiom" (the Pera reservoir), though muddy, is not unwholesome, and when allowed to settle, or filtered, it is held in great esteem, as is also the water from the Cara Koulak, a spring near Tokat, on the Asiatic side of the Bosphorus, and that from Tchamlidja, near Scutari. The water of Ranli-Kavak spring, near Arnaout Kioy, is perhaps the purest spring-water in the world; for by careful analysis it has been proved to rank next in purity to distilled water. Two sources in the Valley of Roses, beyond Buyukdéré, called Fundulili and Kestane, are in great demand among the natives; but the water mostly consumed by the highest class of Turks comes from two springs in Asia, called Goz-tepé and Tash-Délen.

Inquisitive.—Dr. Edward Smith gained the Howard Medal of the Statistical Society in 1875 for his essay on "The State of the Dwellings of the Poor in the Rural Districts of England, with special regard to the Improvements that have taken place since the Middle of the Eighteenth Century, and their Influence on the Morals of their Inmates."

A New Pharmaceutical College, Paris.—The French Government have erected this College upon the outskirts of the Luxemburg Gardens. The buildings and gardens attached to them cover nearly 60,000 square feet. The main building, which is divided into two parts by the central vestibule, contains to the right a lecture-room and amphitheatre, and to the left the offices of the administration and a second amphitheatre. Each of the latter will hold an audience of 600. To the rear of the main edifice a three-storeyed building has been erected, in which students will be provided with laboratories for practice.

Feigned Lunacy.—Last week a letter was read from the Surrey County Lunatic Asylum, Wandsworth, to the Guardians of the Kingston Union, stating that they had sent back a lunatic on the ground that she was not insane. The house-surgeon who had certified as to her lunacy, on being asked for an explanation, said the woman pursued two inmates with a knife to cut their throats; and if she was not a lunatic she was shamming, and laid herself open to go either to an asylum or to a prison. On a guardian inquiring if he could not tell whether a woman was shamming or not, the house-surgeon replied that if anybody behaved in the way this woman did he must take it for granted they were lunatics. The Board recommended the surgeon, before sending another person from the workhouse as a lunatic, to exercise greater caution.

Renegades.—A scare, says the *Bombay Gazette*, has come over some soldiers who are teetotalers in a regiment quartered at Ceylon. It seems that two of their comrades, who recently fell victims to cholera, were total abstainers, and it is remarkable that the effect of this circumstance was to cause the desertion from the temperance cause of 136 *out of* 188 *teetotalers* in the regiment, many of whom, it is said, have since given unmistakable proofs of their change of principle. This act of moral cowardice is ascribed to the youth and inexperience of the men.

Inquirens.—The total attendance of students, shown in the report of the President of Queen's College, Belfast, for 1877 and 1878, was 463, being an increase on the past year of twenty-six. Of these, 281 are medical. The summer classes, instituted in 1873, are attended by 159, chiefly medical students.

The Stone Lunatic Asylum.—The Guardians of the City of London Union had laid before them last week the report of their committee for visiting lunatics, giving the result of an inspection of the inmates of that Asylum. Three hundred and six patients had been examined, of whom nine were, in the opinion of the committee, improperly detained at the institution. One young woman, whom the officers admitted to have been convalescent for some months, was still there working in the laundry. It was resolved to bring the subject under the notice of the visiting justices and the Local Government Board.

Warrington.—The foundation-stone has just been laid of the new Infectious Diseases Hospital in that town, to be erected by the Corporation at an estimated cost of £6000.

Swimmer.—The Registrar-General computes the average number of cases of accidental drowning at over 2000 per annum.

The Registrar-General.—It is stated that Major Graham is about to retire from the office of Registrar-General of England. He succeeded Mr. Lister in 1841 or 1842.

A Caution to Smokers.—A young man, while travelling from Paris to Lyons, lit a match by scratching it with his thumb-nail, and a piece of the incandescent phosphorus penetrated under the nail and made a slight burn, to which he paid no attention. But after an hour the pain became intense, the thumb swelled, then the hand, and next the forearm. He was obliged to alight at a station on the journey, and send for a medical man, who declared that instant amputation of the arm was necessary. The patient insisted on postponing the operation for a few hours, until the arrival of his father, for whom he had telegraphed. Before the latter, however, could reach his son it was too late: the poisonous matter had gained the arm, then the shoulder, and any operation became impossible. He died in great agony twenty-seven hours after the burn.

Selling Liquor to Minors.—In Chicago a Citizen League has been formed for the suppression of the sale of liquor to minors, and the Saloon Keepers' Association of that city is fiercely contesting every measure taken by the League. The Illinois laws provide that any person guilty of selling liquor to a minor without the written authority of a parent, physician, or guardian, shall be fined from $20 to $100, or be imprisoned in the county gaol not less than ten nor more than thirty days, or both penalties may be inflicted. The enforcement of the law would especially affect the profits of the saloon-keepers; and every device is resorted to to frustrate the working of this clause of the Act.

Botanical Students.—A relative of the late owner of the Villa Muret and its magnificent gardens at Antibes, near Cannes, has presented to the French nation this valuable property. It is to be maintained as a sort of laboratory for working botanists, at the expense of the Government. There is an excellent herbarium, microscopes, a library, and everything the student requires; free lodging, too, will be given for six weeks to any botanist who wishes to avail himself of the resources offered. The offer is open to botanists of all nations. A recommendation from some known man of science is only required.

"*Where Ignorance is Bliss,*" *etc.*—The Kilmarnock magistrates have fined a grocer at Newmilus £12 10s. for selling "sweets" containing ginger-wine, made by a process of fermentation, without a licence. The defendant protested his ignorance when purchasing the sweets that the wine contained alcohol. He was a teetotaler.

Ipso Facto.—According to the last annual report of the Commissioners in Lunacy, the total number of registered lunatics, idiots, and persons of unsound mind in England and Wales on January 1 last was 68,538, being an increase of 1902 on those returned for the corresponding period of the previous year. The males numbered 31,024, and the females 37,514. The ratio of lunatics to the population on January 1 last was 27·57 per 10,000.

Ignoramus.—Yes. Among the penalties in the Act of Parliament passed last session to consolidate and amend the law relating to the public health in Ireland, is one of £10 for having a "wake" over a person dying of an infectious disorder.

"*Boarding Out*" *Pauper Children.*—Some interesting statistical details are given in a recently issued return of "boarding out" pauper children in England. It appears that on January 1, 1877, there were 35,187 orphan and deserted children under sixteen years of age under the charge of the Poor-law guardians. These are exclusive of the same class in district pauper schols. The number shown in this return is stated to be about 15 per cent. of the total number of pauper children. Under the regulations of the Local Government Board, 374 children were boarded out. The number boarded out by the guardians, but not under these regulations, was 8874—that is to say, the children placed with foster parents under the regulations are as one to twenty-four who are not under the regulations. The difference in the weekly cost per head is noteworthy. The 374 are boarded out at 4s. 4d. per child weekly on the average. The 8874 do not cost much more than half this—namely, 2s. 3¾d. Many unions put their children out for a cost much below the average, instances of which the return furnishes.

Spurious Soda-water.—At the Manchester Police-court, two mineral-water manufacturers have been summoned for selling soda-water which was not of the nature, substance, and quality of the article demanded. Mr. Escourt, the city analyst, said he had analysed the samples of the soda-water. They contained no soda, being simply water with carbonic gas passed through it. Soda-water proper should contain, according to a rule in the Pharmacopœia, thirty grains of bicarbonate of soda to the pint and be aërated, as the samples in question were, with carbonic acid gas. The point raised by the defendants was, that when the article was purchased they were not informed that it was intended for analysis, and therefore the provisions of the Act had not been complied with. The cases were adjourned for a week, in order that the magistrates might take the opinion of the stipendiary magistrate on the point urged.

Water Supplies in the Provinces.—A committee of the Stoke-on-Trent Town Council recommenced the prosecution of the Stafford Potteries Waterworks Company, for supplying water unfit for drinking purposes. Notwithstanding the complaints to the Company on the subject, the water continues to be in the same polluted condition which is supposed to have caused the prevalent diarrhœa in the district. At Honiton, in consequence of complaints from the inhabitants of the inadequate water-supply, disputes have arisen between the Town Council and the Local Government Board, who have taken action in the matter, which are gaining some notoriety. The absence of the anti-water party at a recent meeting of the Town Council was taken advantage of, and a resolution adopted admitting that the present water-supply was insufficient; but on the return of these gentlemen the resolution was subsequently rescinded. Under these circumstances it is now expected the water-supply will be undertaken (and the cost charged to the town) by the Local Government Board—an alternative by which the deficiency complained of will, no doubt, be fully provided for.

COMMUNICATIONS have been received from—

Dr. Thomas Barlow, London; Mr. John Chatto, London; Mr. Thomas Bryant, London; Mr. J. T. W. Bacot, Seaton, Devon; The Registrar of Apothecaries' Hall, London; Dr. E. Sparks, Crewkerne, Somerset; Mr. T. M. Stone, London; Mr. Everett, London; Mr. Becher, Llandudno; The Registrar-General of Edinburgh; Dr. J. M. Bruce, Birmingham; Dr. J. W. Moore, Dublin; Mr. C. F. Maunder, London; Dr. Gillespie, London; Dr. Ernest Sansom, London; Dr. James Ross, Manchester.

BOOKS AND PAMPHLETS RECEIVED—

G. Ernest Herman, M.R.C.P., London Hospital, The Medical Report for 1876—Thirty-second Report of the Commissioners in Lunacy to the Lord Chancellor—Dr. Louis Jullien, Traité Pratique des Maladies Vénériennes—E. M. Holmes, F.L.S., Botanical Note-Book, or Practical Guide to a Knowledge of Botany—Rickman J. Godlee, M.S., F.R.C.S. An Atlas of Human Anatomy, part 6—Transactions of the Medical and Chirurgical Faculty of the State of Maryland, 1878—Surgeon-General C. A. Gordon, M.D., C.B., Report on Typhoid or Enteric Fever in Relation to British Troops in the Madras Command—Dr. Joseph, Schneer, Alassio and its Climate—Edward W. Cox, the Arts of Writing, Reading, and Speaking—John Goodman, M.D., Fibrin, its Origin and Development in the Animal Organism—Thomas Dwight, M.D., The Identification of the Human Skeleton—Russell and Co., Inter-Medical Note.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médicale—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Nature—Centralblatt für die Medicinischen Wissenschaften—Cincinnati Lancet and Clinic—National Anti-Compulsory Vaccination Reporter—Gazette Hebdomadaire—Medical Enquirer—On Guard—Obstetrical Journal—Students' Journal and Hospital Gazette—Veterinarian—Leisure Hour—Sunday at Home—Monthly Homœopathic Review—New Preparations—Edinburgh Medical Journal.

APPOINTMENTS FOR THE WEEK.

September 7. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

9. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

10. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

11. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 1½ p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

12. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

13. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 31, 1878.

BIRTHS.

Births of Boys, 1251; Girls, 1153; Total, 2404.
Average of 10 corresponding years 1868-77, 2215·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	711	654	1365
Average of the ten years 1868-77	697·5	655·8	1353·3
Average corrected to increased population ...	...	...	1448
Deaths of people aged 80 and upwards ...	...	...	49

Note.—The births and deaths registered last week may be compared with the average numbers in the corresponding weeks of the ten years 1868-77 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	2	1	2	...	5	...	1	...	25
North ...	751729	...	2	9	5	17	1	4	...	22
Central ...	334369	...	1	1	1	2	...	3	...	8
East	639111	...	...	6	1	10	...	2	1	35
South	967692	4	3	11	5	22	1	10	...	58
Total	3254260	6	7	29	12	56	2	20	1	148

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·438 in.
Mean temperature	61·8°
Highest point of thermometer	73·4°
Lowest point of thermometer	52·1°
Mean dew-point temperature	57·2°
General direction of wind	S.W.
Whole amount of rain in the week	1·15 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, August 31, 1878, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1878.*	Persons to an Acre. (1878.)	Births Registered during the week ending Aug. 31.	Deaths Registered during the week ending Aug. 31.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3577304	47·5	2404	1365	73·4	52·1	61·8	16·56	1·15	2·92
Brighton	103923	44·1	75	36	71·9	54·6	62·6	17·01	1·25	3·17
Portsmouth ...	129461	28·9	75	58	...	...	...	...	...	..
Norwich	84620	11·3	51	58	71·5	56·8	61·8	16·56	1·32	3·35
Plymouth	73599	52·8	54	27	69·0	56·0	61·2	16·22	1·21	3·07
Bristol	206419	46·4	133	72	74·1	51·6	61·1	16·17	0·53	1·35
Wolverhampton ...	74240	21·9	45	36	71·6	50·1	58·0	14·40	0·75	1·90
Birmingham ...	383117	45·6	314	210	...	...	...	...	...	...
Leicester	121473	38·0	94	57	...	...	...	...	...	..
Nottingham ...	165267	16·6	97	67	72·7	50·7	60·1	15·62	1·30	3·30
Liverpool	532681	102·2	389	291	70·0	53·1	59·1	15·06	0·85	2·16
Manchester ...	360514	84·0	257	169	...	...	...	...	...	...
Salford	170251	32·9	134	92	76·9	44·4	59·6	15·34	0·96	2·44
Oldham	107366	23·0	81	52	...	...	...	...	...	..
Bradford	185088	25·6	109	73	71·0	49·0	59·8	15·45	1·06	2·69
Leeds	304948	14·1	222	153	71·0	48·0	60·1	15·62	0·89	2·26
Sheffield	289537	14·7	183	121	75·0	49·2	60·6	15·90	0·52	1·32
Hull	143139	39·4	108	85	73·0	48·0	60·1	15·62	1·39	3·53
Sunderland ...	112459	40·6	90	62	75·0	55·0	60·6	15·90	1·91	4·85
Newcastle-on-Tyne	144570	26·9	118	79	...	...	...	...	...	.
Edinburgh	222371	53·1	138	72	72·6	48·0	59·4	15·22	2·59	6·58
Glasgow	566940	94·0	365	228	72·5	50·5	61·0	16·11	0·77	1·96
Dublin	314666	31·3	183	155	74·1	45·9	59·7	15·39	0·95	2·41
Total of 23 Towns in United Kingdom	8373953	38·0	5710	3618	76·9	44·4	60·4	15·78	1·14	2·90

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·44 in. The lowest reading was 29·02 in. on Friday evening, and the highest 29·65 in. at the end of the week.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1878 by the addition of seven years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. Nottingham, Salford, and Oldham, however, form exceptions to this rule, as the estimates for these three towns have been revised with the aid of local information as to the rate of increase of inhabited houses. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

THE STUDENTS' NUMBER

OF THE

MEDICAL TIMES AND GAZETTE

FOR

1878-79.

IN the present number of the *Medical Times and Gazette*, which is specially intended for the guidance of junior Students of Medicine and those about to become students, we have, to a great extent, overlooked the claims of the their seniors for instruction and guidance. The reason is plain. As soon as a student enters a school he becomes, or ought to become, part and parcel of it. His teachers will be always glad to help him with advice as to what is best to be done; and as this advice must be founded on a special knowledge of the man and his belongings, such advice is sure to be better than what we can give, as addressed to all. We therefore begin with the period of preparatory education, passing thence to the selection of a school for the first year's studies, thence on to the second year and its appropriate studies, culminating in the first professional examination. With the third year's studies comes the second and in some instances final examination; in the case of certain examining bodies, this comes at the end of the fourth year. In our remarks we shall have in mind for the most part the English Examinations, but those of Scotland and Ireland shall have due attention.

I.—PRELIMINARY EDUCATION.

By the Regulations of the General Medical Council, no person can be registered as a medical student unless he shall have previously passed a preliminary examination in the subjects of general education as hereinafter provided. For the present, testimonials of proficiency granted by educational bodies, according to the subjoined list, are accepted; the Council reserving the right to add to or take from the list. A degree in Arts of any university of the United Kingdom, or of the colonies, or of such other universities as may be specially recognised from time to time by the Medical Council is considered a sufficient testimonial of proficiency.

LIST OF EXAMINING BODIES WHOSE EXAMINATIONS FULFIL THE CONDITIONS OF THE MEDICAL COUNCIL AS REGARDS PRELIMINARY EDUCATION.

I.—*Universities of the United Kingdom.*

Oxford.—Examination for a degree in Arts; Responsions; Moderations; Local Examinations (Senior), certificate to include Latin and Mathematics; Local Examinations (Junior), certificate to include Latin and Mathematics, and also one of the following optional subjects:—Greek, French, German, Natural Philosophy, including mechanics, hydrostatics, and pneumatics.

Cambridge.—Examination for a degree in Arts; Previous Examination; Local Examinations (Senior), certificate to include Latin and Mathematics; Local Examinations (Junior), certificate to include Latin and Mathematics, and also one of the following optional subjects:—Greek, French, German, Natural Philosophy, including the elements of statics and hydrostatics.

Durham.—Examination for a degree in Arts; Examination for students in their second and first years; Registration Examination for medical students; Local Examinations (Senior), certificate to include Latin and Mathematics; Local Examinations (Junior), certificate to include Latin and Mathematics, and also one of the following optional subjects:—Greek, French, German, Natural Philosophy, including mechanics, hydrostatics, and pneumatics.

Oxford and Cambridge Schools' Examination Board.(a)—Certificate to include—Arithmetic (including vulgar and decimal fractions), Algebra (including simple equations), Geometry (first two books of Euclid), Latin (including translation and grammar), and one of the following optional subjects:—Greek, French, German, mechanical division of Natural Philosophy.

London.—Examination for a degree in Arts or Science; Matriculation Examination.

Aberdeen, Edinburgh, Glasgow, St. Andrews.—Examination for a degree in Arts; Preliminary Examination for graduation in Medicine or Surgery.

Edinburgh.—Examination of (Senior) Candidates for Honorary Certificates under the Local Examinations of the University.

Glasgow.—Senior Certificate of Local Examination Board of the University; certificate to include English Literature, Arithmetic, Algebra, Geometry, Latin, and also one of the following optional subjects:—Greek, French, German, Natural Philosophy.

St. Andrews.—Honours certificates granted under Local Examinations, certificate to include English Literature, Arithmetic, Algebra, Geometry, Latin, and also one of the following optional subjects:—Greek, French, German, Natural Philosophy.

Dublin.—Examination for a degree in Arts; Public Entrance Examination.

Queen's University (Ireland).—Examination for a degree in Arts; Entrance Examination; Examination for the diploma of Licentiate in Arts; Previous Examination for B.A. degree; Local Examinations for Men and Women, certificate to include all the subjects set forth in Recommendation 4.

II.—*Other Bodies named in Schedule (A) to the Medical Act.*

Royal College of Surgeons of England.—Examination conducted under the superintendence of the College of Surgeons, by the Board of Examiners of the Royal College of Preceptors.

The Society of Apothecaries in London.—Examination in Arts.

Royal College of Physicians, Edinburgh; Royal College of Surgeons, Edinburgh.—Preliminary Examination in General Education, conducted by a Board appointed by these two Colleges combined.

Faculty of Physicians and Surgeons of Glasgow.—Preliminary Examination in General Education.

Royal College of Surgeons in Ireland.—Preliminary Examination; certificate to include Mathematics.

Apothecaries' Hall of Ireland.—Preliminary Examination in Gene Education.

III.—*Examining Bodies in the United Kingdom not included in Schedule (A) to the Medical Act.*

Royal College of Preceptors.—Examination for a First Class Certificate.

The Examiners for Commissions and Appointments in her Majesty's Service, Military, Naval, and Civil.—Certificate to include all the subjects required by the General Medical Council.

IV.—*Indian, Colonial, and Foreign Universities and Colleges.*

Universities of Calcutta, Madras, and Bombay.—Entrance Examination; certificate to include Latin.

M'Gill College, Montreal; Bishop's College, Montreal.—Matriculation Examination.

University of Toronto; Trinity College, Toronto; Queen's College, Kingston; Victoria College, Upper Canada.—Matriculation Examination.

University of Fredericton, New Brunswick.—Matriculation Examination.

University of Melbourne.—Matriculation Examination.

University of Sydney.—Matriculation Examination.

University of the Cape of Good Hope.—Matriculation Examination.

University of Adelaide.—1. Matriculation Examination; 2. Primary Examination, first-class certificate.

King's College, Nova Scotia.—Matriculation Examination; Responsions.

Medical College, Halifax, Nova Scotia.—Matriculation Examination.

Codrington College, Barbadoes.—1. English Certificate for Students of two years' standing, specifying the subjects of examination. 2. Latin Certificate, or "Testamur."

Tasmanian Council of Education.—Examination for the degree of Associate of Arts; certificate to include Latin and Mathematics.

Christ's College, Canterbury, New Zealand.—Voluntary Examinations; certificate to include all the subjects required by the General Medical Council.

South Australia: South Australian Institute, Adelaide.—Preliminary General Examination—First Class Certificate.

University of Otago.—Preliminary Examination.

The authorities of the University of Oxford simply say that each candidate for their degree must have graduated

(a) The *English* is provided for by the following resolution of the Executive Committee:—"That, as every candidate for the certificate of the Oxford and Cambridge Schools' Examination Board is required to answer questions in such a manner as to satisfy the examiners that he has an adequate knowledge of English Grammar and Orthography, this shall be held as conforming to the requirements of the Medical Council in reference to English Language."

in Arts—that is, attained at least to the rank of B.A. The University of London insists on all men who want to enrol themselves as candidates for their degrees, save those who have passed at certain colonial establishments, passing the somewhat stiff matriculation examination of the University. Though almost all the other examining bodies have preliminary examinations of their own, nevertheless the certificate of having passed one of them is in almost every case accepted as evidence of a due knowledge of the subjects of preliminary education, so that practically a student may pass when and where he chooses. Nevertheless, the great majority of students select the body whose final qualification they seek; hence it comes that in England the great bulk of students select the preliminary examination of the Royal College of Surgeons or of the Apothecaries' Society. The former is conducted by the College of Preceptors, the latter by selected examiners. As the Preliminary Examination of the ROYAL COLLEGE OF SURGEONS OF ENGLAND is that most largely frequented, and is a very fair sample of the several requirements from gentlemen desiring to enter the profession, we give their programme, which is as follows:—

For the year 1878-79, and until further notice, the following are the subjects of examination:—

PART I.—COMPULSORY SUBJECTS.

1. Writing from dictation.
2. English Grammar.
3. Writing a short English Composition, such as a description of a place, an account of some useful or natural product, or the like.
4. Arithmetic. No candidate will be passed who does not show a competent knowledge of the first four rules, simple and compound, of vulgar fractions and of decimals.
5. Questions on the Geography of Europe, and particularly of the British Isles.
6. Questions on the outlines of English History; that is, the succession of the sovereigns, and the leading events of each reign.
7. Mathematics. Euclid, Books I. and II., or the subjects thereof. Algebra, to simple equations inclusive.
8. Translation of a passage from the second book of "Cæsar's Commentaries—De Bello Gallico."

PART II.—OPTIONAL SUBJECTS.

Papers will also be set on the following six subjects; and each candidate will be required to offer himself for examination on one subject at least, at his option; but no candidate will be allowed to offer himself for examination on more than four subjects:—

1. Translation of a passage from the first book of the Anabasis of Xenophon.
2. Translation of a passage from X. B. Saintine's "Picciola."
3. Translation of a passage from Schiller's "Wilhelm Tell."

(Besides these translations into English, the candidate will be required to answer questions on the grammar of each subject, whether compulsory or optional.)

4. Mechanics. The questions will be chiefly of an elementary character.
5. Chemistry. The questions will be on the elementary facts of Chemistry.
6. Botany and Zoology. The questions will be on the classification of plants and animals.

(The quality of the handwriting and the spelling will be taken into account.)

N.B.—Each candidate (who has not at a previous examination paid the amount) is required to pay a fee of £2 on the morning of the first day of the examination prior to his admission thereto. Examinations will be held on March 21, 22, and 23, and on September 3, 4, and 5. Particulars respecting the examination will be duly advertised in the journals. Candidates are required to apply for the prescribed form of application a month before the date of the examination, and to send the same to the College not less than three weeks before its commencement.

Note.—A candidate, in order to qualify for the Membership, is required to pass at one and the same examination in all the subjects of Part I. and in one subject in Part II., and failure in any one of those subjects necessitates re-examination in all. A candidate, in order to qualify for the Fellowship, is required, in addition to the subjects included in Part I., to pass in not less than four, at his option, of the subjects in Part II. (In the year 1879, Euclid, Books III., IV., V., and VI., will be included in the optional subjects of Part II.)

Certificates in Arts granted by any of the bodies whose certificate is recognised by the Medical Council will be accepted from candidates who present themselves at the professional examination at the Hall, as equivalent to their having passed the above or other similar examination.

The following are the dates at which the several examinations for the year 1878-79 will commence:—

Matriculation: Monday, January 13, 1879. Bachelor of Science: Second B.Sc., Monday, October 21. Bachelor of Medicine: Second M.B., Monday, November 4. Bachelor of Surgery: Tuesday, November 26. Master in Surgery: Monday, November 25. Doctor of Medicine: Monday, November 25. Subjects relating to Public Health: Monday, December 9.

Matriculation.—There shall be two examinations for Matriculation in each year—one commencing on the second Monday in January, and the other on the last Monday in June.(a) No candidate shall be admitted to the Matriculation Examination unless he have produced a certificate(b) showing that he has completed his sixteenth year. This certificate shall be transmitted to the Registrar at least *fourteen days* before the commencement of the examination. A fee of £2 shall be paid at matriculation. No candidate shall be admitted to the examination unless he have previously paid this fee to the Registrar.(c) The examination shall be conducted by means of printed papers; but the examiners shall not be precluded from putting, for the purpose of ascertaining the competence of the candidates to pass, *viva voce* questions to any candidate in the subjects in which they are appointed to examine. Candidates shall not be approved by the examiners unless they have shown a competent knowledge in each of the following subjects, according to the details specified under the several heads:—1. Latin. 2. Any two(d) of the following languages: Greek, French, German, and either Sanskrit or Arabic.(e) 3. The English Language, English History, and Modern Geography. 4. Mathematics. 5. Natural Philosophy. 6. Chemistry.

The following are the particulars of the foregoing subjects of examination:—

Languages.—Latin—One Latin subject to be selected by the Senate one year and a half previously from the works of the undermentioned authors(f):—*Virgil:* One book of the Georgics, and one book of the Æneid. *Horace:* Two books of the Odes. *Sallust:* The Conspiracy of Catiline, or the War with Jugurtha. *Cæsar:* Two books of the Gallic War. *Livy:* One book. *Cicero:* De Senectute or de Amicitiâ, with one of the following orations:—Pro Lege Manilià, one of the four Catilinarian Orations, Pro Archiâ, Pro M. Marcello. *Ovid:* One book of the Metamorphoses, and one book of the Epistles or Heroides. The paper in Latin shall contain passages to be translated into English, with questions in History and Geography arising out of the subjects of the book selected. Short and easy passages shall also be set for translation from other books not so selected. A separate paper shall be set containing questions in Latin grammar, with simple and easy sentences of English to be translated into Latin.(g) Greek(h)—One Greek subject to be selected by the Senate one year and a half previously from the works of the undermentioned authors(i):—*Homer:* One book. *Xenophon:* One book. The paper in Greek shall contain passages to be translated into English, with questions in grammar,(k) and with questions in history and geography arising out of the subjects of the book selected. Short and easy passages shall also be set for translation from other books not so selected. French—The paper in French shall contain passages for translation into English, and questions in grammar, limited to the Accidence. German—The paper in German shall contain passages for translation into English, and questions in grammar, limited (except when German is taken as an alternative for Greek) to the Accidence. Sanskrit; Arabic—The paper in Sanskrit and the paper in Arabic shall contain passages for translation into English, and questions in grammar. The English Language, English History, and Modern Geography—Orthography; writing from dictation; the grammatical structure of the language. History of England to the end of the seventeenth century; with questions in modern geography.

Mathematics.—Arithmetic: The ordinary rules of arithmetic; Vulgar and Decimal Fractions; Extraction of the Square Root. Algebra: Addition, Subtraction, Multiplication, and Division of Algebraical Quantities; Proportion; Arithmetical and Geometrical Progression; Simple Equations. Geometry: The First Four Books of Euclid, or the subjects thereof.

Natural Philosophy.(l)—Mechanics: Composition and Resolution of Statical Forces; Simple Machines (Mechanical Powers)—Ratio of the Power to the weight in each; Centre of Gravity; General Laws of Motion, with the chief experiments by which they may be illustrated; Law of the Motion of Falling Bodies. Hydrostatics, Hydraulics, and Pneumatics: Pressure of Liquids and Gases, its equal diffusion and variation with the depth; Specific Gravity, and modes of determining it; the Barometer, the Syphon, the Common Pump and Forcing Pump, and the Air Pump. Optics: Laws of Reflection and Refraction; formation of Images by Mirrors and Simple Lenses. Heat: its Sources; Expansion; Thermometers—relations between different Scales in common use; difference between Temperature and Quantity of Heat; Specific and Latent Heat—Calorimeters; Liquefaction; Ebullition; Evaporation; Conduction; Convection; Radiation.

(a) These examinations may be held, not only at the University of London, but also, under special arrangement (see Appendix I.), in other parts of the United Kingdom, or in the colonies.

(b) A certificate from the Registrar-General in London, or from the Superintendent Registrar of the district, or a certified copy of the baptismal register, is required *in every case in which it can possibly be obtained*e In other cases the best evidence procurable is admitted. The certificate of each candidate is returned to him when he inscribes his name on the Register of the University. Information respecting the time for doing this will be sent to each candidate when the receipt of his certificate of age is acknowledged.

(c) The fee must be paid when the candidate inscribes his name on the Register of the University.

(d) No credit will be given for more than two of these languages.

(e) Candidates who desire to be examined in either Sanskrit or Arabic must give at least *two calendar months' notice* to the Registrar, and must mention the other optional language which they select.

(f) The Latin subjects for 1879 and 1880 are:—For January, 1879: *Cæsar*, De Bello Gallico, Books III. and IV. For June, 1879: *Cicero*, De Senectute, and the First Speech against Catiline. For January, 1880: *Cicero*, De Amicitiâ and the Speech pro Lege Manilià. For June, 1880: *Sallust*, De Bello Jugurthino.

(g) Special stress is laid on accuracy in the answers to the Grammar questions, and on the correct rendering of English into Latin.

(h) Candidates may substitute German for Greek.

(i) The Greek subjects for 1879 and 1880 are:—For January, 1879: *Homer*, Odyssey, Book XIV. For June, 1879: *Xenophon*, Anabasis, Book III. For January, 1880: *Xenophon*, Agesilaus. For June, 1880: *Homer*, Odyssey, Book XI.

(k) Special stress is laid on accuracy in the answers to the questions in Greek grammar.

(l) The questions in Natural Philosophy will be of a strictly elementary character.

Chemistry.—Chemistry of the Non-metallic Elements, including their compounds as enumerated below, their chief physical and chemical characters, their preparation, and their characteristic tests. Oxygen, Hydrogen, Carbon, Nitrogen; Chlorine, Bromine, Iodine, Fluorine; Sulphur, Phosphorus, Silicon. Combining Proportions by weight and by volume; General Nature of Acids, Bases, and Salts; Symbols and Nomenclature. The Atmosphere—its constitution; effects of Animal and Vegetable Life upon its composition. Combustion; structure and properties of Flame; nature and composition of ordinary fuel. Water: Chemical peculiarities of Natural Waters, such as rain-water, river-water, spring-water, sea-water. Carbonic Acid; Carbonic Oxide; Oxides and Acids of Nitrogen; Ammonia; Olefiant Gas; Marsh Gas; Sulphurous and Sulphuric Acids, Sulphuretted Hydrogen. Hydrochloric Acid, Phosphoric Acid, and Phosphuretted Hydrogen; Silica.

ADVICE TO YOUNG CANDIDATES.

Thus far we have dealt with the mere rules and regulations of the various bodies, but it behoves us also to give the young candidates some advice on the subject of preliminary education. There can be no doubt of the exceeding value of these examinations. Nothing has done so much good in raising the general status of medical men, and in the upholding of the dignity of our profession, as the institution and general enforcement of them. It becomes everyone who desires to enter our profession, and to fight his way to its highest posts of honour, to do all he can to maintain this status or to raise it even to a higher pitch.

To those who can by any possibility afford it, we should say, Take a degree in Arts before entering upon the study of Medicine. The training acquired at a University is invaluable, and the possession of a degree in Arts gives a man a start which can be obtained in no other way. It at once gives him the chances of those higher appointments so eagerly sought for, and gives him a stamp through life which is always acknowledged and respected.

Should the taking of a degree be impracticable, we should recommend as the next best test of preliminary education the Matriculation Examination of the University of London. This, too, is of great value, and is acknowledged by students among themselves, to say nothing of the outer world, as the mark of superior educational acquirements. It is notorious, too, that the medical graduates of this University, who constitute its real glory, number among their ranks the greater part of the most distinguished men of the day. Moreover, the possession of such a professional qualification as is given by the University of London is looked upon as the stamp and seal of superior professional acquirements. For all these and other reasons which could be adduced, we would strongly urge intending students of Medicine to pass their preliminary examination here; for, should they do so, they have the option at any future time of going on to take their degree in the University; but, according to the rules of the University, no part of medical education counts prior to the passing of their own Matriculation Examination. For this reason, therefore, a student must pass this examination at the very beginning of his medical career. He cannot turn back in the middle of his studies, whatever his qualifications; his chance is gone.

There is little difference, as regards preliminary education, between the requirements demanded by the Royal College of Surgeons of those who look forward to the qualification of Membership, and those who aspire to the Fellowship. As the Fellowship of this body is looked upon as giving the same stamp to a surgeon as the M.R.C.P. of London does to a physician, we would earnestly urge all who can attain to it to take up the additional preliminary subjects required for this qualification. For should they at any future time desire to become Fellows of the College by examination, they will, in all probability, find that it is hard indeed to begin again the studies requisite for the passing of this preliminary examination.

APPRENTICESHIP.

In former days the mode of access to the profession was by apprenticeship to some regular practitioner, and this was till recently the rule at Apothecaries' Hall, but practically it has been almost completely departed from. Then the plan was for the young apprentice to enter his master's dispensary or surgery, where he would learn to compound medicines, make a pill, and spread a plaster; by-and-by coming in due course to see and prescribe for patients of various ranks, and suffering from various maladies. With a good master, no course of instruction could be better, and with it men were apt to make better practical practitioners than now, especially as regards the prescribing of medicines and their compounding. But with a careless master the system only tended to perpetuate routine practice, and to produce careless, ignorant, and self-conceited practitioners. Undoubtedly the plan rendered students, when they came to the hospital—which they did towards the close of their apprenticeship—much more at home and much more able to appreciate what they saw and heard around them. The system is not yet wholly forgotten, and with the proviso above mentioned, we heartily commend it. In a modified form it may still be usefully intercalated into the modern system of medical education. The number of years prescribed for this education is four, whilst most hospital courses are so arranged as to be got over in three, leaving a year unoccupied by class work. This year may be spent with advantage, either before entering the medical school, or after having finished the course. Of the latter we shall speak hereafter, but the young student may spend it well, before joining a hospital, in working in the laboratory of a general practitioner, learning something of Chemistry, Pharmacy, and Osteology, and thus preparing himself to enter the school with advantage. This gives him a decided pull over those who come straight to the hospital from a public school. Moreover, this is to be said: it is a good thing for a young man to feel his own weight, his responsibilities and duties, before entering a medical school. The change is so sudden and so violent, from the strict discipline of a school, to the almost unrestricted liberty of the medical student, that sometimes young lads lose their heads for awhile; but the almost uniform good behaviour of the medical students of the present day has a decidedly beneficial effect upon the newly entered candidates for medical qualification.

At all events, we would strongly urge on all intending students to acquire, before entering a medical school, some knowledge of Chemistry and Physics, and, if possible, an acquaintance with Human Osteology, commonly known as "the bones."

REGISTRATION.

As soon as the student has passed his preliminary examination, he ought to register his certificate at the office of the General Medical Council, 315, Oxford-street, W., or at that of one of the Branch Registrars, which will save him all further trouble as regards preliminary education. This is necessary, if the student desires to spend the first year with a general practitioner or at a country hospital, so as to make the time thus spent count. But when the student comes to enter a medical school, he must register the actual commencement of his hospital studies. In London every one used to register at the College of Surgeons; but that plan is now abandoned. It is now the practice for the return required by the General Medical Council to be sent in by the school authorities. *All registration must be made within fifteen days of the beginning of medical studies, or the year will be lost.*

BRITISH LYING-IN HOSPITAL,(b)
Endell-street, St. Giles's, W.C.

Consulting Physician—Dr. Priestley.
Consulting Surgeon—T. Spencer Wells, F.R.C.S.
Physicians—Dr. Heywood Smith, Dr. Arthur Edis, and Dr. Fancourt Barnes.
Matron—Miss Freeman.
Secretary—Mr. Vincent Yardley.

(b) No return.

II.—PRELIMINARY SCIENTIFIC EDUCATION.

Speaking of general education, we have incidentally referred to the importance of certain scientific acquirements. These, though not absolutely essential to some knowledge of Medicine, are so important as to be held in the first rank of subsidiary subjects. Of these, Mechanics are of most importance to the student, and every effort ought to be made to acquire a knowledge of them sufficient at least to pass an ordinary examination. The University of London, however, has instituted an examination known as the Preliminary Scientific, dealing with these and allied subjects. This examination is a very powerful test of a man's acquirements, and many break down under it. We strongly counsel all who desire to graduate in London to pass it, if possible, before entering on their purely medical studies. It is sad to see the loss of time implied by a man being forced to devote his attention to purely scientific subjects when he ought to be attending to others which belong to later periods of his career, and which he will have to work up under like unfavourable auspices. The following are the regulations relating to this examination in the University of London :—

Preliminary Scientific (M.B.) Examination.

No candidate shall be admitted to this examination until he shall have completed his seventeenth year, and shall have either passed the Matriculation Examination(a) or taken a degree in Arts in one of the Universities of Sydney, Melbourne, Calcutta, or Madras (provided that Latin was one of the subjects in which he passed) ; nor unless he have given notice of his intention to the Registrar at least *fourteen days* before the commencement of the examination.

The fee for this examination shall be £5.

Candidates shall be examined in the following subjects(b) : —

inorganic chemistry.

Differences between mechanical mixture, solution, and chemical combination ; outlines of crystallography ; formation of crystals; dimorphism ; isomorphism ; conditions on which the melting-point and the boiling-point of a substance depend ; difference between elementary and compound substances ; laws of chemical combination; equivalent weights of the elements; multiple proportions ; the atomic theory; atomic value (quantivalence) ; molecules ; molecular weights ; relation between the density of a gas and its molecular weight ; abnormal densities ; Avogadro's hypothesis ; combination of gases by volume; compound radicals ; atomic and molecular combination. Meaning of chemical symbols, formulæ, and equations ; calculation of quantities by weight and by volume ; chemical changes, and the conditions under which they occur; combination ; decomposition ; double decomposition ; nature of acids, bases, and salts; capacity of saturation of acids and bases; nomenclature. Relation between atomic weight and specific heat; Faraday's electrolytic law ; principles of spectrum analysis; diffusion of gases. Hydrogen, chlorine, bromine, iodine, fluorine ; the combination of the last four elements with hydrogen. Oxygen ; ozone ; water and peroxide of hydrogen ; the oxides and oxyacids of chlorine ; chlorates and hypochlorites. Sulphur; sulphuretted hydrogen ; the oxides of sulphur; sulphuric acid and the sulphates ; sulphurous acid and the sulphites ; chlorosulphuric acid. Nitrogen ; the atmosphere and its relations to animal and vegetable life ; ammonia ; ammonium and its salts; the oxides of nitrogen ; nitric acid and nitrates ; nitrous acid and nitrites. Phosphorus; phosphoretted hydrogen ; the oxides of phosphorus ; phosphoric acid and the phosphates ; chloride and oxychloride of phosphorus. Arsenic and its oxides ; arseniuretted hydrogen; arsenious acid and its salts ; arsenic acid and its salts: the sulphides of arsenic ; detection of arsenic. Antimony, its oxides and sulphides ; antimoniuretted hydrogen ; chlorides of antimony ; compounds of antimonic oxide ; detection of antimony. Boron ; boracic acid and the borates. Carbon ; carbonic oxide and carbonic acid ; the carbonates ; carbon oxysulphide ; sulphocarbonic acid ; marsh-gas ; ethylene ; combustion ; structure of flame ; coal-gas; Davy lamp : principles of illumination. Silicon ; Siliciuretted hydrogen ; silicon chloride : silicon chloroform ; silica and the silicates. Potassium; sodium ; silver. Calcium ; strontium ; barium. Aluminium. Magnesium ; zinc ; cadmium. Lead. Manganese; iron ; cobalt ; nickel ; chromium. Bismuth ; copper ; mercury ; gold ; tin. Platinum. The chief compounds of these metals with the more important acid radicals ; the detection of these metals and their compounds, in powder or in solution.

experimental physics.

[Candidates will be expected to show a general acquaintance with the methods and apparatus by which the leading principles of Physics as enumerated below can be illustrated and applied.]

Units of measurement. The laws of motion considered experimentally. The chief forces of nature. The general properties of solids, liquids, and gases. The nature, intensity, and transmission of fluid pressure in general. The pressure of liquids in equilibrium under the action of gravity. The equilibrium of solids floating or entirely immersed in gravitating fluids. The specific gravities of substances, with the ordinary modes of determining them. Measurement of the pressure of the atmosphere and of the elastic force of gases. Diffusion of liquids and gases. Definition of work and energy ; conservation and transmutation of energy.

Acoustics.—Production and mode of propagation of sound ; intensity, pitch and quality. Velocity of sound in air. Influence of temperature and density. Velocity of sound in other media. Laws of reflection and Refraction. Nature of musical sounds. Longitudinal vibrations of rods and of columns of air. Transverse vibrations of strings ; variation in their rate of vibration by changes in their tension, length, thickness, and substance.

Heat.—Definitions of heat and temperature. Construction of instruments for the measurement of temperature. Expansion of solids, liquids, and gases under heat. Change of state; tension of vapours; latent heat. Radiant heat; its reflection, refraction, and absorption. Conduction; definition of thermal conductivity. Convection. Specific heat ; mechanical equivalent of heat.

Magnetism.—Properties of magnets ; induction—magnetic relations of iron and steel. Terrestrial magnetism.

Electricity.—Two electrical states, and their mutual relations. Conduction and insulation. Induction. Electric attraction and repulsion. Distribution and accumulation of electricity on conductors. Electric discharge. Voltaic electricity ; the various batteries. Electro-motive force, strength of currents, resistance ; Ohm's law. Heating and chemical effects of electric currents ; action between currents and magnets ; electro-magnetism. Induced currents ; magneto-electricity. Thermo-electricity.

Optics.—Laws of propagation of light ; measurement of velocity of light ; photometry. Laws of reflection and refraction of light. Reflection at plane and at spherical surfaces. Refraction at plane and at spherical surfaces. Refraction through lenses, including the formation of images. Chromatic dispersion.

botany and vegetable physiology.(c)

Structure, functions, and life-history of simple unicellular plants, such as *Protococcus* and *Saccharomyces* (yeast), as types of vegetable life. Structure, functions, and life-history of *Penicillium*, *Mucor*, or some other simple fungus. Structure, functions, and life-history of *Chara* or *Nitella*. Morphology, histology, and history of the reproduction of a fern. Morphology and histology of a flowering plant ; structure of a flower ; homologies of leaves and floral organs ; histology of ordinary vegetable tissues, such as epidermis, parenchyma, fibro-vascular tissue, and their arrangement in the stem and leaves. General principles of vegetable nutrition ; food of plants ; action of green parts of plants ; nature and flow of sap. Growth of a flowering plant ; formation of wood and bark ; nature of cambium. Reproduction of a flowering plant ; structure of ovule ; methods of fertilisation ; development of ovule into seed ; distinctive characters of gymnosperms. Distinctive characters of the principal British natural orders, viz.,—*Dicotyledons*, Ranunculaceæ, Cruciferæ, Caryophylleæ, Leguminosæ. Rosaceæ, Umbelliferæ, Compositæ, Scrophulariaceæ, Labiatæ, Amentaceæ ; *Monocotyledons*, Orchideæ, Liliaccæ, Cyperaceæ, Gramineæ ; *Acotyledons*, Filices, Musci, Lichens, Algæ, Fungi. (Description in technical language of specimens of flowering plants to be provided by the examiners.) Derivation and meaning of the following terms, and demonstration of their application on specimens (provided by the examiners) :—Thalamifloral, calycifloral, corollifloral ; hypogynous, perigynous, epigynous ; monandrous, diandrous, etc. ; individual, variety, species, genus, order, class, kingdom.

zoology.

General structure and life-history of the following animals, as types of some of the principal divisions of the animal kingdom :—Amœba, paramœcium, hydra, tænia, leech, mussel, snail, centipede, insect, lobster, frog. Comparative structure of the digestive apparatus (including the teeth) in the dog, sheep, pig, and rabbit. Comparative structure and actions of the circulating and respiratory organs in the animals enumerated in the first paragraph, and also in each of the vertebrated classes. Essential structure of secretory organs ; principal varieties in the structure of the liver and kidney. General plan of the nervous system in mollusca, arthrozoa, and vertebrata. Proportionate development of the spinal cord and of the several encephalic centres in the ascending series of vertebrata. Respective functions of those centres, Modes of reflex action. Outlines of the comparative history of embryonic development in frog, bird, and mammal.

(a) A certificate of age must be produced by every candidate who shall have passed the matriculation examination in the preceding January or June.

(b) Candidates who shall pass in all the subjects of the Preliminary Scientific (M.B.) Examination, and shall also pass *at the same time* in the Pure Mathematics of the first B.Sc. examination, or who shall have previously passed the first B.A. examination, shall be considered as having passed the first B.Sc. examination.—The attention of such candidates is directed to the fact that, under the new regulations for the B.Sc. degree, this degree may be obtained by passing at the second B.Sc. examination in the three biological subjects only.

(c) Candidates for this and other botanical examinations are expected to bring with them a pocket-lens or simple microscope of two powers, and also a sharp penknife.

III.—PROFESSIONAL EDUCATION.

the courses necessary for qualification.

The object of medical education may be said, though inaccurately, to be twofold. The final end is, of course, to enable a man to practise his profession with advantage to himself and safety to the public. But the only criterion or test of this capability available to the public is the *testamur*, certificate, or diploma of some responsible body, which is accepted and registered by the General Medical Council. These bodies are somewhat numerous, and their requirements very diverse; consequently, the young student must take care, provided he wants a given diploma, to make his course of instruction correspond with that required by the body whence he desires his qualification. Moreover, it often happens that after a time a man may, for certain reasons, desire the diploma of another body besides the one he originally contemplated ; and

for this reason alone, were it for no other, a wide curriculum is most desirable, and we shall try to indicate the rules of the various bodies as briefly and clearly as possible.

(A.) REGULATIONS OF BODIES GRANTING THE DEGREE OF DOCTOR OF MEDICINE.

1. UNIVERSITY OF OXFORD.

DEGREES IN MEDICINE.

Every student in Medicine is required to have passed all the examinations for the degree of B.A., and to reckon the time of his medical study from the final examination for Arts.

1. Candidates for the degree of B.M. are required to pass two examinations, each of which is held yearly in full Michaelmas Term, usually at the end of November, due notice being given, in the usual manner, by the Regius Professor of Medicine.

The subjects of the first examination are Human Anatomy and Physiology, Comparative Anatomy and Physiology to a certain extent, and those parts of Mechanical Philosophy, Botany, and Chemistry which illustrate Medicine. The subjects of the second examination are the Theory and Practice of Medicine (including Diseases of Women and Children), the Materia Medica, Therapeutics, Pathology, the Principles of Surgery and Midwifery, Medical Jurisprudence, and General Hygiene. Every candidate at this second examination is to be examined in two of the ancient authors, Hippocrates, Aretæus, Galen, and Celsus; or in one of those four, and in some more modern author approved by the Regius Professor, as Morgagni, Sydenham, or Boerhaave.

Before a candidate is admitted to the first of these two examinations, he must have spent two years in professional studies after having passed the examinations required for the degree of B.A., unless he was placed in the first or second class in the School of Natural Science, in which case, if he received from the public examiners a special certificate of his attainments in Mechanical Philosophy, Chemistry, or Botany, he may be admitted to this examination at once, and need not then be examined again in any science specified in such certificate.

Before a candidate is admitted to the second examination, he must have completed sixteen terms from the date of the same *testamur*, and two years from the date of his *testamur* in the first medical examination, and must deliver to the Regius Professor satisfactory certificates of his attendance at some first-class hospital.

An examination in Preventive Medicine is held annually. Candidates must have taken the degree of B.M. at Oxford.

No one from another University can be incorporated as a graduate in Medicine without passing these two examinations, as well as having previously passed all examinations for the B.A. degree at his own University.

2. A Bachelor of Medicine wishing to proceed to the degree of Doctor is required to read publicly within the precincts of the Schools, in the presence of the Regius Professor, a dissertation composed by himself on some medical subject approved by the Professor, and to deliver to him a copy of it.

2. UNIVERSITY OF CAMBRIDGE.

REGULATIONS FOR DEGREES IN MEDICINE AND SURGERY.

Degree of Bachelor of Medicine.—Before a student can become a Bachelor of Medicine he must have resided nine terms (three academical years) in the University, and have graduated in Arts, or have passed the Previous Examination.

Five years of medical study are required, unless the student has graduated with honours as Bachelor of Arts, in which case four years of medical study are deemed sufficient.

There are three examinations for M.B.

The first examination is in—1. Chemistry and other branches of Physics; 2. Botany. Before presenting himself for it the student must have attended lectures on Chemistry, including manipulations, and on Botany.

The second examination is in—1. Elements of Comparative Anatomy; 2. Human Anatomy and Physiology; 3. Pharmacy. The student must have completed two years of medical study; and must also produce certificates of attendance on lectures on the Elements of Comparative Anatomy, Human Anatomy and Physiology, and Pharmacy; and of one year's hospital practice, and of one season's dissections.

The third examination is in—1. Pathology and Practice of Physic; 2. Clinical Medicine; 3. Medical Jurisprudence; 4. Principles of Surgery; and 5. Midwifery. The candidate must have completed the course of medical study, and must produce certificates of attendance on one course of lectures on each of the following subjects:—Pathological Anatomy, Principles and Practice of Physic, Clinical Medicine, Clinical Surgery, Medical Jurisprudence, and Midwifery, with attendance on ten cases of Midwifery; and of having attended the medical practice of a hospital during three years, and the surgical practice during one year; and of having been clinical clerk for six months at a recognised hospital, or of having had special charge of hospital, dispensary, or union patients under a qualified medical practitioner; and of having acquired proficiency in Vaccination.

After the third examination an Act has to be kept, which consists in reading an original thesis, followed by a *viva voce* examination on the subject of the thesis, as well as on other subjects of the Faculty.

The Degree of Doctor of Medicine may be taken three years after M.B. An Act has to be kept, with *viva voce* examinations and an essay has to be written extempore. A Master of Arts of four years' standing can proceed direct to M.D. provided he produces the same certificates and passes the same examinations as for M.B.

Degree of Master in Surgery.—The candidate must have passed all the examinations for the degree of M.B., and must produce certificates of having attended a second course of lectures on Human Anatomy, one course of lectures on the Principles and Practice of Surgery, one year's clinical surgical lectures, a second season of dissections, three years' surgical practice of a recognised hospital, and of having been House-Surgeon or Dresser for six months. The subjects of the examination are—1. Surgical Anatomy; 2. Pathology and the Principles and Practice of Surgery; 3. Clinical Surgery.

All the examinations for medical degrees take place in the Michaelmas and Easter Terms.

3. UNIVERSITY OF LONDON.

This University grants degrees both in Medicine and Surgery, and certificates in subjects relating to Public Health. Those available for young students are the Bachelorships of Medicine and Surgery.

Every candidate for the degree of Bachelor of Medicine shall be required—

1. To have passed the matriculation examination in this University (unless he has taken a degree in Arts in one of the Universities of Sydney, Melbourne, Calcutta, or Madras, and Latin was one of the subjects in which he passed).

2. To have passed the preliminary scientific examination.—See page 294. (Candidates for the degree of M.B. are strongly recommended by the Senate to pass the preliminary scientific examination before commencing their regular medical studies.)

3. To have been engaged in his professional studies during four years subsequently to matriculation or graduation in Arts, at one or more of the medical institutions or schools recognised by this University; one year, at least, of the four to have been spent in one or more of the recognised institutions or schools in the United Kingdom.

4. To pass two examinations in Medicine.

FIRST M.B. EXAMINATION.

No candidate shall be admitted to the first M.B. examination unless he have passed the preliminary scientific examination at least one year previously, and have produced certificates to the following effect:—

1. Of having completed his nineteenth year.

2. Of having, subsequently to having passed the matriculation examination, or taken a degree in Arts in one of the before-named universities, been a student during two years at one or more of the medical institutions or schools recognised by this University; and of having attended a course of lectures on each of three of the subjects in the following list:—Descriptive and Surgical Anatomy, Histology and Physiology, Pathological Anatomy, Materia Medica and Pharmacy, General Pathology, General Therapeutics, Forensic Medicine, Hygiene, Obstetric Medicine and Diseases peculiar to Women and Infants, Surgery, Medicine.

3. Of having, subsequently to having passed the matriculation examination or taken a degree in Arts, dissected during two winter sessions.

4. Of having, subsequently to having passed the matriculation examination or taken a degree in Arts, attended a course of Practical Chemistry, comprehending practical exercises in conducting the more important processes of general and pharmaceutical Chemistry; in applying tests for discovering the adulteration of articles of the Materia Medica, and the presence and nature of poisons; and in the examination of mineral waters, animal secretions, urinary deposits, calculi, etc.

5. Of having attended to Practical Pharmacy, and of having acquired a practical knowledge of the preparation of medicines.

The fee for this examination shall be £5.

Candidates shall be examined in the following subjects:—
Anatomy, Histology and Physiology,(a) Materia Medica and Pharmaceutical Chemistry, Organic Chemistry.

Law of substitution; compound radicals; homologous series; principles of ultimate analysis. The chemical history of the cyanogen group; cyanogen; hydrocyanic acid; cyanic acid and urea; sulphocyanic acid; uric acid. Amylaceous and saccharine substances; fermentation; alcohol, wine, beer, bread, etc. Homologues of alcohol; ethers, simple and mixed; oxidation of alcohol; aldehyd and acetic acid and their homologues. Glycol and oxalic acid and their homologues. Glycerine; fatty and oily bodies; saponification. Principal vegetable acids. Ammonia and its derivatives; ammonium and ammoniacal salts. The chief natural organic bases. The chief constituents of the vegetable organism; cellulose; vegetable fibrin; albumin, casein, glutin, etc. The chief constituents of the animal organism; animal fibrin, albumin, casein, gelatin; blood, milk, bile, urine, etc. Decay, putrefaction; destructive distillation. The chemical principles of the processes of nutrition and respiration in plants and animals.

SECOND M.B. EXAMINATION.

No candidate shall be admitted to the second M.B. examination within two academical years of the time of his passing the first examination, nor unless he have produced certificates to the following effect:—

1. Of having passed the first M.B. examination.

2. Of having, subsequently to having passed the first M.B. examination, attended a course of lectures on each of two of the subjects comprehended in the foregoing list, and for which the candidate had not presented certificates at the first M.B. examination.

3. Of having conducted at least twenty labours. (Certificates on this subject will be received from any legally qualified practitioner in medicine.)

4. Of having attended the surgical practice of a recognised hospital or hospitals during two years, with clinical instruction and lectures on Clinical Surgery.

5. Of having attended the medical practice of a recognised hospital or hospitals during two years, with clinical instruction on and lectures on Clinical Medicine. N.B.—The student's attendance on the surgical and on the medical hospital practice may commence at any date after his passing the preliminary scientific examination, and may be comprised either within the same year or within different years; provided that in every case his attendance on surgical and medical hospital practice be continued for at least eighteen months subsequently to his passing the first M.B. examination. Attendance during three months in the wards of a lunatic asylum recognised by the University, with clinical instruction, may be substituted for a like period of attendance on medical hospital practice.(b)

6. Of having, after having attended surgical and medical hospital practice for at least twelve months subsequently to passing the first M.B. examination, attended to Practical Medicine, Surgery, or Obstetric Medicine, with special charge of patients, in a hospital, infirmary, dispensary, or parochial union, during six months, such attendance not to be counted as part of either the surgical or the medical hospital practical prescribed in Clauses 4 and 5.

7. Of having acquired proficiency in vaccination. (Certificates on this subject will be received only from the authorised vaccinators appointed by the Privy Council.)

The candidate shall also produce a certificate of moral character from a teacher in the last school or institution at which he has studied, as far as the teacher's opportunity of knowledge has extended.

The fee for this examination shall be £5.

Candidates shall be examined in the following subjects:—
General Pathology, General Therapeutics and Hygiene; Surgery, Medicine, Obstetric Medicine, Forensic Medicine.

The examinations shall include questions in Surgical and Medical Anatomy, Pathological Anatomy, and Pathological Chemistry.

BACHELOR OF SURGERY.

No candidate shall be admitted to the examination for the degree of Bachelor of Surgery unless he have produced certificates to the following effect:—

1. Of having passed the second examination for the degree of Bachelor of Medicine in this University.

2. Of having attended a course of instruction in Operative Surgery, and of having operated on the dead subject.

The fee for this examination shall be £5.

Candidates are examined in Surgical Anatomy and surgical operations, by printed papers; examination, and report on cases, of surgical patients; performance of surgical operations upon the dead subject; application of surgical apparatus; *vivâ voce* interrogation.

MASTER IN SURGERY.

No candidate shall be admitted to this examination unless he have produced certificates to the following effect:—

1. Of having taken the degree of Bachelor of Surgery(c) in this University.

2. Of having attended, subsequently to having taken the degree of Bachelor of Surgery in this University—*a*. To Clinical or Practical Surgery during two years in a hospital or medical institution recognised by this University. *b*. Or to Clinical or Practical Surgery during one year in a hospital or medical institution recognised by this University; and of having been engaged during three years in the practice of his profession. *c*. Or of having been engaged during five years in the practice of his profession, either before or after taking the degree of Bachelor of Surgery in this University. (One year of attendance on Clinical or Practical Surgery, or two years of practice, will be dispensed with in the case of those candidates who at the B.S. examination have been placed in the first division.)

3. Of moral character, signed by two persons of respectability.

The fee for the degree of Master in Surgery shall be £5.

Candidates shall be examined in the following subjects:—
Logic and Psychology.

Names, notions, and propositions. Syllogism. Induction and subsidiary operations. The senses. The intellect. The will, including the theory of moral obligation.

Any candidate who has taken the degree either of B.A., B.Sc. (if including Branch IX.), or M.D. in this University, is exempted from this part of the examination; and any candidate who has passed the second M.B. examination may at any subsequent M.S. examination present himself for Logic and Psychology alone, if he so prefer; thereby gaining exemption, if he should pass, from examination in that subject when he presents himself to be examined for the degree of Master in Surgery.

DOCTOR OF MEDICINE.

No candidate shall be admitted to this examination unless he have produced certificates to the following effect:—

1. Of having passed the second examination for the degree of Bachelor of Medicine in this University.

2. Of having attended, subsequently to having taken the degree of Bachelor of Medicine in this University—*a*. To Clinical or Practical Medicine during two years in a hospital or medical institution recognised by this University. *b*. Or to Clinical or Practical Medicine during one year in a hospital or medical institution recognised by this University; and of having been engaged during three years in the practice of his profession. *c*. Or of having been engaged during five years in the practice of his profession, either before or after taking the degree of Bachelor of Medicine in this University. (One year of attendance on Clinical or Practical Medicine, or two years of practice, will be dispensed with in the case of those candidates who at the second M.B. examination have been placed in the first division.)

3. Of moral character, signed by two persons of respectability.

(a) Any candidate shall be allowed, if he so prefer, to postpone his examination in Histology and Physiology from the first M.B. examination at which he presents himself for examination in the remaining subjects until the first M.B. examination in the next or any subsequent year; but such candidate shall not be admitted to compete for honours on either occasion; and he shall not be admitted as a candidate at the second M.B. examination until after the lapse of at least twelve months from the time of his passing the examination in Histology and Physiology.

(b) The Senate regard it as highly desirable that candidates for the degree of M.B. should practically acquaint themselves with the different forms of insanity by attendance in a lunatic asylum.

(c) Candidates who have obtained the degree of Bachelor of Medicine previously to 1866 will be admitted to the examination for the degree of Master in Surgery without having taken the degree of Bachelor in Surgery; and in the case of such candidates, the attendance on surgical practice may commence from the date of the M.B. degree.

The fee for the degree of Doctor of Medicine shall be £5.(d)

Candidates shall be examined in the following subjects:—

Logic and Psychology.

Names, notions, and propositions. Syllogism. Induction and subsidiary operations. The senses. The intellect. The will, including the theory of moral obligation.

Any candidate who has taken the degree either of B.A., B.Sc. (if including Branch IX.), or M.S. in this University, is exempted from this part of the examination; and any candidate who has passed the second M.B. examination may at any subsequent M.D. examination present himself for Logic and Psychology alone, if he so prefer; thereby gaining exemption, if he should pass, from examination in that subject when he presents himself to be examined for the degree of Doctor of Medicine.

4. UNIVERSITY OF DURHAM.

For Registration.—Candidates for registration as students in Medicine must have passed the Medical Registration examination appointed by the University, or such other examination as the Warden and Senate may deem equivalent thereto.

Any Arts examination recognised by the General Medical Council is accepted by the University.

For Licences and Degrees in Medicine and Surgery.—Two licences and three medical degrees are conferred by the University of Durham, viz., licences in Medicine and Surgery, and the degrees of Bachelor of Medicine, Master in Surgery, and Doctor of Medicine.

Regulations for the Licence in Medicine.—1. The candidate must produce certificates of registration as a student in Medicine, of good moral conduct, of having attained the age of twenty-one years, and such certificates of attendance on lectures and hospital practice as the Warden and Senate shall require.

2. The candidate must have been engaged in medical and surgical study for four years after registration as a student in Medicine. One of the four years must be spent at the University of Durham College of Medicine, Newcastle-on-Tyne; the other three may be spent either at Newcastle-on-Tyne, or at one or more of the schools recognised by the licensing bodies named in Schedule (A) of the Medical Act, 1858.

There are two professional examinations—the first is held at the end of the second winter session; the final at the end of the fourth year of medical study.

Regulations for the Licence in Surgery.—The regulations are the same as those for the licence in Medicine, except that the final examination is directed more particularly to Surgery, and may or may not be passed at the same time as the final examination for the licence in Medicine.

Regulations for the Degree of Bachelor of Medicine.—1. The candidate must produce certificates of registration as a student in Medicine, of good moral conduct, of having attained the age of twenty-one years, and such certificates of attendance on lectures and hospital practice as the Warden and Senate shall require.

2. The candidate must have obtained a degree in Arts of the University of Durham, or must have passed the Arts examination for graduation in Medicine of the University, or must produce one or other of the following certificates:—(*a.*) A certificate of graduation in Arts at any of the following Universities, viz.:—Oxford, Cambridge, Durham, London, Queen's University (in Ireland), Edinburgh, Glasgow, St. Andrews, Aberdeen, Calcutta, Madras, Bombay, McGill College (Montreal), and Queen's College (Kingston). (*b.*) A certificate of having passed the preliminary or extra-professional examination for graduation in Medicine of any of the following Universities, viz.:—London, Edinburgh, Glasgow, St. Andrews, Aberdeen, Queen's University (Ireland); the Arts examination, qualifying for the Membership of the Royal College of Physicians of London; the Arts examination, qualifying for the Fellowship of the Royal College of Surgeons of England.

3. The candidate must have been engaged in medical and surgical study for four years after registration as a student in Medicine. One of the four years must be spent at the University of Durham College of Medicine, Newcastle-on-Tyne; the other three may be spent either at Newcastle-on-Tyne, or at one or more of the schools recognised by the licensing bodies named in Schedule (A) of the Medical Act, 1858.

There are two professional examinations. The first is held at the end of the second winter session, the final at the end of the fourth year of medical study. The subjects are the same as for the licence in Medicine, but the examinations are more stringent.

Regulations for the Degree of Master in Surgery.—The regulations are the same as for the degree of Bachelor of Medicine, except that the final examination is directed more particularly to Surgery.

Regulations for the Degree of Doctor of Medicine.—1. The candidate must have obtained the degree of Bachelor of Medicine, must be of the age of twenty-four years, and must have been engaged, subsequently to his having received the degree of Bachelor of Medicine, for at least two years in attendance on a hospital, or in the Military or Naval Services, or in medical and surgical practice. 2. The candidate must write an essay, based on original research or observation, on some medical subject, selected by himself, and approved of by the Professor of Medicine, and must pass an examination thereon, including the collateral medical sciences involved in the subject of the essay.

EXAMINATIONS.

Registration Examinations.—Registration examinations will be held at Durham, commencing September 17, 1878, and April 15 and September 16, 1879. Application must be made, at least one month before the day of examination, to Arthur Beanlands, Esq., Durham, to whom candidates must, at the same time, send the examination fee of £1, and certificates of age and character, and specify the optional subject in which they wish to be examined. The following are the subjects for the registration examinations:—Necessary Subjects—The history contained in the Acts of the Apostles; English Grammar and Composition; Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations; Euclid, Books I. and II.; Latin Grammar, with—*in September*, 1878 and 1879, Virgil, Æneid, Lib. I. and II.; *in April*, 1879, Cæsar, De Bello Gallico, Lib. I. and II. In addition to the above, all candidates are required to satisfy the examiners in one (at least) of the following optional subjects:—Greek Grammar, with Xenophon's Memorabilia, Books I. and II.; French Grammar, with Voltaire's Charles XII.; German Grammar, with Goethe's "Dichtung und Wahrheit," Book I.; elementary questions in Mechanics, Hydrostatics, and Pneumatics. In addition to the foregoing examinations the Warden has authority, in case of urgency, to appoint an extraordinary registration examination at any time. The fee for such examination is £2.

Professional Examinations.—The first professional examination for licences and degrees in Medicine and Surgery is held at the end of the second winter session. The following are the subjects of the examination:—Anatomy, Physiology, Chemistry, Botany. The next examination will be held in April, 1878. The final professional examination for licences and degrees in Medicine and Surgery is held at the end of the fourth year of medical study. The following are the subjects of the examination:—Materia Medica, Therapeutics, Medical Jurisprudence, Pathological Anatomy, Midwifery, Diseases of Women and Children, Medicine, and Surgery. The next examination will commence on June 10, 1878.

Examination for the Degree of Doctor of Medicine.—The candidate must write an essay, based on original research or observation, on some medical subject, selected by himself, and approved of by the Professor of Medicine, and must pass an examination thereon, including the collateral medical sciences involved in the subject of the essay. The examinations for licences and degrees in Medicine and Surgery are conducted in Newcastle—1. By printed papers of questions. 2. Practically in Anatomy, Physiology, Chemistry, Materia Medica, Pathology, Surgery, Medicine, Midwifery, and Medical Jurisprudence. 3. *Vivâ voce* on all the subjects.

Every candidate wishing to present himself for any of the above examinations must give at least fourteen days' notice to the Registrar of the College, and must, at the same time, send the fee (£1) and the necessary certificates.

Examination for the Degree of Doctor of Medicine, for Medical Practitioners of Fifteen Years' Standing, without Residence.—The Warden and Senate of the University of Durham, with the view of affording to practitioners of fifteen years' standing an opportunity of obtaining the degree of Doctor of

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(d) This fee will continue to be £10 to all such as, having taken their M.B. degree under the former regulations, shall not have paid the fee of £5 at the Preliminary Scientific Examination.

Medicine, have instituted a special examination, under the following regulations :—

1. That the candidate shall be registered by the General Council of Medical Education and Registration of the United Kingdom.

2. That the candidate shall have been in the active practice of his profession for fifteen years.

3. That the candidate shall not be under forty years of age.

4. That the candidate shall produce a certificate of moral character from three registered members of the medical profession.

5. That if the candidate shall not have passed, previous to his professional examination (in virtue of which he has been placed on the Register), an examination in Arts, he shall be required to pass an examination in Classics and Mathematics. The subjects for this examination shall be as follows:—*a*. An English essay. (A short essay on some subject to be specified at the time of the examination.) *b*. Arithmetic. *c*. Euclid—Books I. and II. *d*. Latin—Translation from Virgil, Æneid, Lib. I. and II., together with grammatical questions. *e*. One of the following subjects:—(i.) Greek—Translation from Xenophon's Memorabilia, Books I. and II., with grammatical questions. (ii.) French—Translation from Voltaire's "Charles XII.," with grammatical questions. (iii.) German—Translation from Goethe's "Dichtung und Wahrheit," Book I., with grammatical questions. (iv.) Elements of Mechanics, Pneumatics, and Hydrostatics. (v.) Some treatise on Moral, Political, or Metaphysical Philosophy.

6. That if the candidate shall have passed, previous to his professional examination (in virtue of which he has been placed on the Register), a preliminary examination, he shall be required to translate into English passages in any of the parts specified below of any one of the Latin authors mentioned—Cæsar, "De Bello Gallico," first three books; Virgil, first three books of the Æneid; Celsus, first three books. The candidate shall have an opportunity of showing proficiency in Greek, Moral Philosophy, or some modern language.

7. That the candidate shall be required to pass an examination in the following subjects:—*a*. Principles and Practice of Medicine, including Psychological Medicine and Hygiene. *b*. Principles and Practice of Surgery. *c*. Midwifery, and Diseases peculiar to Women and Children. *d*. Pathology, medical and surgical. *e*. Anatomy, medical and surgical. *f*. Medical Jurisprudence and Toxicology. *g*. Therapeutics.

8. That the fee shall be £52 10s., to be forwarded to the Registrar of the University of Durham College of Medicine, Newcastle-on-Tyne, when the candidate enters his name for the examination.

9. That if the candidate shall fail to satisfy the examiners the sum of £21 shall be retained; but that if he shall again offer himself for the examination the sum of £42 only shall then be required.

An examination, in accordance with the above regulations, will be held on June 16, 17, 18, and 19, 1879, at the University of Durham College of Medicine, Newcastle-on- Tyne.

The following is the programme of the examination :—

First Day.—Examination in Arts (nine to twelve o'clock).

Second Day.—Morning, four hours (nine to one clock).—Paper of Questions : Medicine, 3 questions; Insanity, 1; Hygiene, 1; Pathology (medical), 1; Anatomy (medical), 1; Therapeutics, 1. Afternoon, three hours (two to five o'clock) : Clinical examination of cases of disease (medical).

Third Day.—Morning, four hours (nine to one o'clock).—Paper of Questions: Surgery, 2 questions; Midwifery, 2; Pathology (surgical), 1; Anatomy (surgical), 1; Medical Jurisprudence, 1; Toxicology, 1. Afternoon, three hours (two to five o'clock): Clinical examination of cases of surgical disease and injury.

Fourth Day.—*Vivâ voce* interrogation, two hours.

Gentlemen intending to offer themselves as candidates are requested to forward their names to Dr. Luke Armstrong, Registrar of the University of Durham College of Medicine, Newcastle-on-Tyne, on or before May 1, 1879, together with the fee and the before-mentioned certificates.

5. UNIVERSITY OF ST. ANDREWS.

ORDINARY DEGREES.

The degrees in Medicine granted by the University of St. Andrews are those of Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.).

The preliminary examination and professional curriculum and examinations for these degrees are generally the same as those of the Universities of Edinburgh, Aberdeen, and Glasgow. The following regulations, however, for candidates for the degrees of Bachelor of Medicine and Master in Surgery present some difference :—

No one shall be received as a candidate for the degree of Bachelor of Medicine or Master in Surgery unless two years at least of his four years of medical and surgical study shall have been in one or more of the following universities and colleges, viz. :—The University of St. Andrews; the University of Glasgow; the University of Aberdeen; the University of Edinburgh; the University of Oxford; the University of Cambridge; Trinity College, Dublin; Queen's College, Belfast; Queen's College, Cork; and Queen's College, Galway.

The remaining years of medical and surgical study may be either in one or more of the universities and colleges above specified, or in the hospital schools of London, or in the School of the College of Surgeons in Dublin, or under such private teachers of medicine as may from time to time receive recognition from the University Court.

Attendance on the lectures of any private teacher in Edinburgh, Glasgow, or Aberdeen shall not be reckoned for graduation in St. Andrews if the fee for such lectures be of less amount than is charged for the like course of lectures in the University of Edinburgh, of Glasgow, or of Aberdeen, according as the teacher lectures in Edinburgh, Glasgow, or Aberbeen.

Fees for Graduation.—For the degree of Bachelor of Medicine £5 5s. in respect of each of the three divisions of the examination on professional subjects; and if the candidate desires to be admitted to the degree of Bachelor of Medicine only, he shall not, on admission thereto, be required to pay any further fee in addition to the £15 15s. so paid by him; but if he desires to be admitted to the degree of Master in Surgery also, he shall, on being admitted to such degree pay a further fee of £5 5s.; and every candidate for the degree of Doctor of Medicine, who has previously obtained the degree of Bachelor of Medicine, shall pay, in addition to the fees paid by him as a candidate for the degree of Bachelor of Medicine, a fee of £5 5s., exclusive of any stamp duty which may for the time be exigible.

SPECIAL DEGREES.

The degree of Doctor of Medicine may be conferred by the University of St. Andrews on any registered medical practitioner above the age of forty years, whose professional position and experience are such as, in the estimation of the University, entitle him to that degree, and who shall, on examination, satisfy the medical examiners of the sufficiency of his professional knowledge; provided always, that degrees shall not be conferred under this section to a greater number than ten in any one year.

Regulations as to Special Degrees.—As regards registered medical practitioners above the age of forty years, the examinations are held in the United College of St. Salvator and St. Leonard, annually, in April. The graduation fee is £52 10s. Candidates must lodge with the Dean of the Medical Faculty the following certificates, along with application for admission to examination :—1. A certificate of age, being a baptismal certificate, or an affidavit of age. 2. Holograph certificates from at least three medical men of acknowledged reputation in the profession, or in the medical schools, recommending the candidate to the Senatus for the degree of M.D., and testifying to his professional position and skill. As only ten can graduate in each year, candidates are selected whose service and certificates seem, to the Medical Faculty, to present the highest professional claims; but where these seem equal, preference is given to priority of application and to age. 3. Candidates, when notified for examination, will remit a portion of the graduation fee—viz., £10 10s. This sum shall be forfeited should the candidate fail to appear, or to graduate, at the time appointed. 4. A satisfactory examination, written and *vivâ voce*, must be passed in the following departments :—(1) Materia Medica and General Therapeutics, (2) Medical Jurisprudence, (3) Practice of Medicine and Pathology, (4) Surgery, (5) Midwifery and Diseases of Women and Children.

6. UNIVERSITY OF EDINBURGH.

This University grants degrees in Medicine, Surgery, and Science (including Health).

No one is admitted to the degree of Bachelor of Medicine

or Master in Surgery who has not been engaged in medical and surgical study for four years—the medical session of each year, or *annus medicus*, being constituted by at least two courses of not less than one hundred lectures each, or by one such course, and two courses of not less than fifty lectures each; with the exception of the Clinical Courses, in which lectures are to be given at least twice a week during the prescribed periods.

Every candidate for the degrees of M.B. and C.M. must give sufficient evidence by certificates—

1. That he has studied each of the following departments of medical science—viz., Anatomy, Chemistry, Materia Medica, Institutes of Medicine or Physiology, Practice of Medicine, Surgery, Midwifery and the Diseases peculiar to Women and Children (two courses of Midwifery of three months each being reckoned equivalent to a six months' course, provided different departments of Obstetric Medicine be taught in each of the courses), General Pathology (or, in schools where there is no such course, a three months' course of lectures on Morbid Anatomy, together with a supplemental course of Practice of Medicine or Clinical Medicine), during courses including not less than one hundred lectures; Practical Anatomy, a course of the same duration as those of not less than one hundred lectures above described; Practical Chemistry, three months; Practical Midwifery, three months at a midwifery hospital, or a certificate of attendance on six cases from a registered medical practitioner; Clinical Medicine, Clinical Surgery, courses of the same duration as those of not less than one hundred lectures above prescribed, or two courses of three months' lectures being given at least twice a week; Medical Jurisprudence, Botany, Natural History (including Zoology), during courses including not less than fifty lectures.
2. That he has attended for at least two years the medical and surgical practice of a general hospital which accommodates not fewer than eighty patients, and possesses a distinct staff of physicians and surgeons.
3. That he has been engaged, for at least six months, by apprenticeship or otherwise, in compounding and dispensing drugs at the laboratory of a hospital, dispensary, member of a surgical college or faculty, licentiate of the London or Dublin Society of Apothecaries, or a member of the Pharmaceutical Society of Great Britain.
4. That he has attended for at least six months, by apprenticeship or otherwise, the out-practice of a hospital, or the practice of a dispensary, physician, surgeon, or member of the London or Dublin Society of Apothecaries.

The studies of candidates for the degrees of Bachelor of Medicine and Master in Surgery are subject to the following regulations:—

1. One of the four years of medical and surgical study required must be in the University of Edinburgh.
2. Another of such four years of medical and surgical study must be either in the University of Edinburgh, or in some other university entitled to give the degree of Doctor of Medicine.
3. Attendance during at least six winter months on the medical or surgical practice of a general hospital which accommodates at least eighty patients, and, during the same period, on a course of Practical Anatomy, may be reckoned as one of such four years, and to that extent shall be held equivalent to one year's attendance on courses of lectures as above prescribed.
4. One year's attendance on the lectures of teachers of Medicine in the hospital schools of London, or in the school of the College of Surgeons in Dublin, or of such teachers of Medicine in Edinburgh or elsewhere as shall from time to time be recognised by the University Court, may be reckoned as one of such four years, and to that extent shall be held as attendance on courses of lectures as above prescribed.
5. Candidates may, to the extent of four of the departments of medical study required, attend in such year or years of their medical and surgical studies, as may be most convenient to them, the lectures of the extra-academical teachers of Medicine specified in the foregoing Sub-section 4.
6. All candidates not students of the University availing themselves of the permission to attend the lectures of extra-academical teachers in Edinburgh must, at the commencement of each year of such attendance, enrol their names in a book to be kept by the University for that purpose, paying a fee of the same amount as the matriculation fee paid by students of the University, and having, in respect of such payment, a right to the use of the library of the University.

Every candidate must deliver, before March 31 of the year in which he proposes to graduate, to the Dean of the Faculty of Medicine—

1. A declaration, in his own handwriting, that he has completed his twenty-first year (or that he will have done so on or before the day of graduation), and that he will not be, on the day of graduation, under articles of apprenticeship to any surgeon or other master.
2. A statement of his studies, as well in Literature and Philosophy as in Medicine, accompanied with proper certificates.

Each candidate is examined, both in writing and *vivâ voce*—first, on Chemistry, Botany, and Natural History; secondly, on Anatomy, Institutes of Medicine, Materia Medica (including Practical Pharmacy), and Pathology; thirdly, on Surgery, Practice of Medicine, Midwifery, and Medical Jurisprudence; fourthly, clinically on Medicine and on Surgery in a Hospital. The examinations on Anatomy, Chemistry, Institutes of Medicine, Botany, Natural History, Materia Medica, and Pathology are conducted, as far as possible, by demonstrations of objects placed before the candidates.

The degree of Doctor of Medicine may be conferred on any candidate who has obtained the degree of Bachelor of Medicine, and is of the age of twenty-four years, and produces a certificate of having been engaged, subsequently to his having received the degree of Bachelor of Medicine, for at least two years in attendance on a hospital, or in the Military or Naval Medical Services, or in medical and surgical practice: provided always that the degree of Doctor of Medicine shall not be conferred on any person, unless he be a graduate of Arts in one of the universities of England, Scotland, or Ireland, or of such other universities as are above specified, or unless he shall, before or at the time of his obtaining the degree of Bachelor of Medicine, or thereafter, have passed a satisfactory examination in Greek, and in Logic or Moral Philosophy, and in one at least of the following subjects—namely, French, German, higher Mathematics, and Natural Philosophy; and provided also that the candidate for the degree of Doctor of Medicine shall submit to the Medical Faculty a thesis, certified by him to have been composed by himself, and which shall be approved by the Faculty, on any branch of knowledge comprised in the professional examinations for the degree of Bachelor of Medicine, which he may have made a subject of study after having received that degree. The candidate must lodge his thesis with the Dean on or before April 30 of the year in which he proposes to graduate. No thesis will be approved by the Medical Faculty which does not contain either the results of original observations in Practical Medicine, Surgery, Midwifery, or some of the sciences embraced in the curriculum for the Bachelor's degree; or else a full digest and critical exposition of the opinions and researches of others on the subject selected by the candidate, accompanied by precise references to the publications quoted, so that due verification may be facilitated.

Candidates, settled for a period of years in foreign parts, who have complied with all the regulations for the degree of M.D. (under the new statutes), but who cannot appear personally to receive the degree, may, on satisfying the Senatus to that effect, by production of sufficient official testimonials, have the degree conferred on them in absence.

NOTICES TO CANDIDATES FOR GRADUATION IN MEDICINE.

1. An *annus medicus* is constituted by at least two winter courses of one hundred lectures each, or by one such course, and two summer courses of fifty lectures each, all being duly certified.
2. Four *anni medici* are required for graduates in Medicine. Two at least of these years must be passed at a university which grants degrees in Medicine, one of the two being at Edinburgh.
3. One or two of the *anni medici* may be taken at qualified extra-academical schools, in the manner stated in the succeeding paragraph:
4. In University College, in King's College, in the hospital schools of London, in the extra-academical School of Edinburgh, in the School of the College of Surgeons of Dublin, and in certain medical schools where at least two lecturers have been qualified by the University Court, a candidate may make *two anni medici*—one of which must be constituted by hospital attendance and Practical Anatomy, and the other by at least two courses of one hundred lectures, or one such course, and two courses of fifty lectures. The classes at these schools only qualify to the extent of four, and one of the four must be Practical Anatomy.
5. In provincial schools where there are no lecturers qualified by the University Court, a candidate can make *one annus medicus only*, and this is constituted by attendance on a qualified hospital, along with a course of Practical Anatomy.

The Fees are—For the degree of M.B., three Examinations, £5 5s. each, £15 15s.; for the degree of C.M., £5 5s. additional; for the degree of M.D., £5 5s. additional to that for M.B., exclusive of £10 Government stamp.

The fees for C.M. and M.D. are required to be paid on or before July 15.

Note.—Total fees and stamp for graduating as M.D. only, by regulations, for students commencing before February, 1861, £25.

N.B.—The above fees include all charges for the diplomas.

RIGHTS OF THE MEDICAL GRADUATES OF SCOTLAND ACCORDING TO THE MEDICAL ACT.

Before the passing of the Medical Act of 1858, the degree of Doctor of Medicine granted by the universities of Scotland (as the possessor underwent a complete education and examination in all departments of Physic and Surgery), qualified the graduate to practise every branch of the medical profession throughout Scotland. One principal purpose of the Medical Act was to extend local rights of practice over the whole of her Majesty's dominions. But according to the hitherto accepted reading of a dubious clause in the Act, no one can practise both Medicine and Surgery without possessing two distinct diplomas—one for Medicine, and another for Surgery. The universities were thus compelled, in justice to their graduates, to give them the additional title of Master in Surgery, not as implying any additional study or examination, but as declaring more distinctly their qualifications, and to permit registration as regularly qualified practitioners in the whole field of their professional education. The Secretary for War some time ago issued an order that candidates for admission into the Medical Service of the Army should obtain their qualifications in Physic and Surgery from two different sources; the effect of which would have been to prevent any one university from qualifying for this purpose. The Scottish Universities' Commissioners, recognising the serious evils of

such a system, followed up a remonstrance which had been offered on the part of the University of Edinburgh, and obtained the rescinding of all restrictions in the source of qualification. Consequently, any single university in Scotland can now qualify candidates for the military service as well as for any other public medical service in the country.

The Medical Faculty have resolved that the written and oral examinations on Chemistry, Botany, and Natural History, in October, 1878, and April, 1879, shall be restricted in the following manner:—

1. *Chemistry.*—Classification of elements; general laws of chemical combination and action, as illustrated in the simpler compounds of the more commonly occurring elements; symbolic notation. Preparation and properties of the non-metallic elements and their chief compounds; manufacture of sulphuric, nitric, and hydrochloric acids and ammonia. Classification and general properties of acids, bases, and salts. Manufacture and properties of soda, potash, nitre, gunpowder, lime, mortars, cements, earthenware, porcelain, and glass. Metallurgical operations in general; preparation of iron, zinc, copper, lead, tin, mercury, and silver, from their ores; alloys; preparation, properties, and composition of cast-iron, wrought-iron, and steel; principal salts of potassium, sodium, ammonium, barium, strontium, calcium, magnesium, zinc, aluminium, chromium, manganese, iron, cobalt, nickel, copper, lead, silver, gold, mercury, platinum, tin, bismuth, antimony, arsenic. Classification of organic compounds; alcohol, ethers, acetic acid, tartaric acid, citric acid, wood, sugars, starch, coal-gas, coal-tar, oils and fats, saponification, urea. Simple qualitative analysis. [*The Examination in analysis is conducted practically.*]

2. *Botany.*—The structure and functions of plants, vegetable organography and physiology, the principles of classification, classes, sub-classes, and sections of the natural system. (See Balfour's "Class-book," or his "Manual of Botany.") Botanical characters to be demonstrated on conspicuous specimens of the following natural orders:—Ranunculaceæ, Papaveraceæ, Cruciferæ, Caryophyllaceæ, Malvaceæ, Leguminosæ, Rosaceæ, Onagraceæ, Umbelliferæ, Dipsacaceæ, Compositæ, Campanulaceæ (including Lobeliaceæ), Boraginaceæ, Labiatæ, Scrophulariaceæ, Solanaceæ, Primulaceæ, Euphorbiaceæ, Salicaceæ, Corylaceæ, Coniferæ, Cycadaceæ, Orchidaceæ, Amaryllidaceæ, Liliaceæ, Palmæ, Cyperaceæ, Gramineæ, Filices, Musci. The student will be examined practically on the microscopical structure of plants, and he will be required to describe the organs of fresh plants put into his hands.

3. *Zoology and Comparative Anatomy.*—The general characters of the animal kingdom, and the general structure and organisation of animals; principles of zoological classification; general plan of structure, and physiology of the types: Protozoa, Porifera, Cœlenterata, Echinodermata, Vermes, Articulata, Mollusca, and Vertebrata. The special distinctive characters of the following groups, with a knowledge of familiar examples of each, and the conditions and circumstances under which they occur (candidates will be required to refer any specimens shown to them by the examiner for this purpose to their respective groups):—Rhizopoda, Infusoria; Porifera silicea, calcarea; Zoantharia, Alcyonaria, Hydrozoa, Echinidea, Asteridea, Crinoidea; Platyelmia, Nematelmia, Annelida; Crustacea, Arachnida, Myriapoda, Insecta; Lamellibranchiata, Gastropoda, Cephalopoda; Pisces, Amphibia, Reptilia, Aves, Mammalia.

ARRANGEMENTS FOR THE PRELIMINARY EXAMINATIONS IN GENERAL EDUCATION.

The preliminary examinations in general education are held in the Upper Library Hall, and students matriculated for the academic year are admitted on presenting their matriculation tickets at the door. Students matriculated for the summer only and non-matriculated students pay a fee of 10s. each, and are admitted on showing their receipts. Those who pay the fee in March will be admitted to the examination in October without further payment. Payment in October does not exempt from payment in March. The academic year is reckoned from November 1 to November 1.

Candidates are required to enter their names *in full*, and at the same time to mention the subject or subjects in which they offer themselves for examination. They are also required to state whether they have appeared for any preliminary or professional examinations at this University.

Any candidate who cannot appear personally at the time fixed to enter his name and pay the fee, must complete the schedule required for the purpose, and transmit it with an order for the fee to the Clerk of the University.

I. In conformity with Section I. of the Statutes, examinations on the preliminary branches of extra-professional education will take place on Tuesday, Wednesday, Thursday, and Friday, October 8, 9, 10, and 11, 1878; and on Tuesday, Wednesday, Thursday, and Friday, March 11, 12, 13, and 14, 1879.

Examination on Tuesdays.—Arithmetic, 9 to 11 a.m.; Mathematics (Euclid, Algebra), 11.30 a.m. to 1.30 p.m.; and Mechanics, 2 to 4 p.m.

7. UNIVERSITY OF GLASGOW.—FACULTY OF MEDICINE.

Three medical degrees are conferred by this University, viz.:—Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.); all of which are recognised by the Medical Act as qualifying for practice throughout the British dominions.

The degree of Bachelor of Medicine may be obtained by candidates of the age of twenty-one years who have complied with the regulations as to education and examination. The degree of Master in Surgery is only conferred upon those who at the same time obtain the Bachelorship of Medicine; and the degree of Doctor of Medicine may be conferred on candidates of not less than twenty-four years of age who have obtained the Bachelorship two or more years previously, and have fulfilled certain conditions to be afterwards mentioned.

The medical curriculum is as nearly as possible the same as that in the University of Edinburgh.

By an order of her Majesty in Council, dated August 13, 1877, the following are the arrangements for Professional Examinations:—

1. Every candidate for the degrees of Bachelor of Medicine and Master in Surgery shall be examined both in writing and *viva voce*—first on Chemistry, Botany, and Natural History; second, on Anatomy and Physiology; third, on Regional Anatomy, Materia Medica and Pharmacy, and Pathology; and fourth, on Surgery, Clinical Surgery, Medicine, Clinical Medicine, Therapeutics, Midwifery, and Medical Jurisprudence. The Examination in Chemistry shall include Practical Chemistry; and the Examinations in Anatomy and Physiology shall include Practical Anatomy, Histology, and Practical Physiology; and the Examination in Surgery shall include Operative Surgery.

5. Students may appear for examination in the first of the foregoing divisions of subjects who have completed their attendance on the required courses during one winter and two summer sessions, or during one summer and two winter sessions.

3. Students who have passed the first examination may appear for examination in the second division of subjects after having completed their attendance on the requisite courses (including those of the subjects of examination), and after the lapse of two winter and three summer sessions, or of three winter and two summer sessions, from the time of the commencement of their studies.

4. Students who have passed the two previous examinations may appear for examination in the third division of subjects at any of the terms fixed for examinations by the Senate, after the conclusion of the third winter's session of attendance upon medical classes (including those of the required subjects).

5. Students who have passed the examinations in the subjects of the three previous divisions may appear for examination in the subjects of the fourth division at the first term for the final examination after the conclusion of their curriculum of study.

DEGREE OF DOCTOR OF MEDICINE.

The degree of Doctor of Medicine may be conferred on any candidate who shall produce evidence—*a*, that he is not less than twenty-four years of age; *b*, that he has obtained the Bachelorship two or more years previously; *c*, that he possesses a degree in Arts, or has, in addition to the preliminary examination in general education required for the Bachelorship, also passed before obtaining the Bachelorship, or within three years thereafter, an examination in Greek, and Logic or Moral Philosophy, together with any one of the other optional subjects included in the second part of the subjects of general education; *d*, that he has been engaged in professional study or avocation for two years after having obtained the Bachelorship. He must also lodge an inaugural dissertation, certified by him to have been composed by himself, on any subject included in the branches of knowledge embraced in the professional curriculum. Theses for the degree of M.D. must be lodged with Mr. Moir, the Assistant Clerk of Senate, on or before March 20, June 20, or October 20. No thesis will be approved unless it gives evidence of original observation, or, if it deals with the researches of others, gives a full statement of the literature of the question, with accurate references and critical investigation of the views or facts cited; mere compilations will in no case be accepted.

The fees for degrees are the same as in Edinburgh.

The Examinations in General Education take place twice yearly—viz., in October and March. The examinations for session 1878-79 will be held on Wednesday, Thursday, and Friday, October 9, 10, and 11, 1878, and Thursday, Friday, and Saturday, March 27, 28, and 29, 1879. Those who intend to present themselves for either of these examinations are

required to send in their names to the Assistant Clerk of Senate on or before September 27 or March 18. A fee of 10s. must be paid on entering their names by those who are not matriculated students—which fee will be returned on matriculation within the year.

The Professional Examinations are held at the following periods—viz.: The first in October (October 15, 1878) and April (April 4, 1879); the second in October (October 16, 1878) and April (April 5, 1879); the third in October, 1878; and the fourth in July, 1879.

8. UNIVERSITY OF ABERDEEN.

The following are the degrees in Medicine granted by this University—namely, Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.).

The preliminary examination and professional curriculum, and examination for the degrees of B.M., C.M., and M.D., being in conformity with the Ordinances of the Scotch Universities Commissioners, are nearly the same as those of the Universities of Edinburgh, Glasgow, and St. Andrews.

The studies of candidates for the degrees of Bachelor of Medicine and Master in Surgery are subject to these regulations:—

One at least of the four years of medical and surgical study must be in the University of Aberdeen.

Another of such four years must be either in this University or in some other University entitled to give the degree of Doctor of Medicine.

FEES FOR GRADUATION.

1. Each candidate for the degree of M.B. shall pay a fee of £5 5s. in respect of each of the three professional examinations.

2. If the candidate desires to be admitted to the degree of Bachelor of Medicine only, he shall not, on admission thereto, be required to pay any further fee in addition to the £15 15s. so paid by him; but if he desires to be admitted to the degree of Master in Surgery also, he shall, on being admitted to such degree, pay a further fee of £5 5s.

3. And every candidate for the degree of Doctor of Medicine shall pay, in addition to the fees paid by him for the degree of Bachelor of Medicine, a fee of £5 5s., exclusive of any stamp duty which may for the time be exigible.

EXEMPTION FROM THE FOREGOING REGULATIONS.

Students who shall have begun their medical studies before the first Tuesday of November, 1861, are entitled to appear for examination for the degree of M.D. after four years' study, one of which must have been at the University of Aberdeen.

9. UNIVERSITY OF DUBLIN.

DEGREES AND LICENCES IN MEDICINE AND SURGERY.

The degrees and licences in Medicine and Surgery granted by the University are—1. Bachelor in Medicine. 2. Doctor in Medicine. 3. Master in Surgery. 4. Bachelor in Surgery. 5. Master in Midwifery.

1. *Bachelor in Medicine.*—A candidate for the degree of Bachelor in Medicine must be a graduate in Arts, and may obtain the degree of Bachelor in Medicine at the same commencement as that at which he receives his degree of B.A., or at any subsequent commencement, provided the requisite medical education shall have been completed. The medical education of a Bachelor in Medicine is of four years' duration, and comprises attendance on the following course of lectures, viz.:—Courses of five months' duration (November to April)—Anatomy, Practical Anatomy (with Dissections), Surgery, Chemistry, Practice of Medicine, Midwifery. Courses of three months' duration (April to July)—Botany, Practical Chemistry, Medical Jurisprudence, Materia Medica and Pharmacy, Institutes of Medicine.

Hospital Attendance.—1. Nine months' attendance on the clinical lectures of Sir Patrick Dun's Hospital. 2. Nine months' additional attendance on the clinical lectures of any hospital recognised by the Board. 3. Instruction in practical Midwifery, including not less than six deliveries. 4. Certificate of personal attendance on fever cases, stating name and date of each case.

Any of the above-named six or three months' courses may be attended at any medical school in Dublin recognised by the Provost and Senior Fellows (and three of them, at the discretion of the candidate, may be attended in the University of Edinburgh), provided the candidate has kept an *annus medicus* in the School of Physic.

The schools recognised are—1. The School of the Royal College of Surgeons in Ireland. 2. The Carmichael School. 3. The School of Dr. Steevens' Hospital. 4. The School of the Catholic University.

An *annus medicus*, or a year's attendance in the School of Physic, may be kept in three ways:—1. By attending at least two, or not more than three, of the foregoing courses which are of six months' duration. 2. By attending one course of six months' and two of three months' duration. 3. By nine months' attendance on Sir Patrick Dun's Hospital and clinical lectures; together with one course of six months', or, in lieu thereof, two courses of three months' duration.

The fee for nine months' attendance at Sir Patrick Dun's Hospital is £12 12s. The fee for each course of lectures is £3 3s. The fee for the *Liceat ad Examinandum* is £5. The fee for the degree of M.B. is £11.

2. *Doctor in Medicine.*—A Doctor in Medicine must be M.B. of at least three years' standing, or have been qualified to take the degree of M.B. for three years, and must perform exercises for the degree before the Regius Professor of Physic, in accordance with the rules and statutes of the University. Total amount of fees for this degree, £13.

3. *Master in Surgery.*—A Master in Surgery must be a Bachelor in Surgery of three years' standing, or have been qualified to take the degree of Bachelor in Surgery for three years; and must read a thesis publicly before the Regius Professor of Surgery, or undergo an examination before the Regius Professor, according to Regulations to be approved by the Provost and Senior Fellows. Fee for the degree of Master in Surgery, £11.

Hospital attendance for three sessions, each of nine consecutive months' duration, in any recognised hospital, together with attendance on the clinical lectures on Medicine and Surgery there delivered, are required. Any of the above-named courses may be attended at any of the medical schools of Dublin recognised by the Board, provided the candidate has kept an *annus medicus* in the School of Physic. The following hospitals are recognised by the Board:—1, Sir Patrick Dun's School of Physic Hospital; 2, Meath Hospital; 3, Richmond, Whitworth, and Hardwicke Hospitals; 4, Dr. Steevens' Hospital; 5, Jervis-street Infirmary; 6, City of Dublin Hospital; 7, Mercer's Hospital; 8, St. Vincent's Hospital; 9, Adelaide Hospital; 10, Mater Misericordiæ Hospital. Of the courses of lectures which are of five months' duration, not more than three can be attended during any one session. Candidates will also be required to perform surgical operations on the dead subject. Candidates for the degree of Master in Surgery, who have already passed the examination for the degree of Bachelor of Medicine, will be examined in Anatomy and Surgery only. Fee for the *Liceat ad Examinandum*, £5. Fee for the degree of M.Ch., £11.

4. *Bachelor in Surgery.*—A Bachelor in Surgery must be a Bachelor in Arts, and have spent four years in the study of Surgery and Anatomy. He must also have passed the M.B. examination, before presenting himself at the B.Ch. examination, having previously completed the prescribed curriculum of study. The curriculum comprises the following, in addition to the complete course for the degree of Bachelor in Medicine:—Theoretical and Operative Surgery, one course; Dissections, two courses; Ophthalmic Surgery, one course. Candidates are required to perform surgical operations on the dead subject, and will also be examined in Bandaging and Minor Surgery, and in Surgical Pathology. Candidates for the degree of Bachelor in Surgery, who have already passed the examination for the degree of Bachelor in Medicine, will be examined in Anatomy and Surgery only. Fee for the *Liceat ad Examinandum*, £5. Fee for the degree of Bachelor in Surgery, £5.

5. *Master in Obstetric Science.*—A Master in Obstetric Science must have passed the M.B. and B.Ch. examinations, and produce certificates of having completed the following curriculum:—1. One winter course in Midwifery. 2. Six months' practice in a recognised lying-in hospital or maternity. 3. A summer course in Obstetric Medicine and Surgery. 4. Two months' practice in the Cow-pock Institution. Existing Graduates in Medicine, of the standing of M.D., are entitled to present themselves for examination, without complying with Regulations 3 and 4. Fee for the degree of Master in Obstetric Science, £5.

UNIVERSITY LICENCES.

Candidates for the licences in Medicine, Surgery, or Midwifery must be matriculated in Medicine, and must have com-

pleted four years in medical studies. Candidates for the licences in Medicine, Surgery, or Midwifery must pass the following examination in Arts, unless they be students in the Senior Freshman or some higher class:—Homer's Iliad, Books I., II. (omitting catalogue of ships), III.; Lucian's Dialogues (Walker's edition); Xenophon's Anabasis, Books I., II., III.; Virgil, Æneid, Books I., II., III.; Sallust; Horace, Satires; Latin Prose Composition; English Prose Composition; English History; Modern Geography; Arithmetic; Algebra to the end of Simple Equations; Euclid, Books I., II., III. Students who have passed the foregoing examination will be required to pay the admissiou fee of £15.

1. *Licentiate in Medicine.*—The medical course and examination necessary for the licence in Medicine are the same as for the degree of M.B., with the exeeption that any general hospital approved by the Board of Trinity College may be substituted for Sir Patrick Dun's. Candidates who are already Licentiates in Surgery of the Royal College of Surgeons in Ireland, or Members of the College of Surgeons of England, on passing the foregoing Arts examination, will be admitted to examination for the licence in Medicinc. Fee for the *Liceat ad Examinandum*, £5. Fee for the licenee in Medieine, £5.

2. *Licentiate in Surgery.*—The surgical course and examination neeessary for the licenee in Surgery are the same as for the degree of Bachelor iu Surgery. Fee for the *Liceat ad Examinandum*, £5. Fee for the licenee in Surgery, £5.

3. *Licence in Obstetric Science.*—The course and examination for the lieence in Obstetric Science are the same as for the degree in Obstetric Science. Fee for the licenee in Obstetric Science, £5.

Total Expenses of obtaining the Degrees of Bachelor in Medicine and Bachelor in Surgery.—I. Lectures: 1. Anatomy (one course), £3 3s. 2. Practical Anatomy (three courses), £9 9s. 3. Dissections (three courses), £15 15s. 4. Surgery (two courses), £4 4s. 5. Practice of Medicine, £3 3s. 6. Chemistry (two courses), £4 4s. 7. Materia Medica and Pharmacy, £3 3s. 8. Midwifery, £3 3s. 9. Botany. 10. Medical Jurisprudence, £3 3s. 11. Institutes of Medicine, £3 3s. Matriculation fee, 5s. II. Hospitals: Sir P. Dun's (first year), £9 9s.; ditto (second year), £9 9s.; ditto (third year), £9 9s.; Practical Midwifery, £3 3s. Ophthalmic Surgery, £2 2s. III. Degrees: 1. *Liceat ad Examinandum in Medicinâ*, £5. 2. *Liceat ad Examinandum in Chirurgiâ*, £5. 3. M.B. degree, £11. 4. M.Ch. degree, £11. Total Expenses: 1. Leetures, £52 15s. 2. Hospitals, £33 12s. 3. Degrees, £32. Total, £118 7s.

N.B.—As no degrees in Medicine or Surgery are conferred except upon graduates in Arts, the expense of the degree of Bachelor in Arts, amounting altogether to £83 4s., should be added to the foregoing, making the total £281 11s.

10. QUEEN'S UNIVERSITY IN IRELAND.(a)

This University confers the degrees of M.D. and M.Ch. Students who wish to obtain the degree of M.D. or of M.Ch. in the Queen's University must be matriculated students of one of the Queen's Colleges at Belfast, Cork, or Galway, and must pursue the courses of study prescribed by the Senate of the University.

Each candidate for the degree of Doctor in Medicine or Master iu Surgery is required—1. To have passed in one of the Colleges of the Queen's University the entrance examination in Arts, and to have been admitted a matrieulated student of the University. 2. To have attended in one of the Queen's Colleges lectures on one modern continental language for six months, and lectures on Natural Philosophy for six months. 3. To have also attended, in some one of the Queen's Colleges, at least two of the eourses of leetures marked below with an asterisk. For the remainder of the courses, authenticated certificates will be received from the professors or lecturers in universities, colleges, or schools recognised by the Senate of the Queen's University in Ireland. 4. To pass the University examiuations—the first and second University examinatious, and the degree examination. The curriculum extends over at least four years, and is divided into periods of at least two years each. Candidates are recommended to pass the matriculation examination prior to entering on the second period. It is recommended that the first period shall comprise attendance on the following courses of medical lectures:—*Chemistry; *Botauy, with Herborisations for practical study, and Zoology; *Anatomy and Physiology; *Practieal Anatomy; *Materia Medica and Pharmaey. And that the second period shall comprise attendance on the following courses of medieal lectures:—Anatomy and Physiology (second course), Practical Anatomy (seeond course), *Theory and Practice of Surgery, *Midwifery, *Theory and Practice of Medicine, *Medical Jurisprudence. In addition to the above courses of lectures, candidates shall have attended, during either the first or seeond period, a course of lectures on a modern continental language (in one of the colleges of the University), and Experimental Physics (in one of the colleges of the University). Also, during the first period—Practical Chemistry, (in a recognised laboratory), and medieo-chirurgical hospital (recognised by the Senate) containing at least sixty beds, together with the elinieal leetures therein delivered, at least two eaeh week—a winter sessiou of six months. And during the seeoud period—Practical Midwifery, at a recognised midwifery hospital, with the clinieal lectures therein delivered, for a period of three months in a hospital coutaining not less than thirty beds, or six months in a hospital eontaining not less than fifteen beds; medieo-chirurgical hospital (recognised by the Senate) containing at least sixty beds, together with the elinieal lectures therein delivered, eighteen months, including either three winter sessions of six months each, or two winter sessions of six months each, and two summer sessions of three months each. Medical examinations are held in June, and in September and October. The June examinations are pass examinations. Both honour and pass examinations are held in September. Each eandidate for examination in June must forward to the Secretary, on or before June 1, notice of his intention to offer himself as a candidate, along with his certificates, and each candidate for examination in September must forward similar notice, along with his certifieates, before September 1.

(a) No return has been obtained from this University.

(B.) BODIES GIVING LICENCES OR OTHER FORMS OF QUALIFICATION NOT BEING DEGREES IN MEDICINE.

1. THE ROYAL COLLEGE OF PHYSICIANS, LONDON.

In the Royal College of Physicians there are three grades—Fellows, Members, aud Lieentiates. Of these the first is purely houorary, and so in a certain sense is the seeond. The third is that taken by the student on leaving his studies, and is valuable as being at once a qualifieation to practise Medicine, Surgery, and Midwifery, and is recognised by the Poor-law Board as a qualification in Surgery as well as in Medicine.

The College will, under its charter, grant licenees to practise Physic, including therein the practice of Medieine, Surgery, aud Midwifery (whieh licenees are not to extend to make the Licentiates Members of the Corporation), to persons who shall conform to the following by-laws:—

Every candidate for the College licence (except when otherwise provided by the by-laws) is required to produce satisfactory evidence to the following effect:—

1. Of having attained the age of twenty-one years.
2. Of moral character.
3. Of having passed, before the commencement of professional study, an examination in the subjects of general education recognised by the College.
4. Of having been registered as a medical student in the manner prescribed by the General Medical Council. ["After October, 1870, every candidate (not exempted from registration) is required to have been registered at least four years previously."]
5. Of having been engaged in professional studies during four years, of which at least three winter sessions and two summer sessions shall have been passed at a recognised medical school or schools, and one winter session and two summer sessions in one or other of the following ways:—*a*. Attending the practice of a hospital or other institution recognised by the College for that purpose. *b*. Receiving instruction as the pupil of a legally qualified practitioner holding any public appointment which affords opportunities, satisfactory to the examiners, of imparting a practical knowledge of Medicine, Surgery, or Midwifery. *c*. Attending lectures on any of the required subjects of professional study at a recognised place of instruction. Professional studies commenced *before* the candidate shall have passed an examination in the subjects of general education will not be recognised by the College.
6. Of having attended, during three winter sessions and two summer sessions, the medical and surgical practice at a recognised hospital or hospitals, of having discharged the duties of clinical clerk at a recognised hospital for a period of not less than three months; of having performed the duties of dresser at a recognised hospital for a period of not less than three months; and of having been engaged during six months in the clinical study of Diseases peculiar to Women.
7. Of having studied the following subjects:—Anatomy (with dissections) during two winter sessions; Physiology during two winter sessions; Chemistry during six months; Practical Chemistry during three months;

Materia Medica during three months; Practical Pharmacy during three months (by Practical Pharmacy is meant instruction in the laboratory of a registered medical practitioner, or of a member of the Pharmaceutical Society of Great Britain, or of a public hospital or dispensary recognised by the College); Botany during three months (this course of lectures may be attended prior to the commencement of professional studies; and any candidate producing satisfactory evidence that Botany formed one of the subjects of his preliminary examination will be exempt from attendance on this course); Morbid Anatomy during six months (this includes attendance and instruction in the post-mortem-room during the period of clinical study); Principles and Practice of Medicine during two winter sessions (it is required that the Principles of Public Health should be comprised in this course of lectures, or in the course of lectures on Forensic Medicine: the attendance on these lectures must not commence earlier than the second winter session at a recognised medical school); Principles and Practice of Surgery during two winter sessions (the attendance on these lectures must not commence earlier than the second winter session at a recognised medical school); Clinical Medicine during two winter sessions and two summer sessions (the attendance on these lectures must not commence until after the first winter session at a recognised medical school); Clinical Surgery during two winter sessions and two summer sessions (the attendance on these lectures must not commence until after the first winter session at a recognised medical school: by Clinical Medicine and Clinical Surgery are meant special study and instruction at the bedside, with lectures on cases); Midwifery and the Diseases peculiar to Women during three months (certificates must also be produced of attendance on not less than twenty labours, and of instruction and proficiency in vaccination); Forensic Medicine during three months.

8. Of having passed the professional examinations.

Any candidate who shall produce satisfactory evidence of having passed an examination on Anatomy and Physiology, conducted by any of the bodies named in Schedule (A) to the Medical Act, and recognised by the College as requiring a course of study and an examination satisfactory to the College, shall be exempt from re-examination on the subjects of the primary examination. Any candidate who shall have obtained a degree in Medicine at a university recognised by the College, after a course of study and an examination satisfactory to the College, shall be exempt from re-examination on the subjects of the primary examination. Any candidate who shall have obtained a degree in Surgery at a university in the United Kingdom, after a course of study and an examination satisfactory to the College, shall be exempt from re-examination on Surgical Anatomy and on the Principles and Practice of Surgery. Any candidate who shall have passed the examination on Surgery conducted by the Royal College of Surgeons of England, or the Royal College of Surgeons of Edinburgh, or the Royal College of Surgeons in Ireland, after a course of study and an examination satisfactory to the College, shall be exempt from re-examination on Surgical Anatomy and on the Principles and Practice of Surgery. Any candidate being a "registered medical practitioner," whose qualification or qualifications shall have been obtained before January 1, 1861, having been with the consent of the College admitted a candidate for the licence, will be examined on the Principles and Practice of Medicine, Surgery, and Midwifery; but he will be exempted from such other parts of the professional examinations as his qualifications may seem to the examiners to render in his case unnecessary.

Licentiates of this College shall not compound or dispense medicines except for patients under their own care.

BY-LAWS AND REGULATIONS RELATING TO THE EXAMINATION FOR THE LICENCE.

Every candidate for the College licence, before he is admitted to examination, will be required to sign a declaration, stating that he has not been rejected within three months by any of the examining boards included in Schedule (A) to the Medical Act.

Any candidate who shall be rejected at the first examination will not be readmitted to examination until after the lapse of three months, and will be required to produce a certificate of the performance of dissections, or other professional study satisfactory to the examiners, during that time.

Any candidate who shall be rejected at the second or pass examination will not be readmitted to examination until after the lapse of six months, and will be required to produce a certificate of attendance on the practice of a recognised hospital, and also of attendance on clinical lectures, or other professional study satisfactory to the examiners, during that time.

The fee for the College licence is £15 15s., of which £5 5s. are to be paid on admission to the first examination, which fee will not be returned to any candidate rejected at this examination, but will be allowed in the fee for the licence, and he will be admitted to one subsequent first examination without the payment of an additional fee.

Any candidate who shall be rejected at the second or pass examination will have the fee paid on admission to this examination returned to him, less £3 3s.

ADDITIONAL REGULATIONS, JANUARY 31, 1878.

For the Licence.—I. Any candidate who shall produce satisfactory evidence of having passed an examination on Chemistry and Materia Medica, required for a degree in Medicine at a university in the United Kingdom, in India, or in a British colony, will be exempted from re-examination on those subjects. II. Any candidate who shall have obtained a qualification which entitles him to practise Medicine or Surgery in the country where such qualification has been conferred, after a course of study and an examination equivalent to those required by the Regulations of the College, shall, on production of satisfactory evidence as to age, moral character, and proficiency in vaccination, be admissible to the pass examination, and shall be exempt from re-examination on such subjects as shall in each case be considered by the Censors' Board to be unnecessary.

For Membership.—I. Any candidate who shall produce satisfactory evidence of having passed an examination on Chemistry and Materia Medica, required for a degree in Medicine at a university in the United Kingdom, in India, or in a British colony, will be exempted from re-examination on those subjects. II. Any candidate who has already obtained the degree of Doctor or Bachelor of Medicine at a university in the United Kingdom, in India, or a British colony, or who shall have obtained a qualification entitling him to practise Medicine or Surgery in the country where such qualification has been conferred, wherein the courses of study and the examinations to be undergone previously to graduation shall have been adjudged by the Censors' Board to be satisfactory, shall be exempt (if the Censors shall think fit) from all or any parts of the examinations hereinbefore described, except such as relate to the third or pass examination. The nature and extent of this examination shall, in the case of each candidate, be determined by the Censors' Board. Every candidate for the membership will, however, be required to translate into English a passage from a Latin author, and he will have the opportunity of showing a knowledge of Greek, or of one or more of the modern European languages.

2. THE ROYAL COLLEGE OF SURGEONS, ENGLAND.

By far the most important qualification in this country is that of the Royal College of Surgeons of England, inasmuch as almost all English and many Scottish and Irish students become candidates for the Membership of that body. The College consists of two grades—Fellows and Members. The Fellowship is partly honorary, being obtained by the election of Members of a certain standing, but is now only obtainable by examination. The Membership is the qualification sought by students leaving their hospitals, hence the importance of the following regulations:—

I. Professional studies prior to the date at which the candidate shall have passed an examination in general knowledge are not recognised.

II. The following will be considered as the commencement of professional education:—

1. Attendance on the practice of a hospital or other public institution recognised by this College for that purpose.
2. Instruction as the pupil of a legally qualified surgeon holding the appointment of surgeon to a hospital, general dispensary, or union workhouse, or where such opportunities of practical instruction are afforded as shall be satisfactory to the Council.
3. Attendance on lectures on Anatomy, Physiology, or Chemistry, by lecturers recognised by this College.

The commencement of professional study, otherwise than by attendance on lectures in recognised medical schools, or by attendance on the practice of recognised hospitals, will not be admitted until a certificate thereof shall be furnished to the Secretary for registration at the College by the practitioner whose pupil the candidate shall have become, or by the medical superintendent of the hospital or other institution to the practice of which he shall have entered, and will, consequently, date only from the reception of such certificate by the Secretary; the certificate to be accompanied by proof of having passed the necessary preliminary examination in general knowledge.

III. Candidates will be required to produce the following certificates, viz.:—

1. Of being twenty-one years of age.
2. Of having been engaged, subsequently to the date of passing the preliminary examination, during four years, or during a period extending

voer not less than four winter and four summer sessions, in the acquirement of professional knowledge.

3. Of having attended lectures on Anatomy during two winter sessions.

4. Of having performed Dissections during uot less than two winter essions.

5. Of having attended lectures on General Anatomy and Physiology during one winter session.

6. Of having attended a practical course of General Anatomy and Physiology during another winter or a summer session, consisting of not less than thirty meetings of the class.

Note A.—By the practical course referred to in Clause 6, it is meant that the learners themselves shall, individually, be engaged in the necessary experiments, manipulations, etc.; but it is not hereby intended that the learners shall perform vivisections.

7. Of having attended lectures on Surgery during one winter session.

8. Of having attended a course of Practical Surgery during a period occupying not less than six months prior or subsequent to the course required by the preceding Clause 7.

Note B.—The course of Practical Surgery referred to in Clause 8 is intended to embrace instruction in which each pupil shall be exercised in practical details, such as in the application of anatomical facts to surgery, on the living person, or on the dead body. The methods of proceeding and the manipulations necessary in order to detect the effects of diseases and accidents, on the living person, or on the dead body. The performance, where practicable, of the operations of surgery on the dead body. The use of surgical apparatus. The examination of diseased structures, as illustrated in the contents of a museum of morbid anatomy, and otherwise.

9. Of having attended one course of lectures on each of the following subjects, viz.:—Chemistry, Materia Medica, Medicine, Forensic Medicine, Midwifery (with practical instruction, and a certificate of having personally conducted not less than ten labours); Pathological Anatomy during not less than three months.

Note C.—The course of lectures on Chemistry included in Clause 9 will not be required in the case of a candidate who shall have passed a satisfactory examination in this subject in his preliminary examination.

10. Of having studied Practical Pharmacy during three months.

11. Of having attended a three months' course of Practical Chemistry (with manipulations), in its application to medical study.

12. Of instruction and proficiency in the practice of Vaccination.

Note D.—In the case of candidates who commenced their professional education on or after October 1, 1868, the certificate of instruction in Vaccination will only be received from recognised vaccine stations, or from recognised vaccine departments in medical schools or hospitals, or other public institutions, where the appointed teacher of vaccination is not liable to frequent change, and where ample means for study are provided by not less than such a number of cases (eight or ten on an average weekly) as may be found, after due inquiry, to be sufficient for this purpose at each place.

Note E.—The certificates of attendance on the several courses of lectures must include evidence that the student has attended the practical instructions and examinations of his teacher in each course.

13. Of having attended, at a recognised hospital or hospitals, the practice of Surgery during three winter(a) and two summer(b) sessions.

14. Of having been individually engaged, at least twice in each week, in the observation and examination of patients at a recognised hospital or hospitals, under the direction of a recognised teacher during not less than three months.

Note F.—It is intended that the candidate should receive the instruction required by Clause 14 at an early period of his attendance at the hospital.

15. Of having, subsequently to the first winter session of attendance on surgical hospital practice, attended, at a recognised hospital or hospitals, clinical lectures on Surgery during two winter and two summer sessions.

16. Of having beeu a dresser at a recognised hospital, or of having, subsequently to the completion of one year's professional education, taken charge of patients under the superintendence of a surgeon during not less than six months, at a hospital, general dispensary, or parochial or union infirmary recognised for this purpose, or in such other similar manner as, in the opinion of the Council, shall afford sufficient opportunity for the acquirement of Practical Surgery.

17. Of having attended, during the whole period of attendance on surgical hospital practice (see Clause 13), demonstrations in the post-mortem rooms of a recognised hospital.

18. Of having attended, at a recognised hospital or hospitals, the practice of Medicine, and clinical lectures on Medicine, during one winter and one summer session.

Notice.—Clauses 6, 8, 11. 14, and 17, and Notes A, B, C, E. and F, together with the courses of lectures on Forensic Medicine and Pathological Anatomy mentioned in Clause 9, are applicable to candidates who commenced their professional education on or after October 1, 1870.

N.B.—Blank forms of the required certificates may be obtained on application to the Secretary, and all necessary certificates will be retained at the College.

Section II.

I. Certificates will not be received on more than one branch of science from one and the same lecturer; but Anatomy and Dissections will be considered as one branch of science.

II. Certificates will not be recognised from any hospital in the United Kingdom unless the surgeons thereto be members of one of the legally constituted Colleges of Surgeons in the United Kingdom; nor from any school of Anatomy and Physiology or Midwifery, unless the teachers in such school be members of some legally constituted College of Physicians or Surgeons in the United Kingdom; nor from any school of Surgery, unless the teachers in such school be members of one of the legally constituted Colleges of Surgeons in the United Kingdom.

III. No metropolitan hospital will be recognised by this College which contains less than 150, and no provincial or colonial hospital which contains less than 100 patients.

(a) The winter session comprises a period of six months, and, in England, commences on October 1, and terminates on March 31.

(b) The summer session comprises a period of three months, and, in England, commences on May 1, and terminate on July 31.

IV. The recognition of colonial hospitals and schools is governed by the same regulations, with respect to number of patients and to courses of lectures, as apply to the recognition of provincial hospitals and schools in England.

V. Certificates of attendance upon the practice of a recognised provincial or colonial hospital, unconnected with, or not in convenient proximity to, a recognised medical school, will not be received for more than one winter and one summer session of the hospital attendance required by the regulations of this College; and in such cases clinical lectures will not be necessary, but a certificate of having acted as dresser for a period of at least six months will be required.

VI.—Certificates will not be received from candidates who have studied in London, unless they shall have registered at the College their cards of admission to attendance on lectures and hospital practice within fifteen days from the commencement of the session; nor from candidates who have studied in the provincial schools in England, unless their names shall be duly returned from their respective schools.

N.B.—At their first registration in October, candidates will be required to produce a certificate of having passed one or other of the preliminary examinations in general knowledge recognised by this College.

VII. Those candidates who shall have pursued the whole of their studies in Scotland or Ireland will be admitted to examination upon the production of the several certificates required respectively by the College of Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, and the College of Surgeons in Ireland, from candidates for their diploma, together with a certificate of instruction and proficiency in the practice of vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the preliminary examination, at least four years, or during a period extending over four winter and four summer sessions, in the acquirement of professional knowledge; and in the case of candidates who shall have pursued the whole of their studies at recognised foreign or colonial universities, upon the production of the several certificates required for their degree by the authorities of such universities, together with a certificate of instruction and proficiency in the practice of vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the preliminary examination, at least four years, or during a period extending over four winter and four summer sessions, in the acquirement of professional knowledge.

VIII. Members or licentiates of any legally constituted College of Surgeons in the United Kingdom, and graduates in Surgery of any University recognised for this purpose by this College, will be admitted to examination on producing their diploma, licence, or degree, together with proof of being twenty-one years of age, a certificate of instruction and proficiency in the practice of vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the preliminary examination, at least four years, or during a period extending over four winter and four summer sessions, in the acquirement of professional knowledge.

IX. Graduates in Medicine of any legally constituted College or University recognised for this purpose by this College will be admitted to examination on adducing, together with their diploma or degree, proof of being twenty-one years of age, a certificate of instruction and proficiency in the practice of vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the preliminary examination, at least four years, or during a period extending over four winter and four summer sessions, in the acquirement of professional knowledge.

The following are regulations as to the examination for the qualification of Membership:—

The examination is divided into two parts.

1. The first, or primary examination, on Anatomy and Physiology, is partly written and partly demonstrative on the recently dissected subject, and on prepared parts of the human body.

2. The second, or pass examination, on Surgical Anatomy and the Principles and Practice of Surgery and Medicine,(c) is partly written,

(c) Candidates can claim exemption from examination in Medicine under the following conditions, viz.:—(1.) The production by the candidate of a degree, diploma, or licence in Medicine entitling him to register under the Medical Act of 1858; or a degree, diploma, or licence in Medicine in a colonial or foreign university approved by the Council of the College. (2.) A declaration by the candidate, prior to his admission to the final examinatiou for Membership or Fellowship, that it is his intention to obtain either of the medical qualifications mentioned in the foregoing paragraph, in which case the diploma of the College will not be issued to him until he shall produce either the said medical qualification or proof of having passed the several examinations entitling him to receive the same.

partly oral, and partly on the practical use of surgical apparatus, and the practical examination of patients.

3. The primary examinations are held in the months of January, April, May, July, and November, and the pass examinations generally in the ensuing week respectively.

4. Candidates will not be admitted to the primary examination until after the termination of the second winter session of their attendance at a recognised school or schools; nor to the pass, or surgical examination, until after the termination of the fourth year of their professional education.

5. The fee of £5 5s., paid prior to the primary examination, and allowed on the whole fee of £22(d) payable for the diploma, is retained; and after any two consecutive failures at the primary examination, the candidate is required to pay an *additional* fee of £5 5s. prior to being again admitted to that examination, which *additional* fee is also retained.

6. Five guineas, part of the sum of £16 15s., the balance of the whole fee due for the diploma, and paid prior to the pass examination, is retained; and after any two consecutive failures at the pass examination, the candidate is required to pay an *additional* fee of £5 5s. prior to being again admitted to the said pass examination, which *additional* fee is also retained.

7. A candidate having entered his name for either the primary or pass examination, who shall fail to attend the meeting of the Court for which he shall have received a card, will not be allowed to present himself for examination within a period of three months from the date at which he shall have so failed to attend.

8. A candidate referred on the primary examination is required, prior to his admission to re-examination, to produce a certificate of the performance of dissections during not less than three months subsequently to the date of his reference.

9. A candidate referred on the pass examination is required, prior to his admission to re-examination, to produce a certificatate of at least six months' further attendance on the surgical practice of a recognised hospital, together with lectures on Clinical Surgery, subsequently to the date of his reference.

CERTIFICATE OF QUALIFICATION IN MIDWIFERY.

This College also, after due examination, grants a special certificate of qualification in Midwifery. This, however, though of great value to the possessor, cannot be registered, and is only granted to men otherwise qualified.

1. Persons who were Fellows or Members of the College prior to the first day of January, 1853, will be admitted to examination for the certificate of qualification in Midwifery upon producing their diploma.

2. Persons having become Members of the College subsequently to the first day of January, 1853, will be admitted to examination on producing their diploma, together with a certificate or certificates of having attended twenty labours.

3. Members or Licentiates of any legally constituted College of Surgeons in the United Kingdom, and graduates in Surgery of any University recognised for this purpose by this College, will also be admitted to examination on producing, together with their diploma, licence, or degree, proof of being twenty-one years of age; of having been occupied at least four entire years in the acquirement of professional knowledge; of having attended one course of lectures on Midwifery; and of having attended not less than twenty labours.

4. Graduates in Medicine of any legally constituted college or university recognised for this purpose by this College, will also be admitted to examination on producing, together with their diploma or degree, proof of being twenty-one years of age; of having been occupied at least four entire years in the acquirement of professional knowledge; of having completed at recognised schools the anatomical and surgical education required of candidates for the diploma of Member of the College; of having attended one course of lectures on Midwifery; and of having attended not less than twenty labours.

5. Persons having commeuced their professional education, either by attendance on hospital practice or on lectures on Anatomy, prior to the first day of January, 1853, will be admitted to examiuatiou ou producing the several certificates of professional education required for admission to examination for the diploma of Member of this College at the period when such persons shall respectively have, in such manner, commenced their professional education.

6. Persons having commenced their professional education, either by attendance on hospital practice or on lectures on Anatomy, after the 31st day of December, 1852, will be admitted to examination ou producing certificates of being twenty-one years of age; of having been engaged during at least four entire years in the acquirement of professional kuowledge; of having completed at recognised schools the professional education required of candidates for the diploma of Member of this College; of having attended one course of lectures on Midwifery and the Diseases of Women and Children; and of having personally conducted thirty labours.

Note.—All candidates who commenced their professional education on or after October 1, 1866, will, in addition to the certificates enumerated in the foregoing clauses, be required to produce a certificate of having, prior to such commencement, passed a preliminary examination in general knowledge recognised by this College.

N.B.—The fee for the certificate is as follows, viz.:—1. Persons who were Fellows or Members of this College prior to January 1, 1853, £2 2s. 2. Persons admitted Fellows or Members of this College subsequently to January 1, 1853, £3 3s. 3, 4. Persons producing any other diploma or certificate or degree which may be considered by the Council to afford satisfactory proof of sufficient surgical aud medical education, £3 3s. 5, 6. All other persons, £10 10s.

3. SOCIETY OF APOTHECARIES (ENGLAND).

Every candidate for a certificate of qualification to practise as an apothecary will be required to produce testimonials—1. Of having passed a preliminary examination in Arts, as a test of general education. 2. Of having attained the full age of twenty-one years. 3. Of good moral conduct. 4. A certificate of three months' Practical Pharmacy from some recognised hospital or dispensary, or from a qualified medical practitioner. 5. Of having pursued a course of medical study in conformity with the regulations of the Court.

Course of Study.—Every candidate must attend the following lectures and medical practice: each winter session to consist of not less than six months, to commence on the 1st and not later than the 15th of October; each summer session to commence on the 1st and not later than the 15th of May.

First Year.—Winter Session: Chemistry; Anatomy and Physiology, including Dissections and Demonstrations. Summer Session: Botany; Materia Medica and Therapeutics; Practical Chemistry.

Second Year.—Winter Session: Anatomy and Physiology, including Dissections and Demonstrations; Principles and Practice of Medicine; Clinical Medical Practice. Summer Session: Midwifery and Diseases of Women and Children; Forensic Medicine and Toxicology; Clinical Medical Practice.

Third Year.—Winter Session: Principles and Practice of Medicine; Clinical Medical Lectures; Morbid Anatomy; Pathology and Clinical Medical Practice. Summer Session: Practical Midwifery and Vaccination; Morbid Anatomy; Clinical Medical Practice.

No certificates of lectures, or of anatomical instructions delivered in private to particular students apart from the ordinary classes of recognised public medical schools, can be received by the Court of Examiners.

Professional Examinations.—The Court of Examiners meet in the Hall every Wednesday and Thursday, where candidates are required to attend at 4.30 p.m. Every candidate intending to offer himself for examination must give seven days' notice previous to the day of examination, and must at the same time deposit all the required certificates, with the fee, at the office of the Beadle, where attendance is given daily, from ten to four o'clock; Saturdays, ten to two.

The certificates being found correct, a card to admit the candidate will be sent, stating the day and hour of examination.

The examination of candidates is divided into two parts, and is conducted partly in writing and partly *vivâ voce*.

The first examination which may be passed after the second winter session, embraces the following subjects:—Physicians' Prescriptions and Pharmacy; Anatomy and Physiology, including an examination on the living subject; General and Practical Chemistry; Materia Medica and Botany; Histology.

Testimonials required of Candidates for the First Examination.—Of having passed an examination in Arts, recognised by the Medical Council; of having completed the curriculum of study to the close of the second winter session; of having attended three months' Practical Pharmacy; and of good moral conduct. Any candidate who presents himself for the first examination and is rejected may be admitted to re-examination at the expiration of three calendar months.

The Second Examination.—At the termination of the medical studies: Principles and Practice of Medicine, Pathology and Therapeutics; Midwifery, including the diseases of women and children; Forensic Medicine and Toxicology; Microscopical Pathology.

Certificates required of Candidates for the Second or Pass Examination.—Of having completed four years' medical study, including the period spent at the Hospital; of being twenty-one years of age; and of good moral conduct. Of having passed the first examination. Of having completed the prescribed curriculum of study according to the schedule, inincluding a personal attendance of twenty cases of Midwifery, (a certificate of which will be received from any registered practitioner); and of having received instruction in practical Vaccination, and vaccinated not less than twenty cases (this certificate must be obtained from a public vaccinator recognised by the Local Government Board). Of having served the office of clinical clerk at a recognised hospital during the period of six weeks, at least. Of having been examined at the class examinations instituted by the various lecturers and professors of their respective medical schools and colleges. By the 22nd section of the Act of Parliament of 1815, no rejected candidate for the licence can be re-examined until the expiration of six calendar months from his former examination.

The examination of candidates for certificates of qualification to act as Assistant in compounding and dispensing medicines will be as follows:—In translating physicians' prescriptions; in the British Pharmacopœia; in Pharmacy, Pharmaceutical Chemistry, Materia Medica, and Medical Botany.

(d) This sum of £22 is exclusive of the fee of £2 paid for the preliminary examination.

By Section 22 of the Act of Parliament no rejected candidate as an Assistant can be re-examined until the expiration of three calendar months from his former examination.

Fees.—For a certificate of qualification to practise, £6 6s., half of which is retained in case of rejection, to be accounted for at a subsequent examination. For the first examination, £3 3s., which sum is retained in case of rejection and accounted for subsequently; for the second examination, £3 3s.; for an Assistant's certificate, £2 2s., which sum is retained in case of rejection, and accounted for subsequently.

N.B.—After two rejections a second fee of £3 3s. will be required, or £1 1s. in the case of an Assistant.

Modified Examinations.—All graduates in Medicine of British universities will be admitted to a modified examination.

In Scotland, besides the Universities, there are three licensing bodies, viz.:—

4. ROYAL COLLEGE OF PHYSICIANS, EDINBURGH;
5. ROYAL COLLEGE OF SURGEONS, EDINBURGH;
6. FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

The first alone can give a qualification in Medicine; the two latter can give only a surgical qualification. Each of the surgical bodies has, however, most sensibly joined with the College of Physicians, so that a candidate can, by a single set of examinations, acquire a qualification both in Medicine and Surgery. For this reason, and as the greater must include the less, we shall only give the rules applying to these conjoint examinations. These are so nearly identical, that one set of regulations will suffice.

The Royal College of Physicians and the Royal College of Surgeons, Edinburgh, and the Royal College of Physicians of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow, while they continue to give their diplomas separately under separate regulations, have made arrangements by which, after one series of examinations, the student may obtain two separate licences—one in Medicine, and one in Surgery.

The general principle of this joint examination is, that it is conducted by a board in which each body is represented, the object being to give to students facilities for obtaining from two separate bodies, and at less expense, a double qualification in Medicine and in Surgery. Students passing these examinations successfully will be enabled to register two qualifications under the Medical Act—viz., Licentiate of the Royal College of Physicians and Licentiate of the Royal College of Surgeons, Edinburgh; and Licentiate of the Royal College of Physicians of Edinburgh and Licentiate of the Faculty of Physicians and Surgeons of Glasgow.

Candidates for these qualifications commencing professional study on or after October 1, 1866, must have been engaged in professional study during four years, and in actual attendance at a university or recognised school of medicine during not less than four winter sessions or three winter sessions and two summer sessions, and must have completed the following curriculum:—

1. Anatomy, two courses of lectures in distinct sessions, six months each.
2. Practical Anatomy, twelve months.
3. Chemistry, one course of lectures, six months.
4. Practical or Analytical Chemistry, one course of lectures, three months.
5. Physiology, not less than fifty lectures.
6. Practice of Medicine, one course of lectures, six months.
7. Clinical Medicine, extending to six months.
8. Another course of Practice of Medicine, or of Clinical Medicine, at the option of the candidate.
9. Principles and Practice of Surgery, one course of lectures, six months.
10. Clinical Surgery extending to six months.
11. Another course of Surgery, or of Clinical Surgery, at the option of the candidate.
12. Materia Medica, one course of lectures, three months.
13. Midwifery, one course of lectures, three months.
14. Practical Midwifery, attendance on at least six cases of labour.
15. Medical Jurisprudence, one course of lectures, three months.
16. Pathological Anatomy, instruction in the post-mortem rooms of a recognised hospital, three months.
17. Practical Pharmacy, instruction, three months.
18. General Hospital, attendance on the practice of a public general hospital, containing on an average not less than eighty patients, twenty-four months.
19. Proficiency in Vaccination, certified by a public vaccinator or a registered practitioner.

[Attendance for six months on the practice of a public dispensary, or certificate of having been engaged for six months as visiting assistant to a registered practitioner.—Edinburgh.]

Students are strongly recommended to avail themselves of any opportunities they may possess of studying Ophthalmic and Mental Diseases, Natural History, Comparative Anatomy, and Practical Physiology, in addition to what is required in the curriculum.

The examinations are conducted partly in writing and partly orally. Recent dissections, anatomical specimens, chemical tests, articles of the materia medica, the microscope, surgical and obstetrical apparatus, and pathological specimens, are employed at the discretion of the examiners. Candidates at the second examination are subjected in the hospital to a practical clinical examination in Medicine and Surgery.

Candidates for the double qualification who have passed the examination in Anatomy, Physiology, and Chemistry of one or other of the licensing bodies enumerated in Schedule (A) of the Medical Act, on complying with the regulations in other respects, are admissible to the second professional examination. No candidate is exempted from examination in any of the subjects of the second examination.

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7. KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

This body consists of Fellows and Licentiates. The regulations relating to the latter are as follows:—Candidates must produce—1. Evidence of having been engaged in the study of Medicine for four years. 2. A certificate of having passed the preliminary examination of one of the recognised licensing corporations before the termination of the second year of medical study. 3. Certificates of having studied at a school or schools recognised by the College, the following subjects, viz.:—Practical Anatomy, two courses; and Physiology or Institutes of Medicine, Botany, Chemistry, Practical Chemistry, Materia Medica, Practice of Medicine and Pathology, Surgery, Midwifery, Medical Jurisprudence, one course each. 4. Certificates of having attended a medico-chirurgical hospital in which regular courses of clinical lectures are delivered, together with clinical instruction, for twenty-seven months; and of having been in attendance during at least nine months on a clinical hospital which contains wards for the treatment of infectious fevers,(a) said nine months being included in the total period of twenty-seven months. 5. Of having attended Practical Midwifery and Diseases of Women for six months at a lying-in hospital or maternity recognised by the College; or, where such hospital attendance cannot have been obtained during any period of the student's course of study, of having been engaged in Practical Midwifery under the supervision of a registered practitioner holding public appointments; the certificate in either case to state that not less than twenty labour cases have been actually attended. 6. Certificates of character from two registered physicians or surgeons.

A candidate who has already obtained a medical or surgical qualification recognised by the College is only required to produce his diploma or certificate of registration, a certificate of Practical Midwifery, and testimonials as to character.

EXAMINATION FOR THE LICENCE IN MEDICINE.

The examination consists of two parts. The subjects of the first part, or previous examination, are—Anatomy, Physiology, Chemistry, and Materia Medica. The subjects of the second part, or final examination, are—Practice of Medicine, Medical Jurisprudence, Midwifery, Clinical Medicine, Pathology, Hygiene, and Therapeutics.

All candidates for the second or final examination (with the exception below specified) (b) are examined in the Practice of Medicine at the bedside in one of the hospitals of Dublin, and in the College by means of printed questions and orally in all the subjects of examination.

Candidates qualified as follows are required to undergo the *second part* of the professional examination *only*, viz.:—

(a) This rule to be enforced in the case of all candidates who commenced their studies since September, 1876.

(b) Registered practitioners of five years' standing are exempted from the written portion of the final examinations for both licences.

1. Graduates in Medicine of a university in the United Kingdom, or of any foreign university approved by the College. 2. Fellows, Members, or Licentiates of the Royal College of Physicians of London or Edinburgh, who have been admitted upon examination. 3. Graduates or Licentiates in Surgery. 4. Candidates who, having completed the curriculum above mentioned, have passed the previous professional examination or examinations of any of the licensing corporations in the United Kingdom.

LICENCE IN MIDWIFERY.

Candidates already qualified in Medicine or Surgery may apply for permission to be examined for the licence in Midwifery. The certificates required to be lodged are the same as those required from *qualified* candidates for the licence to practise Medicine.

Fees.—Fee for the licence in Medicine, £15 15s. Fee for licences in Medicine and Midwifery (for which latter there is a separate examination), if taken out within an interval of a month, £16 16s. Fee for the licence in Midwifery, £3 3s.

The election for Fellowship takes place twice a year, viz., on the first Friday in April and on St. Luke's Day (October 18). Candidates must be proposed and seconded three months previously.

REGULATIONS RESPECTING FEMALE CANDIDATES FOR EXAMINATION FOR A LICENCE TO PRACTISE AS MIDWIVES AND NURSE-TENDERS.

Qualifications.—Age not less than twenty-one years; certificates of character.

Preliminary Examination.—Reading, writing, and arithmetic.

Course of Instruction.—Six months' attendance on systematic lectures on Midwifery, and not less than six months' attendance on bedside instruction in a lying-in hospital or maternity recognised by the College.

Subjects for the Examinations.—Midwifery (not including operations) and Nurse-tending.

Examination fee, £1 1s.

8. THE ROYAL COLLEGE OF SURGEONS, IRELAND.

This body grants two qualifications—that of Fellow, and Letters Testimonial equivalent to a Licentiateship. The regulations relating to the latter are as follows:—

Candidates for the Letters Testimonial of the College may present themselves either at a Special or at a Stated Examination, as follows:—

SPECIAL EXAMINATIONS.

Every registered pupil shall be admitted, upon payment of a special fee of £5 5s., to a Special Examination for Letters Testimonial, if he shall have laid before the Council the following documents:—

a. A receipt showing that he has lodged, in addition to his registration and special fees, a sum of £21 in the Bank of Ireland, to the credit of the President, and for the use of the College.

b. A certificate that he has passed a preliminary examination, conducted by a board recognised by the General Medical Council, into the curriculum of which the Greek language enters as a compulsory subject.

c. A certificate showing that he has been engaged in the study of his profession for not less than four years.

d. Certificates of attendance during three years on a hospital recognised by the Council, where clinical instruction is given.

e. Certificates of attendance on three courses of lectures on Anatomy and Physiology; three courses of lectures on the Theory and Practice of Surgery; and of the performance of three courses of Dissections, accompanied by demonstrations; also certificates of attendance on two courses of lectures on Chemistry, or one course of lectures on General and one on Practical Chemistry; one course of lectures on Materia Medica; one course of lectures on the Practice of Medicine; one course of lectures on Midwifery; one course of lectures on Medical Jurisprudence; and one course of lectures on Botany.

N.B.—The subjects for examination, and the mode of carrying these out, for a Special Examination, will be the same as those hereinafter laid down for the Stated Examinations, and any rejected candidate will only be entitled to receive back £15 15s. of the fees lodged by him.

STATED EXAMINATIONS.

1st. Stated Examinations shall be held in the months of April, July, and November, commencing on dates of which due notice shall be given beforehand by the Council of the College, and to which *candidates cannot be admitted unless they be registered pupils*, and at which they shall be divided into two classes—Junior and Senior.

2nd. The Junior Class shall produce certificates of having passed a preliminary examination conducted by a board recognised by the General Medical Council, into the curriculum of which the Greek language enters as a compulsory subject; and of having attended three courses of lectures on Anatomy and Physiology; three courses of lectures on Practical Anatomy, with dissections; two courses of lectures on Chemistry; one course of lectures on Materia Medica; one course of lectures on Botany; and one course of lectures on Forensic Medicine.

3rd. This class shall be examined in Anatomy, Histology, Physiology, Materia Medica, and Chemistry.

4th. The fee for this examination shall be £5 5s., in addition to the registration fee of £5 5s.—not to be returned in case of rejection, but to be allowed the candidate in case he presents himself a second time for examination.

5th. The Senior Class shall produce certificates of having attended three courses of lectures on the Theory and Practice of Surgery, one course of lectures on the Practice of Medicine, and one course of lectures on Midwifery; also certificates of attendance on a recognised hospital for three winter and three summer sessions.

6th. This class shall be examined in Surgery, Operative Surgery and Surgical Appliances, Practice of Medicine, Medical Jurisprudence, and Prescriptions.

7th. The fee for the Senior Class Examination shall be £15 15s., returnable to the candidate in case of rejection.

8th. Both of these examinations shall be conducted partly by written and partly by oral questions.

9th. In addition to the foregoing fees, a fee of £1 1s. is to be paid to the Registrar on handing each licentiate his diploma.

10th. Every candidate rejected at any of the Stated Examinations, on applying for re-examination, shall be required to pay to the College, in addition to the regular fees, the sum of £2 2s. to reimburse the College the necessary expense of his re-examination.

This body also grants a diploma in Midwifery, for which the following are the regulations:—

Qualifications of Candidates for the Diploma in Midwifery.—Any Fellow or Licentiate of the College shall be admitted to an examination for the diploma in Midwifery upon laying before the Council the following documents:—*a.* A certificate showing that he has attended one course of lectures on Midwifery and Diseases of Women and Children, delivered by a professor or lecturer in some School of Medicine or Surgery recognised by the Council. *b.* A certificate showing that he has attended, during a period of six months, the practice of a lying-in hospital recognised by the Council; or the practice of a dispensary for lying-in women and children recognised by the Council and devoted to this branch of Surgery alone. *c.* A certificate showing that he has conducted thirty labour cases, at least.

Fees to be paid by Candidates for the Diploma in Midwifery. — The candidate pays £1 6s. for the Midwifery diploma, provided he takes it out within one month from the date of his letters testimonial; after that date the fee will be £2 2s.

9. THE APOTHECARIES' HALL OF IRELAND.

This body grants a licence to practise, on the following conditions:—

1. Of having passed an examination in Arts previously to entering on professional study.

2. Of being at least twenty-one years of age, and of good moral character.

3. Of pupilage to a qualified apothecary, or of having been otherwise engaged in practical pharmacy for a period of twelve months subsequent to having passed the examination in Arts.

4. Of having spent four years in professional study.

5. Of having attended the following courses, viz.:—Chemistry, during one winter session; Anatomy and Physiology, during two winter sessions; Demonstrations and Dissections, during two winter sessions; Botany and Natural History, during one summer session; Practical Chemistry (in a recognised laboratory), during three months; Materia Medica, during three months; Principles and Practice of Medicine and Therapeutics, during one winter session; Midwifery and Diseases of Women and Children, during six months; Practical Midwifery at a recognised hospital (attendance upon twenty cases); Surgery, during one winter session; Forensic Medicine, during one summer session; instruction in the practice of Vaccination.

6. Of having attended, at a recognised hospital or hospitals

the practice of Medicine and clinical lectures on Medicine, during two winter and two summer sessions; also the practice of Surgery and clinical lectures on Surgery, during one winter and one summer session.

7. Of practical study, with care of patients, as apprentice, pupil, assistant, clinical clerk, or dresser, in hospital, dispensary, or with a registered practitioner.

8. Of having performed the operation of vaccination successfully under a recognised vaccinator.

The examination for the licence to practise is divided into two parts:—The first part comprehends Chemistry, Botany, Anatomy, Physiology, Materia Medica, and Pharmacy; the second—Medicine, Surgery, Pathology, Therapeutics, Midwifery, Forensic Medicine, and Hygiene.

The professional examinations will be held quarterly, and will commence on the first and second Mondays in the months of January, April, July, and October.

THE HIGHER QUALIFICATIONS.

Besides the ordinary qualifications available to students who have just finished their curriculum, there are higher grades in the profession attainable after a certain period. Thus, at the Universities the student first graduates M.B., and after certain years, with or without a special examination, proceeds to the degree of M.D. At the Royal College of Physicians, in the same manner, with or without the Licentiateship, one may proceed to take the Membership of the College; but this is rarely done save by those who desire to practise what is called "pure" Medicine. This is by the rules of most institutions a necessary qualification for one desiring the post of Physician. The reason of this limitation is that the by-laws of the College impose such restrictions on its Members that it is hardly possible for them to practise as general practitioners. Again, at the College of Surgeons, those who have obtained the qualification of M.R.C.S.E. may, after certain special study, to which we need not here further refer, present themselves for examination for the Fellowship. This stands in the same relationship to the surgical branch of our profession as does the Membership of the Royal College of Physicians to the purely medical; but, inasmuch as the restrictions are less onerous, it is also possessed by many general practitioners. These, however, are not Student-qualifications, and consequently the rules and regulations relating to them are here omitted.

THE SELECTION OF A SCHOOL.

The pupil or his friends having determined in their own minds the body whose qualification is to be sought, and the consequent curriculum to be followed, the next thing is to seek the means of following out this curriculum, and of obtaining the knowledge neccssary for the acquisition of the diploma. This is commonly a simple enough matter, for if a student desires to obtain the degree of M.B. Edinburgh, he naturally enters himself as a student in the University. In London it is otherwise. Here we would advise all who desire an ordinary qualification in Medicine and Surgery to look forward to those offered by the Royal Colleges of Physicians and Surgeons. The licence of the Apothecaries' Society is in many ways useful, but it does not possess the same high character as that given by the Royal College of Physicians. The curricula of the English schools are specially adapted to the regulations of these bodies, and hence there is no difficulty in obtaining what the student wants. The difficulty to be solved is, where to get it of the best quality. In other words, the student or his friends have to select one of the eleven metropolitan or one of the provincial schools in which to pursue his studies. This, in many instances, is settled by matter of convenience; the youth's residence, or that of some of his friends, may make them select the nearest school, be it great or small. But when neither this nor any other reason is operative, the selection of a school often becomes a somewhat difficult matter. Above all, there is the old difficulty of a large school or a small. The largest schools are St. Bartholomew's, Guy's, and University College; the first two having at the same time the largest hospitals, with the exception of the London Hospital, in London; but, on the other hand, University College Hospital is one of the smallest. This very effectually deals with the idea that the success of a school exactly corresponds to the size of the hospital with which it is associated. The truth is, that the size of the hospital does not greatly matter. It is quite impossible for any one student to attend upon the whole practice of even a small hospital with advantage. A physician or surgeon finds that the number of beds he can use with advantage to himself and others is very limited; and still more is this the case with the student. Again, as regards class-work, there can be no doubt that with a large body of young men enthusiasm is highly contagious; but so, too, is indifference; and as regards tutorial work there can be no question of the superiority of a small class over a large one. The place to select—for all the recognised hospitals are large enough—is where the teachers are active and enthusiastic, and have got their way to make in the world, whose success must in great measure depend on the success of their school. University College is a good example of what may be done in this way, for the teachers there have by such means raised their numbers to a height which is hardly manageable in so small a hospital.

ENTRANCE SCHOLARSHIPS.

The following is a list of Entrance Scholarships given at the various London hospitals:—

St. Bartholomew's Hospital.—Two open Scholarships in Science, each £130 for one year. Subjects: Physics, Chemistry, Botany, and Zoology. Also one of £50 in preliminary education.

Charing-cross Hospital.—Two Entrance Scholarships, £30 and £20. Subjects—Compulsory: English, Latin, French or German, Mathematics; Optional (one only may be selected): Chemistry, Mechanics, German or French. The subjects and authors will be the same as those chosen for the London matriculation of the preceding June.

Guy's Hospital.—Two of £26 5s.—one in preliminary education, the other in science.

King's College.—Three Scholarships of £25—two for three years, one for two; Divinity, Classics, Mathematics, History (English), Chemistry, Botany, and Natural Philosophy; also one of £100 in science only.

London Hospital.—Two Entrance Science Scholarships, £60 and £40. Preliminary education.

St. Mary's Hospital.—One Entrance Scholarship, £120; one Exihbition, £20. Natural Science.

St. Thomas's Hospital.—Two (£60 and £40) Entrance Science Scholarships. Subjects the same as for the Preliminary Scientific Examination of the University of London.

Middlesex Hospital.—Two Entrance Scholarships, £25 and £20, tenable for two years.

University College.—Three Entrance Scholarships, £30, £20, and £10, tenable for two years. Preliminary education.

Westminster Hospital.—Four Entrance Scholarships—two of £50 for two years, and two of £10 for one year. Latin, Mathematics, French or German, and Physics and Chemistry.

LONDON HOSPITALS AND MEDICAL SCHOOLS.

ST. BARTHOLOMEW'S HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Consulting Physicians.

Sir G. Burrows, Bart., D.C.L., F.R.S., Dr. Farre, Dr. Harris, Dr. Martin.

Consulting Surgeon—Sir J. Paget, Bart., D.C L., F.R.S.

Physicians.
Dr. Black.
Dr. Andrew.
Dr. Southey.
Dr. Church.

Assistant-Physicians.
Dr. Gee.
Dr. Duckworth.
Dr. Hensley.
Dr. Brunton, F.R.S.

Physician-Accoucheur.
Dr. Matthews Duncan.

Assistant Physician-Accoucheur.
Dr. Godson.

Surgeons.
Mr. Holden.
Mr. Savory, F.R.S.
Mr. Callender, F.R.S.
Mr. Thomas Smith.

Assistant-Surgeons.
Mr. Willett.
Mr Langton.
Mr. Morrant Baker.
Mr. Marsh.

Ophthalmic Surgeons.
Mr. Power.
Mr. Vernon.

Casualty Physicians—Dr. Wickham Legg, Dr. Bridges, Dr. Champneys.
Dental Surgeon—Mr. Coleman.
Administrator of Chloroform—Mr. Mills.
Medical Registrar—Dr. Champneys.
Surgical Registrars—Mr. Butlin, Mr. Macready.

LECTURES.

Botany—Rev. George Henslow.
Chemistry and Practical Chemistry—Dr. Russell.
Clinical Medicine—Dr. Black, Dr. Andrew, Dr. Southey, and Dr. Church.
Clinical Surgery—Mr. Holden, Mr. Savory, Mr. Callender, Mr. Thos. Smith.
Comparative Anatomy—Dr. Moore.
Dental Anatomy and Surgery—Mr. Coleman.
Descriptive and Surgical Anatomy—Mr. T. Smith and Mr. Langton.
Forensic Medicine and Hygiene—Dr. Southey.
General Anatomy and Physiology—Mr. Morrant Baker.
Histology—Dr. Klein.
Materia Medica—Dr. Brunton.
Medicine — Dr. Andrew and Dr. Gee.
Mental Diseases—Dr. Claye Shaw.
Midwifery and the Diseases of Women and Children—Dr. Matthews Duncan
Ophthalmic Medicine and Surgery—Mr. Power.
Pathological Anatomy—Dr. Gee.
Surgery—Mr. Savory and Mr. Callender.

DEMONSTRATIONS.

Diseases of the Ear—Mr. Langton.
Diseases of the Eye—Mr. Vernon.
Diseases of the Skin—Mr. Baker.
Mechanical and Natural Philosophy—Mr. C. R. Smith.
Morbid Anatomy—Dr. W. Legg.
Orthopædic Surgery—Mr Willett.
Practical Anatomy and Operative Surgery—Mr. Cumberbatch, and Mr. Walsham.
Practical Physiology—Dr. V. Harris.
Practical Surgery—Mr. Marsh.

Medical Tutor—Dr. Moore.

This Hospital comprises a service of 710 beds, of which 676 are in the Hospital in Smithfield, and 34 are for convalescent patients at Lauderdale House, Highgate.

SCHOLARSHIPS AND PRIZES.

The following scholarships and prizes are awarded:—Open Scholarships in Science, founded 1873; subjects of examination—Physics, Chemistry, Botany, and Zoology. These scholarships, of the value of £130 each, tenable for one year, will be competed for on September 25 and following days. Preliminary Scientific Exhibition, founded 1873; subjects of examination—Physics, Chemistry, Botany, and Zoology. This Exhibition, of the value of £50, is awarded in October. Lawrence Scholarship and Gold Medal, of the value of £40, founded in 1873 by the family of the late Sir W. Lawrence. Brackenbury Scholarship in Medicine, and Brackenbury Scholarship in Surgery, founded in 1873 by the will of the late Miss Hannah Brackenbury, who left £2000 for this purpose. Senior Scholarship of the value of £50—Anatomy, Physiology, and Chemistry. Junior Scholarships of the value of £50, £30, and £20 are awarded after an examination in the subjects of study of the first year at the end of the summer and winter sessions. The Jeaffreson Exhibition, of the value of £50, is awarded at the commencement of each winter session, after open competition, on the same days as the Science Scholarships in Classics, Mathematics, and Modern Languages. The Wix Prize is awarded for the best essay on the following subject—"The Life and Works of Sydenham." Hichens Prize: subject of examination—Bishop Butler's Analogy. Bentley Prize, for the best report of medical cases occurring in the wards of the Hospital during the previous year. It is expected that the reports will comprise the histories, progress, treatment, and results of not less than twelve cases, with observations thereupon. Foster Prize: subject of examination—Practical Anatomy; senior. Treasurer's Prize: subject of examination—Practical Anatomy; junior. The Kirkes Gold Medal: subject of examination—Clinical Medicine.

FEES.

Whole fee for attendance on lectures and hospital practice £138 12s., payable by instalments, or a single payment of £131 5s. Payment in either of these ways entitles to a prpetual ticket.

A College for resident students exists in connexion with the Hospital; Warden, Dr. Norman Moore, from whom students will obtain information respecting rooms in the College, or will be advised regarding residence out of the Hospital.

All communications to be addressed to the Warden of the College, St. Bartholomew's Hospital, E.C.

CHARING-CROSS HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Consulting Physician—Sir Joseph Fayrer, M.D., K.C.S.I., F.R.S.
Consulting Surgeons—Mr. H. Hancock, F.R.C.S., and E. Canton, F.R.C.S.

Physicians.
Dr. A. J. Pollock.
Dr. A. Silver.
Dr. T. H. Green.

Assistant-Physicians.
Dr. J. Mitchell Bruce.
Dr. J. Pearson Irvine.
Dr. David B. Lees.
Dr. W. B. Houghton.

Physician-Accoucheur.
Dr. J. Watt Black.

Physician for Skin Diseases.
Dr. A. Sangster.

Medical Registrar.
Dr. Robert Smith.

Surgeons.
Mr. F. Hird.
Mr. R. Barwell.
Mr. E. Bellamy.

Assistant-Surgeons.
Mr. J. Astley Bloxam.
Mr. R. J. Godlee.
Mr. E. Amphlett.

Dental Surgeon.
Mr. John Fairbank.

Chloroformists.
Mr. Woodhouse Braine.
Mr. G. H. Bailey.

Surgical Registrar.
Mr. Daniel Colquhoun.

LECTURERS AND TEACHERS.

Anatomy—Mr. Edward Bellamy.
Bandaging, etc.—Mr. J. A. Bloxam.
Botany—Rev. J. C. Saunders.
Chemistry & Practical Chemistry—Mr. C. W. Heaton; Demonstrator, Mr. A. H. Hooker.
Clinical Medicine—Dr. Alexander Silver.
Clinical Surgery—Mr. H. Hancock.
Comparative Anatomy—Dr. J. F. Blake.
Demonstrations and Dissections—Mr. James Cantlie and Mr. H. R. Whitehead.
Dental Surgery — Mr. John Fairbank.
Diseases of Children—Dr. W. B. Houghton.
Forensic Medicine—Dr. J. Pearson Irvine.
Materia Medica and Therapeutics—Dr. J. Mitchell Bruce.
Mental Diseases—Dr. L. S. Forbes Winslow.
Morbid Histology—Mr. Jas. Cantlie.
Operative Surgery—Mr. Edward Bellamy.
Pathology and Morbid Anatomy—Dr. T. Henry Green.
Physiology, Theoretical and Practical—Dr. Alexander Silver and Mr. Daniel Colquhoun.
Practical Chemistry—Mr. C. W. Heaton; Demonstrator—Mr. A. H. Hooker.
Principles and Practice of Medicine—Dr. A. J. Pollock.
Principles and Practice of Midwifery and Diseases of Women—Dr. J. Watt Black.
Principles and Practice of Surgery—Mr. R. Barwell.
Public Health — Dr. J. Pearson Irvine, Mr. C. W. Heaton, and Mr. W. Eassie.
Skin Diseases—Dr. A. Sangster.
Surgical Pathology—Mr. E. Amphlett.

SCHOLARSHIPS, MEDALS, AND PRIZES.

Two Entrance Scholarships, of the value of £30 and £20 respectively, tenable for one year, will be awarded annually in October, after a competitive examination in the following subjects:—Compulsory: English, Latin, French or German, Mathematics. Optional (only one of which may be selected): Chemistry, Mechanics, German or French. The subjects (as regards extent and the authors selected) will be the same as those chosen for the Matriculation Examination of the University of London in the June immediately preceding. Candidates must give notice of their intention to compete on or before Saturday, September 21, 1878. The successful candidates will be required to enter for their medical education at Charing-cross Hospital.

The Llewellyn Scholarship of £25 is open to all matriculated students who have just completed their second academical year. The examination is held at the end of the second summer session, and includes the following subjects:—Descriptive and Surgical Anatomy, Physiology, Materia Medica, Medicine, Surgery, Midwifery.

The Golding Scholarship of £15 is open to all matriculated students who have just completed their first academical year. The examination is held at the end of the first summer session, and includes the following subjects:—Descriptive Anatomy, Physiology, Materia Medica, and Chemistry.

The Pereira Prize of £5 is open to all matriculated students who shall have completed their third academical year. It is awarded to the author of the best Clinical Reports of Cases in the Hospital during the preceding year, Medical and Surgical Cases being selected in alternate years.

Each candidate must produce a certificate of good conduct from the Dean of the Medical School, at the time of giving in his name as a competitor; and the names of the candidates for Scholarships are to be delivered to the Librarian one week before the first day of the examination.

The Governors' Clinical Gold Medal.—The competition for this medal is open to matriculated students who shall have completed, at the end of the current session, their attendance

on the Medical and Surgical Practice of the Hospital. Candidates are examined on the subjects of Clinical Lectures delivered during the session, and on Medical and Surgical Cases in the wards of the Hospital.

Silver Medals.—Silver Medals are awarded in all the classes.

Bronze Medals.—Where two sessions' attendance on a course are required, a Bronze Medal is awarded in the junior class, in addition to the Silver one in the senior class.

Certificates of Honour are awarded to both senior and junior students who, not being the most proficient, have yet attained a marked degree of excellence.

ST. GEORGE'S HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Consulting Physicians—Dr. Wilson, Dr. Pitman, Dr. Ogle.
Consulting Surgeons—Mr. Cæsar Hawkins, F.R.S., Mr. Tatum, Mr. Prescott Hewett, F.R.S., Mr. H. Lee.

Physicians.	*Surgeons.*
Dr. Barclay.	Mr. Pollock.
Dr. Wadham.	Mr. Holmes.
Dr. Dickinson.	Mr. Rouse.
Dr. Whipham.	Mr. Pick.
Assistant-Physicians.	*Assistant-Surgeons.*
Dr. Cavafy.	Mr. Haward.
Dr. Watney.	Mr. Stirling.

Obstetric Physician—Dr. Barnes.
Ophthalmic Surgeon—Mr. Brudenell Carter.
Aural Surgeon—Mr. Dalby. *Dental Surgeon*—Mr. A. Winterbottom.

LECTURERS.—WINTER SESSION.

Chemistry and Physics—Mr. Wanklyn.
Clinical Lectures on Diseases of Women—Dr. Barnes.
Clinical Medicine—Drs. Dickinson and Barclay.
Clinical Surgery—Messrs. Pollock and Pick.
Descriptive and Surgical Anatomy—Mr. Pick.
Histology—Mr. Stirling.
Morbid Anatomy—Dr. Ewart.
Ophthalmic Surgery—Mr. Brudenell Carter.
Pathology—Dr. Whipham.
Physiological Chemistry—Dr. Ralfe.
Physiology and General Anatomy—Dr. Cavafy.
Principles and Practice of Physic—Drs. Barclay and Dickinson.
Principles and Practice of Surgery—Mr. Holmes and Mr. Rouse.

SUMMER SESSION.

Aural Surgery—Mr. Dalby.
Botany—Dr. Owen.
Clinical Demonstrations of Diseases of the Skin—Dr. Wadham.
Clinical Medicine—Dr. Whipham.
Clinical Surgery—Mr. Holmes.
Comparative Anatomy—Dr. Brailey.
Dental Surgery—Mr. Edgelow.
Materia Medica—Dr. Watney.
Medical Jurisprudence—Dr. Wadham.
Midwifery and Diseases of Women and Children—Dr. Barnes.
Practical Chemistry—Mr. Wanklyn.
Practical Medicine—Dr. Whipham.
Practical Surgery—Mr. Haward.
Psychological Medicine—Dr. Blandford.

EXHIBITIONS AND PRIZES.

"The William Brown Exhibition," of £100 per annum, tenable for two years, to be competed for by perpetual pupils who have recently obtained their diploma. "The William Brown Exhibition," of £40 per annum, tenable for three years, to be competed for by students during their fourth year of study. The Brackenbury Prizes of £35 each in Medicine and Surgery, awarded annually after a competitive examination. The Treasurer's Clinical Prize of £10 10s., the gift of the Duke of Westminster, to be competed for annually. Sir Charles Clarke's Prize for good conduct: The interest of £200 Consols, to be awarded annually to the student of the Hospital "who, by reason of his general good conduct during the preceding year, should be considered the most deserving." The Thompson Medal: A silver medal to be awarded annually for the best clinical report of medical and surgical cases observed in the Hospital during the preceding twelve months. Sir Benjamin Brodie's Clinical Prize in Surgery will be awarded to the pupil of the Hospital who shall have delivered to the Surgeons the best report of not more than twelve surgical cases which have occurred in the Hospital during the preceding twelve months. Dr. Acland's Clinical Prize in Medicine will be awarded to the pupil of the Hospital who shall produce the best report of not more than twelve medical cases which have occurred in the Hospital during the preceding twelve months. The Henry Charles Johnson Memorial Prize in Anatomy will be awarded to that pupil who shall, in the judgment of the Medical School Committee, exhibit the greatest proficiency in Practical Anatomy. General Proficiency Prizes: To pupils in their first year, £10 10s.; to pupils in their second year, £10 10s.; to pupils in their third year, £10 10s.

FEES.

Perpetual pupils pay £45 in their first year, £45 in their second year, and £40 in their third year of study, or £125 on entrance.

Gentlemen are admitted to the hospital practice and lectures required for the licensing bodies on payment of the following fees—viz., £45 for the first year of study, £45 for the second year of study, and £20 for the two succeeding years.

Dental pupils are admitted to the required courses on payment of £30 for their first year, and £25 for their second year, including Practical Chemistry.

Pupils may also enter to the hospital practice and lectures separately.

For further particulars apply to Dr. Barclay, Treasurer, or Dr. Wadham, Dean of the School.

GUY'S HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Consulting Physicians—Sir William Gull, Bart., Dr. G. Owen Rees.
Consulting Obstetric Physician—Dr. Henry Oldham.
Consulting Surgeons—Mr. J. Hilton, Mr. E. Cock, Mr. Birkett.

Physicians.	*Surgeons.*
Dr. S. O. Habershon.	Mr. J. Cooper Forster.
Dr. S. Wilks.	Mr. Thomas Bryant.
Dr. F. W. Pavy.	Mr. Arthur Durham.
Dr. W. Moxon.	Mr. H. G. Howse.
Assistant-Physicians.	*Assistant-Surgeons.*
Dr. C. Hilton Fagge.	Mr. N. Davies-Colley.
Dr. P. H. Pye-Smith.	Mr. R. Clement Lucas.
Dr. Frederick Taylor.	Mr. C. H. Golding-Bird.
Dr. J. F. Goodhart.	Mr. W. H. A. Jacobson.
Obstetric Physician.	*Ophthalmic Surgeons.*
Dr. J. Braxton Hicks.	Mr. C. Bader.
	Mr. C. Higgens, *Asst.*
Assistant Obstetric Physician.	*Dental Surgeons.*
Dr. A. L. Galabin.	Mr. S. J. A. Salter.
	Mr. H. Moon, *Asst.*
Medical Registrar.	*Aural Surgeon.*
Dr. Mahomed.	Mr. W. Laidlaw Purves.
Curator of the Museum.	*Surgical Registrar.*
Dr. Fagge.	Mr. G. A. Wright.

Dean—Dr. F. Taylor.

WINTER COURSES.—LECTURES.

Anatomy, Descriptive and Surgical—Mr. Howse and Mr. Davies-Colley.
Chemistry — Dr. Debus and Dr. Stevenson.
Clinical Medicine—Dr. Habershon, Dr. Wilks, Dr. Pavy, and Dr. Moxon.
Clinical Surgery—Mr. Forster, Mr. Bryant, Mr. Durham, and Mr. Howse.
Clinical Lectures on Midwifery and Diseases of Women—Dr. Braxton Hicks.
Experimental Physics—Prof. A. W. Reinold.
Medicine—Dr. Wilks and Dr. Pavy.
Physiology—Dr. Pye-Smith.
Surgery — Mr. Bryant and Mr. Arthur Durham.

DEMONSTRATIONS.

Cutaneous Diseases — Dr. Pye-Smith.
Morbid Anatomy—Dr. Fagge and Dr. Goodhart.
Practical Surgery—Mr. Lucas.
Practical Anatomy—Mr. W. H. A. Jacobson, Mr. R. E. Carrington, and Mr. C. J. Symonds.
Practical Physiology—Mr. Golding-Bird.

SUMMER COURSES.—LECTURES.

Botany—Mr. Bettany.
Clinical Medicine—Dr. Fagge, Dr. Pye-Smith, Dr. F. Taylor, and Dr. Goodhart.
Clinical Surgery—Mr. Davies-Colley, Mr. Clement Lucas, Mr. Golding-Bird, and Mr. Jacobson.
Clinical Lectures on Diseases of Women—Dr. A. L. Galabin.
Comparative Anatomy and Zoology—Dr. Brailey.
Dental Surgery—Mr. Moon.
Hygiene—Dr. F. Taylor.
Materia Medica and Therapeutics—Dr. Moxon.
Medical Jurisprudence—Dr. Stevenson.
Mental Diseases—Dr. Savage.
Midwifery and Diseases of Women—Dr. Braxton Hicks.
Ophthalmic Surgery—Mr. Bader.
Pathology—Dr. Fagge.

DEMONSTRATIONS.

Morbid Histology—Mr. Howse.
Practical Chemistry—Dr. Debus.
Operative Surgery—Mr. Lucas.

This Hospital contains 695 beds.

Open Scholarships.—An open Scholarship of the value of £131 5s. in Classics, Mathematics, Modern Languages. An open Scholarship of the value of £131 5s. in Science.

PRIZES.

For First Year's Students.—At the end of the summer session, in Anatomy, Physiology, Chemistry, Materia Medica, Botany, and Comparative Anatomy: Prizes, £50, £25, and £10 10s. (presented by one of the Governors). *For Second Year's Students.*—In the winter session, the Michael Harris Prize of £10 in Anatomy. Summer session, examination in Anatomy and Physiology: The Joseph Hoare Prizes of £25 and £10; the Sands-Cox Scholarship of £15 per annum, tenable for three years—subject, Physiology. *For Third Year's Students.*—Summer session, examination in Medicine, Surgery, Midwifery, and Medical Jurisprudence: Prizes £35 and £20. *For Senior Students.*—The Treasurer's Gold Medal for Clinical Medicine; the Treasurers' Gold Medal for Clinical Surgery; the Gurney Hoare Prize of £25 for Clinical Medicine and Surgery.

FEES.

The fees for hospital practice and lectures are as follows:—A perpetual ticket may be obtained—(1.) By the payment of £131 5s. on entrance. (2.) By two payments of £66, at the commencement of the first winter session and the following summer session. (3.) By the payment of three annual instalments, at the commencement of the sessional year: First year £50; second year, £50; third year, £37 10s. Materials used in practical courses are charged extra.

For further information apply to the Dean, Dr. F. Taylor.

KING'S COLLEGE HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Consulting Physicians—Sir Thos. Watson, Bart., M.D., Dr. George Budd, Dr. Arthur Farre, Dr. W. A. Guy, Dr. W. O. Priestley, Dr. A. B. Garrod.

Physicians.

Dr. George Johnson.
Dr. Lionel S. Beale.
Dr. Alfred B. Duffin.
Dr. William Playfair.
Dr. J. Burney Yeo.

Assistant-Physicians.

Dr. David Ferrier.
Dr. E. B. Baxter.
Dr. John Curnow.
Dr. T. C. Hayes.

Surgeons.

Mr. John Wood.
Mr. Joseph Lister.
Mr. Henry Smith.
Mr. H. Royes Bell.

Assistant-Surgeons.

Mr. William Rose.
Mr. Gerald Yeo.

Dental Surgeon.

Mr. S. Hamilton Cartwright.

Ophthalmic Surgeon—Mr. J. Soelberg Wells.
Aural Surgeon—Dr. Urban Pritchard.
Vaccinator—Mr. R. W. Dunn.
Pathological Registrar—Mr. A. B. Barrow.
Chloroformist—Mr. Charles Moss.
Registrar—Dr. Hebb.

LECTURES.

Anatomy, Descriptive and Surgical—Dr. John Curnow.
Botany—Mr. Robert Bentley.
Chemistry and Practical Chemistry—Mr. C. L. Bloxam; Mr. W. N. Hartley, Demonstrator; Mr. J. M. Thomson, Assist.-Demonstrator.
Clinical Medicine—Dr. George Johnson.
Clinical Surgery—Mr. John Wood, Mr. Joseph Lister.
Comparative Anatomy—Mr. A. H. Garrod.
Dental Surgery—Mr. S. Hamilton Cartwright.
Forensic Medicine—Dr. D. Ferrier.
Materia Medica and Therapeutics—Dr. E. B. Baxter.
Principles and Practice of Medicine—Dr. L. S. Beale.
Obstetric Medicine, and the Diseases of Women and Children—Dr. W. Playfair.
Ophthalmology—Dr. J. Soelberg Wells.
Pathological Anatomy—Dr. A. B. Duffin.
Physiology and Practical Physiology—Dr. Gerald F. Yeo.
Psychological Medicine—Dr. Edgar Sheppard.
Principles and Practice of Surgery.
Surgery and Practical Surgery—Mr. Henry Smith; Mr. H. Royes Bell, Mr. W. Rose, and Mr. Gerald F. Yeo, Demonstrators.

Dean of the Faculty—Professor Bentley.
Sub-Dean and Medical Tutor—Dr. N. I. C. Tirard.

University of London Preliminary Scientific Examination.—Special courses of lectures and practical work in the chemical, physical, and physiological laboratories have been arranged during the winter and summer sessions to meet the requirements of the University of London for this examination.

SCHOLARSHIPS AND PRIZES.

Warneford Scholarships: "For the encouragement of the previous education of medical students," two scholarships of £25 per annum for three years, one of £25 per annum for two years, and "For the encouragement of resident medical students," one scholarship of £25 per annum for two years. Medical Scholarships: The following are given every year to matriculated students of this department:—1. One of £40 for two years, open to students of the third and fourth years; 2. One of £30 for one year, open to students of the second year; 3. One of £20 for one year, open to students of the first year. Daniell Scholarship: £20, tenable for two years; is open to every student of the College who has worked in the laboratory for at least six months. Sambrooke Registrarships: Two of £50 every year. Science Exhibition: One annually of £100, for proficiency in Physics, Chemistry, Botany, and Zoology. Leathes Prizes: Bible and Prayer-book annually to two matriculated medical students. Warneford Prizes: £40 is expended annually in the purchase of medals and books as prizes to two matriculated medical students. Class Prizes are awarded annually of the value of £3 in each subject of study. Two Medical Clinical Prizes, one of £3 for the winter session, and the other of £2 for the summer session, and two Surgical Clinical Prizes of the same value, are given annually for attendance at the Hospital. Todd Medical Clinical Prize: This prize was founded in memory of the late Dr. Todd, and is awarded annually. It consists of a bronze medal and books to the value of £4 4s. Tanner Prize: Of the value of £10 in each year, for proficiency in the study of Obstetric Medicine.

FEES.

The fees for perpetual attendance amount to £125 if paid in one sum on entrance; or £130 if paid in two instalments—viz., £70 on entrance and £60 at the commencement of the second winter session; or £135 if paid in three instalments—viz., £60 on entrance, £50 at the beginning of the second winter session, and £25 at the beginning of the third winter session. Students are, however, recommended to add to the above the fee for attendance on the medical tutor's class for one year—viz., £3 3s.; or, in the case of those preparing for the Preliminary Scientific Examination of the University of London, £5 5s.

For further information apply to Professor Bentley, Dean of the Medical Faculty.

LONDON HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Consulting Physician—Dr. Herbert Davies.
Consulting Surgeons—Mr. Luke and Mr. Curling.

Physicians.

Dr. Andrew Clark.
Dr. Ramskill.
Dr. Langdon Down.
Dr. Hughlings-Jackson.
Dr. Sutton.
Dr. Fenwick.

Assistant-Physicians.

Dr. Stephen Mackenzie.
Dr. A. E. Sansom.
Dr. F. Charlewood Turner.
Dr. J. Barlow.
Dr. Gilbart Smith.

Surgeons.

Mr. Hutchinson.
Mr. Maunder.
Mr. Couper.
Mr. Rivington,
Mr. Jas Adams.
Mr. Waren Tay.
Mr. McCarthy.

Assistant-Surgeon—Mr. Reeves.
Obstetric Physician—Dr. Palfrey. *Surgeon-Dentist*—Mr. A. W. Barrett.
Surgeons to the Ophthalmic Department—Mr. James Adams and Mr. Waren Tay.
Surgeon to the Aural Department—Mr. A. Gardiner Brown.
Physician to the Skin Department—Dr. S. Mackenzie.

LECTURES.

Anatomy and Pathology of the Teeth—Mr. A. W. Barrett.
Botany—Mr. John Gilbert Baker.
Chemistry—Dr. C. Meymott Tidy.
Comparative Anatomy—Dr. E. B. Aveling.
Descriptive and Surgical Anatomy—Mr. Walter Rivington.
Diseases of the Throat and Use of the Laryngoscope—Dr. Morell Mackenzie.
Forensic Medicine—1. Toxicology, Mr. J. E. D. Rodgers; 2. Medical Jurisprudence and Public Health, Dr. C. Meymott Tidy.
Materia Medica and General Therapeutics—Dr. M. Prosser James.
Medicine—Dr. Sutton and Dr. S. Fenwick.
Midwifery and Diseases of Women—Dr. James Palfrey.
Pathology and Demonstrations of Morbid Anatomy—Dr. H. G. Sutton.
Practical Anatomy—Dr. Wilson.
Practical Chemistry—Dr. C. Meymott Tidy.
Practical Histology, and Use of the Microscope—Mr. J. McCarthy.
Physiology and General Anatomy—Mr. J. McCarthy.
Ophthalmic Surgery—Mr. J. Couper.
Special Operative Surgery—Mr. C. F. Maunder.
Surgery—Mr. John Couper.

Principal—Dr. Norman Chevers.

SCHOLARSHIPS AND PRIZES.

Nine scholarships will be offered for competition during the ensuing winter and summer sessions.

Two Entrance Scholarships in Natural Science, of the value of £60 and £40 respectively, will be offered for competition at the end of September. The subjects will be the same as those for the Preliminary Scientific (M.B.) Examinations at the University of London. (See the University Calendar for details.)

The two Buxton Scholarships will be awarded in October to the students who distinguish themselves most in the subjects appointed by the General Council of Medical Education and Registration as the subjects of the preliminary examinations. 1. A scholarship, value £30, to the student placed first in the examination. 2. A scholarship, value £20, to the student placed second in the examination. 3. A scholarship, value £20, will be awarded to the first-year student who shall pass in April, 1878, the best examination in Human Anatomy. 4. A scholarship, value £25, will be awarded to the first-year or second-year student who shall pass at the end of the winter session the best examination in Anatomy, Physiology, and Chemistry. 5. A hospital scholarship, value £20, for proficiency and zeal in Clinical Medicine. 6. A hospital scholarship, value £20, for proficiency and zeal in Clinical Surgery. 7. A hospital scholarship, value £20, for proficiency and zeal in Obstetrics (awarded at the end of June, 1878). A prize of £5 is also awarded to the student who has attended most midwifery cases for the Hospital during the previous twelve months. The Duckworth-Nelson Prize, value £10, will be awarded by competition bien-

nially, and will be open to all students who have not completed their education. The subjects of examination will be Practical Medicine and Surgery. Money prizes, to the value of £60 per annum, are awarded by the House Committee to the most meritorious of the dressers in the out-patient rooms.

The Hospital contains nearly 800 beds, and the number of in-patients last year amounted to more than 7000.

Owing to the great size of the Hospital, the appointments are necessarily numerous and most valuable. They are all free to full students without additional fee.

The resident appointments consist of five House-Physiciancies, four House-Surgeoncies, and one Accoucheurship, each being tenable for six months. There are also two Resident Dressers and two Maternity Assistants, the holders of which appointments are required to have passed the primary examination at the College of Surgeons.

Attached to the Pathological Department of the London Hospital is a laboratory, under the supervision of Dr. Sutton, which contains a large number of microscopic sections, carefully indexed and recorded. This important addition is entirely due to the liberality of the Hospital authorities, and was made a part of the "Grocers' Wing" lately erected.

FEES.

Perpetual fee for attendance on all the lectures with two years' Practical Anatomy, and for attendance on medical and surgical practice, qualifying for examination at most of the medical and surgical boards, £94 10s. if paid in one sum, or £105 in three instalments of £42, £36 15s., and £26 5s., at the commencement of the first, second, and third years respectively; composition fee for gentlemen entering at or before the beginning of their second winter session, their first year having been spent elsewhere, £73 10s.; perpetual fee for lectures alone, £52 10s.; perpetual fee for hospital practice alone, £52 10s. Extra fees: Practical Chemistry (for apparatus, etc.), £2 2s.; subscription to the library (compulsory), £1 1s. The composition fee is payable in two instalments of £42 and £31 10s.

Graduates of Universities who have attended lectures in Anatomy, Physiology, Chemistry, Botany, or Comparative Anatomy, and have obtained signatures for such attendance, fulfilling the requirements of the Examining Boards, may become pupils of the London Hospital, eligible for all hospital prizes and appointments, on payment of the fee of £52 10s. for practice (perpetual) at the Hospital.

Communications addressed to the Principal, at the London Hospital Medical College, Turner-street, Mile-end, London, E., will receive immediate attention.

ST. MARY'S HOSPITAL.

MEDICAL OFFICERS.

Consulting Medical Officers.

Sir James Alderson, M.D., F.R.S., Dr. Chambers, Mr. Lane, Mr. Spencer Smith, Mr. White Cooper.

Physicians.	*Surgeons.*
Dr. Handfield Jones.	Mr. Haynes Walton.
Dr. Sieveking.	Mr. James R. Lane.
Dr. Broadbent.	Mr. Norton.
Assistant-Physicians.	*Assistant-Surgeons.*
Dr. Cheadle.	Mr. Edmund Owen.
Dr. Shepherd.	Mr. Herbert W. Page.
Dr. Farquharson.	Mr. Pye.

Physician-Accoucheur—Dr. Alfred Meadows.
Assistant Physician-Accoucheur—Dr. Wiltshire.
Physicians in charge of the Department for Diseases of the Skin—Dr. Cheadle, Dr. Farquharson.
Surgeon in charge of the Ophthalmic Department—Mr. Haynes Walton.
Surgeon in charge of the Department for Diseases of the Throat—Mr. Norton.
Aural Surgeon—Mr. G. Field.
Surgeon-Dentist—Mr. Howard Hayward.
Instructor in Vaccination—Mr W. A. Sumner.

LECTURES.—WINTER SESSION.

Anatomy—Mr Owen.
Clinical Medicine—Dr. Handfield Jones, Dr. Sieveking, and Dr. Broadbent.
Clinical Surgery — Mr. Haynes Walton, Mr. J. R. Lane, and Mr. Norton.
Chemistry and Natural Philosophy —Dr. C. R. A. Wright.
Dissections — Mr. J. G. Garbutt, Demonstrator; Mr. W. Pearce, Assistant Demonstrator.
Dental Surgery—Mr. Howard Hayward.
Experimental Physiology — Dr. Shepherd.
Medicine—Dr. Chambers and Dr. Broadbent.
Pathology—Dr. Cheadle.
Physiology—Mr. Pye.
Surgery—Mr. James R. Lane and Mr. Norton.
Practical Surgery—Mr. Herbert W. Page.

SUMMER SESSION.

Aural Surgery—Mr. G. Field.
Botany—Rev. J. M. Crombie.
Comparative Anatomy—Mr. St. George Mivart.
Diseases of the Skin—Dr. Cheadle.
Medical Jurisprudence—Dr. Randall.
Materia Medica—Dr. Farquharson.
Midwifery—Dr. Meadows and Dr. Wiltshire.
Ophthalmic Surgery—Mr. Haynes Walton.
Practical Chemistry—Dr. C. R. A. Wright.

The Hospital contains 190 beds—88 medical, and 102 surgical. There are special departments for the Diseases of Women and Children, and for Diseases of the Eye, the Ear, the Skin, and the Throat.

SCHOLARSHIPS, PRIZES, ETC.

Three Scholarships in Natural Science, each of a total value of £120, tenable for three years, and an Exhibition in Natural Science, for one year, value £20. One of the Scholarships and the exhibition are awarded by open competitive examination at the commencement of the winter session. For the year 1878 an extra scholarship will be awarded in Natural Science of a total value of £100. A Scholarship in Anatomy, of the annual value of £20 (the holder of which is styled Assistant-Demonstrator, and assists in the teaching of Practical Anatomy), is offered for competition amongst those students who have completed their second winter session; and a Scholarship in Pathology, of the value of £40 (the holder of which is styled Assistant-Curator), for those students who have completed their third winter session. Examinations for prizes are held at the termination of each session in the various classes for students of the first, second, and third year. Two Prosectors are appointed annually, who each receive a certificate and £5 for their services in the dissecting-room.

FEES.

The entrance fee for general students may be paid in instalments by arrangement with the Dean of the School. Students who have kept the two years' course at the University of Cambridge are admitted as perpetual pupils on payment of £72 9s., and those who have kept a portion of the course elsewhere at a proportionate reduction. A fee of £1 1s. is required to be paid to the library and reading-room. Instruction in vaccination can be obtained; fee £1 1s.

Further information may be obtained from Dr. Shepherd, Dean of the School; or from the Registrar, at the Hospital.

MIDDLESEX HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Consulting Physicians—Dr. A. P. Stewart, Dr. Goodfellow.
Consulting Surgeon—Mr. Shaw.
Consulting Dental Surgeon—Mr. Tomes, F.R.S.

Physicians.	*Surgeons.*
Dr. Henry Thompson.	Mr. Nunn.
Dr. Greenhow, F.R.S.	Mr. Hulke, F.R.S.
Dr. Cayley.	Mr. Lawson.
Assistant-Physicians.	
Dr. Robert King.	*Assistant-Surgeons.*
Dr. Sidney Coupland.	Mr. Morris.
Dr. Douglas Powell.	Mr. Andrew Clark.

Obstetric Physician—Dr. Hall Davis.
Assistant Obstetric Physician—Dr. Arthur Edis.
Ophthalmic Surgeon—Mr. Critchett.
Dental Surgeon—Mr. Turner.
Curator of Museum and Pathologist—Dr. Sidney Coupland.
Registrars—Dr. D. W. Finlay and Mr. R. W. Lyell.
Resident Medical Officer—Mr. Lucas.
Chloroformist—Mr. G. Everitt Norton.

LECTURES.—WINTER SESSION.

Chemistry—Mr. Wm. Foster.
Clinical Lectures on Medicine and Surgery—The Physicians and Surgeons.
Clinical Lectures on Diseases of Women and Children—Dr. J. Hall Davis.
Descriptive and Surgical Anatomy —Mr. Morris.
Pathological Anatomy—Dr. Coupland.
Physiology and General Anatomy—Mr. B. Thompson Lowne.
Practical Demonstrations on Diseases of the Eye—Mr. Critchett.
Practical Surgery—Mr. Morris and Mr. Andrew Clark.
Principles and Practice of Medicine —Dr. Cayley.
Principles and Practice of Surgery —Mr. Hulke and Mr. George Lawson.

SUMMER SESSION.

Botany—Mr. Hensman.
Clinical Lectures on Medicine and Surgery— The Physicians and Surgeons.
Clinical Lectures on Diseases of the Eye—Mr. Critchett.
Comparative Anatomy and Zoology —Mr. Hensman.
Materia Medica and Therapeutics— Dr. Thorowgood.
Medical Jurisprudence — Dr. R. King.
Midwifery and Diseases of Women and Children — Dr. J. Hall Davis.
Diseases of the Skin—Dr. Robert Liveing.
Practical Demonstrations on Diseases of Women and Children— Dr. Arthur Edis.
Practical Demonstrations on Diseases of the Larynx and Ear— Mr. Andrew Clark.
Practical Physiology and Histology —Mr. B. Thompson Lowne.
Practical Chemistry — Mr. Wm. Foster.
Psychological Medicine—Mr. Henry Case, Supt. Leavesden Asylum.
Public Health—Dr. Robert King.

This Hospital contains 310 beds, of which 185 are for surgical and 120 for medical cases. There is a special department for Cancer cases, affording accommodation for thirty-three in-patients, whose period of residence in the Hospital is unlimited. Wards are also appropriated for the reception

of cases of Uterine Disease and of Syphilis, and beds are set apart for patients from Diseases of the Eye. There are special out-patient departments for Diseases of the Skin, the Throat, the Eye and Ear.

PRIZES AND SCHOLARSHIPS.

Two Entrance Scholarships of the annual value of £25 and £20, tenable for two years, are afforded for competition at the commencement of the winter session.

Two Broderip Scholarships of the annual value of £30 and £20, tenable for two years, and a clinical prize of £10 10s., are annually awarded to those students who pass the most satisfactory examination at the bedside, and in the post-mortem room.

The Murray Scholarship is open to all general students, and will next be awarded in 1880. Examinations in Medicine, Surgery, and Midwifery.

The Governors' Prize of £21 is awarded annually to the student who shall have most distinguished himself during his three years' curriculum.

FEES.

The fee for attendance on the hospital practice and lectures required by the Colleges of Physicians and Surgeons and the Society of Apothecaries is £90 if paid in advance, or £35 on entrance, £35 at the beginning of the second winter session, £20 at the beginning of the third winter session, and £10 for every additional year's attendance.

Dental students who intend to become Licentiates in Dental Surgery of the Royal College of Surgeons are admitted to attend the requisite courses of lectures and hospital practice on payment of a fee of £42, either in one payment or by instalments of £26 5s. on entrance, and £15 15s. at the beginning of the second winter session.

ST. THOMAS'S HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Honorary Consulting Physicians—Dr. Barker, Dr. J. Risdon Bennett, Dr. Peacock.
Honorary Consulting Surgeons—Mr. F. Le Gros Clark, Mr. Simon, C.B.
Consulting Ophthalmic Surgeon—R. Liebreich, Esq.

Physicians.
Dr. Bristowe.
Dr. Murchison.
Dr. Stone.
Dr. Ord.

Obstetric Physician.
Dr. Gervis.

Assistant-Physicians.
Dr. John Harley.
Dr. Payne.
Dr. Greenfield.

Assistant Obstetric Physician.
Dr. Cory.

Resident Assistant-Physician.
Dr. Starkey.

Surgeons.
Mr. Sydney Jones.
Mr. Croft.
Mr. Mac Cormac.
Mr. Mason.

Ophthalmic Surgeon.
Mr. Nettleship.

Assistant-Surgeons.
Mr. W. W. Wagstaffe.
Mr. A. O. MacKellar.

Dental Surgeon.
Mr. J. W. Elliott.

Assistant Dental Surgeon.
Mr. W. G. Ranger.

Resident Assistant-Surgeon.
Mr. H. H. Clutton

Anæsthetist—Mr. S. Osborn.
Demonstrators of Morbid Anatomy—Dr. Greenfield and Dr. Reid.
Analytical Chemist of the Hospital—Dr. Albert J. Bernays.
Curator to the Museum—Mr. C. Stewart.
Apothecary—Mr. Plowman.
Medical Registrar—Dr. T. C. Charles.
Surgical Registrar—Mr. Percy Potter.

LECTURES.—WINTER SESSION.

Chemistry—Dr. Albert J. Bernays.
Demonstrations—The Anatomical Lecturers, Dr. R. W. Reid, and Anatomical Assistants.
Descriptive Anatomy—Mr. Francis Mason and Mr. W. W. Wagstaffe.
General Pathology—Dr. Payne.
Physics and Natural Philosophy—Dr. Stone.
Physiology and General Anatomy—Dr. John Harley.
Demonstrations in Physiology—Dr. T. C. Charles.
Pathological Anatomy—Dr. Greenfield.
Practical and Manipulative Surgery—Mr. Croft and Mr. MacKellar.
Special Anatomical and Microscopical Demonstrations—Mr. Rainey.
Surgery—Mr. Sydney Jones and Mr. Mac Cormac.
Theory and Practice of Medicine—Dr. Bristowe and Dr. Ord.

SUMMER SESSION.

Botany—Mr. A. W. Bennett.
Comparative Anatomy—Mr. C. Stewart.
Forensic Medicine—Dr. Payne and Dr. Cory
Materia Medica—Dr. Stone.
Mental Diseases—Dr. H. Rayner.
Midwifery—Dr. Gervis.
Ophthalmic Surgery—Mr. Nettleship.
Practical and Manipulative Surgery—Mr. Croft and Mr. MacKellar.
Practical Chemistry—Dr. Albert J. Bernays.
Practical Physiology—Dr. Charles.
State Medicine—Dr. A. Carpenter.

PRIZES AND APPOINTMENTS.

Entrance Scholarships of £60 and £40, awarded after an examination in Physics, Chemistry, Botany, and Zoology.

First Year's Prizes.—Winter: The Wm. Tite Scholarship of £30; College Prizes—£20 and £10. Summer Prizes: £15, £10, and £5.

Second Year's Prizes.—Winter: The College Scholarship of £42, tenable for two years; College Prizes—£20 and £10. Summer Prizes: £15, £10, and £5. The Dresserships and the Clinical and Obstetrical Clerkships are open to students who have passed the primary examinations at the Royal College of Surgeons.

Third Year's Prizes.—Winter: £20, £15, and £10. The Cheselden Medal, awarded after a special examination in Surgical Anatomy and Surgery. The Mead Medal, awarded after a special examination in Practical Medicine and Hygiene. The Solly Medal, biennially, with a prize of at least £10 10s. for a collection of surgical reports. The Treasurer's Gold Medal, for general proficiency during the entire course of study. The Grainger Testimonial Prize, of the value of £20, will be awarded biennially to the third or fourth year's students for a physiological essay, to be illustrated by preparations.

FEES.

Gentlemen are informed that the admission fees to practice and to all the lectures may be paid in one of three ways, entitling to unlimited attendance—1st, £125, paid on entrance, entitle a student to unlimited attendance; 2nd, £130 in two payments, of £70 on entrance and £60 at beginning of next year; 3rd, by three instalments, of £60 the first year, £50 the second, and £30 the third. Special entries may be made to any course of lectures, or to the hospital practice.

There are special departments for Diseases of the Eye, Diseases of Women and Children, Vaccination, Diseases of the skin, Diseases of the Teeth, and Mental Diseases.

Visits to wards now take place at 2 p.m.

For further information, apply to Dr. Gillespie, Secretary, St. Thomas's Hospital, London, S.E.

UNIVERSITY COLLEGE HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Consulting-Physicians.
Dr. Walter H. Walshe.
Dr. J. Russell Reynolds.

Physicians.
Sir William Jenner, Bart.
Dr. Wilson Fox.
Dr. Sydney Ringer.
Dr. H. Charlton Bastian.
Dr. F. T. Roberts.

Obstetric Physician.
Dr. Graily Hewitt.

Physician to the Skin Infirmary.
Dr. W. Tilbury Fox.

Assistant Physicians.
Dr. W. R. Gowers.
Dr. G. V. Poore.

Assistant Obstetric Physician.
Dr. John Williams.

Consulting-Surgeons.
Mr. Richard Quain.
Mr. J. Eric Erichsen.
Sir Henry Thompson, Bart.

Surgeons.
Mr. Marshall.
Mr. Berkeley Hill.
Mr. Christopher Heath.

Assistant-Surgeons.
Mr. Marcus Beck.
Mr. A. Barker.
Mr. R. J. Godlee.

Ophthalmic Surgeons.
Mr. Wharton Jones.
Mr. J. F. Streatfeild.

Dental Surgeon.
Mr. G. A. Ibbetson.

Assistant Professors of Clinical Medicine—Dr. W. R. Gowers and Dr. G. Vivian Poore.
Assistant-Teachers of Clinical Surgery—Mr. Marcus Beck and Mr. A. Barker.
Assistant-Medical Officer in the Skin Department—Dr. H. R. Crocker.
Surgical Registrar—Mr. S. H. Burton.
Resident Medical Officer—Mr. W. L. S. Jameson, M.D.

LECTURES.—WINTER SESSION.

Chemistry—Dr. Williamson.
Clinical Medicine—Sir W. Jenner, Dr. Bastian, Dr. W. Fox, Dr. S. Ringer, Dr. Poore, Dr. Gowers.
Clinical Midwifery—Dr. G. Hewitt.
Clinical Surgery—Mr. Erichsen, Mr. Marshall, Sir H. Thompson, Mr. C. Heath, Mr. W. Jones, Mr. Streatfeild, Mr. Beck, and Mr. Barker.
Descriptive Anatomy—Mr. Thane; Demonstrations—Mr. G. D. Thane, Mr. Rickman J. Godlee, Mr. Walter Ottley, Mr. Boyd, Mr. Money, Mr. K. R. Smith, Mr. Maudsley, and Mr. Firth.
Medicine—Dr. Sydney Ringer.
Physiology and General Anatomy—Dr. B. Sanderson.
Skin Diseases—Dr. T. Fox.
Surgery—Mr. Marshall

SUMMER SESSION.

Botany—Mr. Oliver.
Histology and Practical Physiology—Dr. B. Sanderson, Mr. Schäfer.
Comparative Anatomy—Mr. E. R. —Lankester.
Dental Surgery—Mr. Ibbetson.
Forensic Medicine—Dr. Maudsley.
Hygiene—Dr. Corfield.
Materia Medica—Dr. F. T. Roberts.
Morbid Anatomy and Pathology—Dr. H. C. Bastian.
Midwifery—Dr. Graily Hewitt.
Natural Philosophy—Prof. G. C. Foster.
Ophthalmic Surgery—Mr. W. Jones.
Practical Chemistry—Dr. Williamson.
Practical and Operative Surgery—Mr. B. Hill, Mr. M. Beck, Mr. E. A. Barker.
Practical Pharmacy—Mr. Gerrard.
Skin Diseases—Dr. T. Fox.

SCHOLARSHIPS AND EXHIBITIONS.

The Atkinson-Morley Surgical Scholarship, of £45 per annum, tenable for three years, is awarded every year for proficiency in the theory and practice of Surgery. Atchison Scholarship, value about £55, tenable for two years. The Sharpey Physiological Scholarship, of about £70 a year, for proficiency in Biological Science. The Filiter Prize of £30,

for proficiency in Pathological Anatomy. Dr. Fellowes' Clinical Medals, one gold and one silver, each winter and summer session, and certificates of honour, for reports and observations on the Medical cases of the Hospital. The Liston Gold Medal, and certificates of honour, for reports and observations on the Surgical cases in the Hospital. The Alexander Bruce Gold Medal, for Pathology and Surgery. The Cluff Memorial Prize, awarded every other year for proficiency in Anatomy, Physiology, and Chemistry. Gold and silver medals, as well as certificates of honour, are awarded as class prizes. The Jews' Commemoration Scholarship of £15 a year, tenable for two years, for general proficiency in the Faculty of Arts or of Science, for students of one year's standing; Tuffnell Scholarship, £100 tenable for two years, for proficiency in Chemistry; and the Clothworkers' Exhibition for Chemistry and Physics, of £50 a year, tenable for two years, may be held by students who, after obtaining it, enter the Medical Faculty.

ENTRANCE EXHIBITIONS.

Three Entrance Exhibitions, of the respective value of £30, £20, and £10 per annum, tenable for two years, are awarded upon examination to gentlemen who are about to commence their first winter's attendance in a medical school.

FEES.

For the lectures and hospital practice for the licences of the Royal College of Physicians, Society of Apothecaries, and M.R.C.S., £131 5s. if paid in one sum; or first year, £63; second year, £52 10s; third year, £21.

Further information and detailed prospectuses may be obtained at the Office of the College.

WESTMINSTER HOSPITAL.

HOSPITAL STAFF.

Consulting Physicians and Surgeons—Dr. Kingston, Dr. Radcliffe, Dr. Basham, Mr. Lynn, Mr. Brooke, Mr. Barnard Holt, Mr. Holthouse.

Physicians.	*Surgeons.*
Dr. Fincham.	Mr. Cowell.
Dr. Sturges.	Mr. Richard Davy.
Dr. Allchin.	Mr. Macnamara.
Assistant-Physicians.	*Assistant-Surgeons.*
Dr. Horatio Donkin.	Mr. T. Cooke.
Dr. De Havilland Hall.	Mr. T. Bond.
Dr. Hughes Bennett.	Mr. Gould.

Obstetric Physician—Dr. Potter
Assistant Obstetric Physician—Dr. Grigg.
Surgeon in charge of the Ophthalmic Department—Mr. Cowell.
Surgeon in charge of the Skin Department—Mr. Bond.
Surgeon in charge of the Aural Department—Mr. Keene.
Dental Surgeon—Mr. Walker.

Medical Registrar.	*Surgical Registrar.*
Mr. Murrell.	Mr. Neale.

LECTURERS.

Anatomy—Mr. A. Pearce Gould.
Aural Surgery—Mr. Keene.
Botany—Mr. Worsley-Benison.
Chemistry—Dr. Dupré.
Clinical Medicine—Dr. Radcliffe, Dr. Fincham, Dr. Sturges, Dr. Allchin.
Clinical Surgery—Mr. Holt, Mr. Holthouse, Mr. Cowell, Mr. Davy, Mr. Macnamara.
Comparative Anatomy—Dr. Carter Blake.
Dental Surgery—Mr. Walker.
Diseases of the Skin—Mr. Bond.
Forensic Medicine and Hygiene—Mr. Bond, Dr. Dupré.
Materia Medica and Therapeutics—Dr. Phillips.
Medicine — Dr. Fincham, Dr. Sturges.
Metallurgy—Dr. Dupré.
Midwifery and Diseases of Women—Dr. Potter.
Natural Philosophy—Mr. Brooke.
Ophthalmic Surgery—Mr. Cowell.
Pathology and Morbid Anatomy—Dr. Allchin.
Physiology—Dr. Allchin.
Practical Chemistry—Dr. Dupré.
Practical Surgery—Mr. Cowell, Mr. Richard Davy.
Practical Physiology and Histology—Mr. Murrell.
Psychological Medicine—Dr. Sutherland.
Surgery—Mr. Cowell, Mr. Davy.

Treasurer of the School—Mr. Cowell. *Dean of the School*—Dr. Allchin.
Sub-Dean—Mr. Gould. *Tutors*—Dr. De Havilland Hall and Mr. Miller.

DEMONSTRATORS.

Anatomy—Mr. Miller.

Morbid Anatomy—Mr. Murrell, Mr. Neale.
Minor Surgery and Bandaging—Mr. Neale.

In addition to the practice of the Hospital, which contains 201 beds, and has just been enlarged and improved, the general students of this school are admitted to the practice of the Royal Westminster Ophthalmic Hospital, and to that of the National Hospital for Epilepsy and Paralysis.

PRIZES.

There are five Entrance Scholarships: the Fence and Houldsworth, value £50 a year each, tenable for two years; one, £25 a year, tenable for two years; and two others, £10 a year each, tenable for two years; an Exhibition in Anatomy, Physiology, and Chemistry for first year's men, a Scholarship of £21 in Anatomy and Physiology for second year's men, the Frederic Bird Prize and Medal, value £15, the Chadwick Prize of the value of £21 for general proficiency, and two Clinical Prizes of the value of £5 5s. each. Prizes and certificates of honour are also awarded to the most meritorious students.

FEES.

The entry fee to lectures and hospital practice required by the College of Physicians and Surgeons and the Society of Apothecaries may be paid in one sum of £92 10s.; in two payments of £49 each, at the commencement of the first two years; or in five payments, amounting to £107 2s., at the commencement of the first five sessions. The fees for Dental Students are £45 in one sum, or £32 and £18 respectively at the commencement of each academic year.

Full particulars as to the preliminary scientific and tutorial classes, the courses of lectures and mode of instruction, will be found in the published Calendar, and any further information may be obtained by personal application to Dr. Allchin, the Dean of the School, or to Mr. Gould, the Sub-Dean.

PROVINCIAL MEDICAL SCHOOLS.

OXFORD.

There is no School of Medicine at Oxford.

CAMBRIDGE.

The winter session will commence on October 11. The following is a list of the classes and lectures in the Cambridge University School of Medicine:—

WINTER COURSES.

Anatomy—Professor Humphry and the Demonstrator (Mr. Crighton).
Anatomy and Physiology—Professor Humphry.
Chemistry—Professor Liveing.
Dissections — Professor Humphry and the Demonstrator.
Materia Medica—Professor Latham.
Medicine—Professor Paget.
Physics—Professor Maxwell.
Practical Chemistry — Professor Liveing and Mr. Hicks.
Practical Physiology—Dr. Michael Foster.
Zoology and Comparative Anatomy—Professor Newton.

SUMMER COURSES.

Botany—Professor Babington.
Chemistry and Practical Chemistry—Professor Liveing and Mr. Hicks.
Comparative Anatomy, Dissections—Mr. Bridge.
Human and Comparative Osteology—Professor Humphry.
Human Osteology—Professor Humphry and the Demonstrator.
Pathology—Dr. Bradbury.
Practical Physiology—Dr. Michael Foster.
Practical Histology—The Demonstrator.

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

This Hospital contains 120 beds.

MEDICAL AND SURGICAL STAFF.

Physicians.	*Surgeons.*
Dr. Paget.	Mr. Lestourgeon.
Dr. Latham.	Dr. Humphry.
Dr. Bradhury.	Mr. Carver.

Fees for attendance upon the practice (medical and surgical), £15 15s. for an unlimited period; £10 10s. for one year; £8 8s. for six months.

THE QUEEN'S COLLEGE, BIRMINGHAM.

WINTER SESSION.

Chemistry—Professor A. C. Bruce.
Demonstrations on Practical Anatomy—Mr. Bennett May and Mr. Henry Eales.
Descriptive and Surgical Anatomy—Professors Thomas and Jolly.
Medicine—Professor Foster.
Pathology—Professor Rickards.
Physiology—Professors Norris and Bartleet.
Surgery — Professors Pemberton and Furneaux Jordan.

SUMMER SESSION.

Botany—Professor Hinds.
Comparative Anatomy—Professor Savage.
Dental Surgery—Professor Howkins.
Diseases of Women and Children—Professors Berry and R. C. Jordan.
Materia Medica—Professor Sawyer.
Forensic Medicine and Toxicology—Professors J. St. S. Wilders and Bruce.
Midwifery—Professors Clay and Bassett.
Ophthalmic Surgery — Professor Solomon.
Practical Chemistry — Professor Bruce.

Operative Surgery—Professors Pemberton and Jordan.

SCHOLARSHIPS AND PRIZES.

The Sands Cox Prize.—A prize of the value of £20 is given annually in the Medical Department, in accordance with the Act of Parliament, "in commemoration of the exertions of Mr. William Sands Cox in founding and supporting the College. This prize is open to students who have completed their curriculum, and is awarded after examination in Medicine, Surgery, and Midwifery. Every candidate is required to produce a certificate of good conduct from the Warden. The examination for this prize in 1879 will be held in the third week in March. The Warden's Prize of the

value of £3 3s., is offered by the Rev. W. H. Poulton to the most proficient student of the first year. The Ingleby Scholarships.—Two Ingleby Scholarships, founded in memory of the late Dr. Ingleby, formerly Professor of Midwifery in this School, will be awarded annually, after examination in Obstetric Medicine and Surgery and Diseases of Women and Children. These scholarships are open to students who have completed the first two years of their curriculum in this College. Class Prizes.—Medals and certificates of honour are awarded annually in each class after examination.

THE GENERAL AND QUEEN'S HOSPITALS, BIRMINGHAM.

GENERAL HOSPITAL STAFF.

Consulting Physician.—Dr. Bell Fletcher.

Consulting Surgeon—Mr. D. W. Crompton.

Physicians.	*Surgeons.*
Dr. Russell.	Mr. Alfred Baker.
Dr. Wade.	Mr. Oliver Pemberton.
Dr. Foster.	Mr. T. H. Bartleet.
Dr. Rickards.	Mr. W. P. Goodall.
	Mr. Robert Jolly.
Assistant-Physician.	*Assistant-Surgeons.*
Dr. R. Saundby.	Mr. W. G. Archer.
	Mr. T. F. Chavasse.
Resident Medical Officer.	*Resident Surgeon and Surgical Tutor.*
Dr. H. Malet.	Mr. Alex. F. Hawkins.

Registrar and Pathologist—Mr. H. G. Lowe.

QUEEN'S HOSPITAL STAFF.

Physicians.	*Surgeons.*
Dr. Heslop.	Mr. West.
Dr. Sawyer.	Mr. Gamgee.
Dr. Carter.	Mr. Furneaux Jordan.
Dr. Hunt.	Mr. J. St. S. Wilders.
House-Physicians.	*House-Surgeons.*
Mr. I. Spofforth.	Mr. G. J. Lloyd.
Dr. Wood.	Mr. J. Brett.

Obstetric Surgeon—Mr. John Clay.
Ophthalmic Surgeon—Mr. Priestly Smith.
Pathologist—Mr. Thomas.
Dental Surgeon—Mr. Charles Sims.

CLINICAL PRIZES.

The following prizes will be given annually:—Senior Medical Prizes, for third or fourth year students: First Prize: £5 5s.; Second Prize, £3 3s. Senior Surgical Prizes: First Prize, £5 5s.; Second Prize, £3 3s. Junior Medical Prizes, for second year students: First Prize, £3 3s.; Second Prize, £2 2s. Junior Surgical Prizes: First Prize, £3 3s.; Second Prize, £2 2s. Midwifery Prize, £4 4s.

The examination for all the above-mentioned appointments and prizes will be conducted by the Clinical Board, and will be open for competition to all students registered by the Clinical Board.

BRISTOL SCHOOL OF MEDICINE.

COURSES OF LECTURES.—WINTER SESSION.

Chemistry—Mr. Thomas Coomber.	Physiology—Mr. George F. Atchley and Dr. R. Shingleton Smith.
Descriptive and Surgical Anatomy—Mr. Nelson C. Dobson, and Dr. Henry Waldo.	Principles of Surgery and Practical Surgery—Mr. Robert W. Coe and Mr. Robert W. Tibbits.
Medicine—Dr. William H. Spencer and Dr. E. Markham Skerritt.	

SUMMER SESSION.

Botany—Mr. Adolph Leipner.	Pathological Anatomy—Dr. Wm. H. Spencer and Dr. E. Markham Skerritt.
Comparative Anatomy—Mr. George F. Atchley.	Practical Chemistry—Mr. Thomas Coomber.
Materia Medica and Therapeutics—Dr. George F. Burder.	Practical Physiology—Mr. Geo. F. Atchley and Dr. R. Shingleton Smith.
Medical Jurisprudence—Mr. Wm. P. Keall.	
Midwifery and Diseases of Women—Dr. Joseph G. Swayne.	

BRISTOL ROYAL INFIRMARY.

MEDICAL AND SURGICAL STAFF.

Honorary and Consulting Physicians—Dr. William Budd, Dr. Frederick Brittan, Dr. Alexander Fairbrother, and Dr. Edward L. Fox.

Honorary and Consulting Surgeons—Mr. John Harrison, Mr. Thomas Green, and Mr. Augustin Prichard.

Physicians.

Dr. William H. Spencer. | Dr. Henry Waldo.
Dr. R. Shingleton Smith. | Dr. John E. Shaw.

Surgeons.

Mr. Crosby Leonard. | Mr. Charles Steele.
Mr. Robert W. Tibbits. | Mr. Edmund C. Board.
Mr. Christopher H. Dowson.

Assistant-Surgeon.—Mr. Arthur W. Prichard.
House-Surgeon—Dr. J. Greig Smith.
Assistant House-Surgeon—Dr. James Scott.

This Infirmary was founded in the year 1735, and is one of the largest provincial hospitals in England. It contains 250 beds.

PRIZES.

Suple's Medical Prize, consisting of a gold medal of the value of £5 5s., and about £7 7s. in money, is given annually to the successful candidate in an examination held by the Physicians. The examination comprises reports of cases in the medical wards, and the preparation of morbid specimens illustrative of disease, accompanied, if possible, by microscopic and chemical illustrations, besides written replies to questions in Medicine.

Suple's Surgical Prize corresponds in value and character to the medical one described above. In this case the examination is conducted by the Surgeons, and comprises surgical subjects only.

Clark's Prize.—The interest of £500, bequeathed by the late Henry Clark, Esq., Consulting Surgeon to the Infirmary, will be given annually to the prizeman of his third year at the examination held at the Medical School, provided he has attended his hospital practice at the Bristol Royal Infirmary, and can produce certificates of good moral character.

Pathological Prize.—The Pathological Clerk at the expiration of his term of office will receive a prize of the value of £3 3s. if his duties have been performed to the satisfaction of the Faculty.

FEES.

An entrance fee of £5 5s. to the Infirmary, and subscription of £1 1s. per annum to the Library. Surgeon's pupil, £12 12s. for one year; £21 for two years (at one payment); £26 5s. for three years (at one payment). Dresser (extra fee), £12 12s. for one year; £21 for two years (at one payment); £26 5s. for three years (at one payment). Physician's pupil—For six months, £8; for one year, £15; for eighteen months, £20; perpetual, £25.

The fee for apprenticeship to the House-Surgeon is £315, which includes five years' residence in the Infirmary and all attendance on hospital practice required by the various examining bodies, excepting dressers' fees. House Pupils may also enter for a shorter period, at the rate of £52 10s. per annum to the Infirmary, with a fee of £52 10s. to the House-Surgeon.

BRISTOL GENERAL HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Honorary and Consulting Physician—Dr. Henry E. Fripp.

Honorary and Consulting Surgeons—Mr. Robert W. Coe, Mr. W. Michell Clarke, Dr. Henry Marshall.

Honorary and Consulting Physician-Accoucheur—Dr. Joseph G. Swayne.

Physicians.	*Surgeons.*
Dr. George F. Burder.	Mr. F. Poole Lansdown.
Dr. E. Markham Skerritt.	Mr. George F. Atchley.
Dr. Joseph B. Siddall.	Mr. Nelson C. Dobson.
	Mr. William P. Keall.
Physician-Accoucheur.	*House-Surgeon.*
Dr. A. E. Aust Lawrence.	Mr. William H. Harsant.
Physician's Assistant.	*Assistant House-Surgeon.*
Mr. Frederick G. Stewart.	Mr. A. Cameron Brock.

Dentist—Mr. Thomas C. Parson.

PRIZES.

Martyn Memorial Entrance Scholarship.—This scholarship of the value of £20, founded by public subscription, in memory of the late Dr. Samuel Martyn, Physician to the Hospital, is awarded annually at the commencement of the winter session, after a competitive examination in subjects of general education.

Clarke Scholarship.—A surgical scholarship of £15, founded by H. M. Clarke, Esq., of London, is awarded annually, at the end of the winter session, after an examination in surgery.

Sanders Scholarship.—A scholarship, founded by the late John Nash Sanders, Esq., and consisting of the interest of £500, is awarded annually, at the end of the winter session, after examinations in Medicine, Surgery, and Diseases of Women. Two of these scholarships will be available in the ensuing session.

Lady Haberfield's Prize.—This prize, founded by the late Lady Haberfield, and consisting of the interest of £1000, is awarded annually, at the end of the winter session, after examinations in Medicine, Surgery, and Diseases of Women.

The Martyn Memorial Scholarship and Lady Haberfield's Prize, when not awarded as above, are available for the remuneration of a Museum Curator, to be appointed from amongst the students after a competitive examination in subjects bearing upon the duties of the office. A Museum Curatorship in connexion with Lady Haberfield's Prize will be offered for competition in October, 1878.

FEES.

Medical or surgical practice, £6 for six months; £10 for one year; £20 perpetual. Extra fee for clinical clerk or dresser, £5 5s. for six months. Extra fee for obstetric clerk, £3 3s. for three months. Library fee, £1 1s. per annum. Resident pupils (including board, lodging, and washing), £100 for the first year, £60 for each subsequent year; or for five years, with apprenticeship to the Hospital, £260.

UNIVERSITY OF DURHAM.—COLLEGE OF MEDICINE, NEWCASTLE-ON-TYNE.

LECTURERS.—WINTER SESSION.

Anatomy—Mr. Russell and Mr. Mears.
Chemistry—Professor Marreco.
Medicine—Dr. Philipson.
Mental Diseases—Mr. Wickham.
Physiology—Dr. Drummond.
Public Health—Mr. H. E. Armstrong.
Surgery—Dr. Heath and Dr. Arnison.

SUMMER SESSION.

Botany—Dr. Murphy.
Diseases of Women and Children—Dr. Gibson.
Materia Medica—Mr. McBean.
Medical Jurisprudence—Dr. Page.
Midwifery—Dr. Nesham.
Operative Surgery—Dr. Armstrong.
Pathological Anatomy—Dr. Gibb and Dr. Bramwell.
Practical Chemistry—Prof. Marreco.
Practical Physiology—Dr. Drummond.
Pharmacy—Mr. Proctor.
Therapeutics—Mr. Barron.

Hospital practice can be attended at the Newcastle Infirmary, which contains 230 beds.

FEES.

Composition fee for all the lectures payable on entering to the first winter session, £52 10s. Perpetual ticket for Pharmacy curriculum, £12 12s. Separate courses of lectures, each £4 4s. The composition fee entitles the holder to attend the lectures on Botany, Chemistry, Materia Medica, and Pharmacy, and to use the Museum of Materia Medica in the Library of the College.

Twelve months' hospital practice, £7 7s.; six months', £5 5s.; three months', £4 4s.; perpetual fee, £17 17s.; or, if paid by instalments, first year £7 7s., second year £6 6s, third year £5 5s. These fees also are payable in advance.

The winter session will open on October 1, 1877.

SCHOLARSHIPS AND MEDALS.

Four Scholarships of £25 a year each, tenable each for four years. Dickinson Memorial Scholarship, £15, tenable for one year, for general proficiency. Tulloch Scholarship, £20, tenable for one year, for Anatomy, Physiology, and Chemistry. Charlton Memorial Scholarship, £35, tenable for one year, for Medicine. Gibb Scholarship in Pathological Anatomy, the interest of £500, tenable for one year. Four Resident Dressers, who also act as Physicians' Clinical Clerks, are chosen every six months from the Senior Students. Fee for six months' board and residence £10 10s. Two Assistants in the Pathological Department are chosen every six months.

At the end of each session a Silver Medal and Certificate of Honour will be awarded in each of the required Classes.

R. H. B. Wickham, F.R.C.S. Ed., Medical Superintendent of the Cox Lodge Lunatic Asylum, will deliver a course of lectures on Psychological Medicine, illustrated by cases in the Asylum, to students in their third and fourth years, during the latter half of the winter session.

Further particulars may be obtained of Dr. Luke Armstrong, Registrar, or Mr. Henry E. Armstrong, Secretary.

NEWCASTLE-UPON-TYNE INFIRMARY.

This Infirmary contains 230 beds. There are special wards for the treatment of Children, Ophthalmic, and Syphilitic Diseases.

MEDICAL AND SURGICAL STAFF.

Physicians.
Dr. Philopson.
Dr. B. Bramwell.
Dr. Gibson.
Dr. Drummond

Surgeons.
Dr. Heath.
Dr. Arnison.
Dr. Armstrong.
Dr. Hume.

Assistant-Surgeons.
Dr. Page.
Mr. T. A. Dodd.

Pathologist.
Dr. Bramwell.

Senior House-Surgeon.
Mr. Dixon.

Junior House-Surgeon.
Mr. C. M. Goyder.

FEES.

Fees for hospital practice and clinical lectures:—Twelve months, £7 7s.; six months, £5 5s.; three months, £4 4s. Perpetual fee, £17 17s.; or if paid by instalments—first year £7 7s., second year £6 6s., third year £5 5s.

LIVERPOOL SCHOOL OF MEDICINE.

LECTURERS.

Anatomy—Mr. W. Mitchell Banks.
Botany—Dr. G. Shearer.
Chemistry—Dr. J. C. Brown.
Comparative Anatomy—Dr. E. H. Dickinson.
Dental Mechanics—Mr. R. E. Stewart.
Dental Surgery—Mr. J. Snape.
Forensic Medicine—Dr. Ewing Whittle.
Diseases of Children—Dr. R. Gee.
Materia Medica—Dr. W. Carter.
Medicine—Dr. A. T. H. Waters.
Obstetric Medicine and Gynæcology—Mr. A. B. Steele.
Ophthalmic Medicine—Mr. T. Shadford Walker.
Pathological Anatomy—Dr. A. Davidson.
Physiology—Dr. Richard Caton.
Surgery—Mr. Rushton Parker.

DEMONSTRATORS.

Histology and Practical Physiology—Dr. H. Ashby.
Practical Anatomy—Dr. Briggs.

ROYAL INFIRMARY.

Consulting Physicians—Dr. Vose, Dr. Turnbull.

Consulting Surgeons—Mr. Long, Mr. Hakes.

Physicians.
Dr. Waters.
Dr. Glynn.
Dr. Davidson.

Surgeons.
Mr. Bickersteth.
Mr. Harrison.
Mr. Banks.

Resident Medical Officer—Mr. Harrisson. *Assistant-Surgeon*—Mr. Parker

Pathologist—Mr. Paul. *Dental Surgeon*—Mr. Snape.

Surgeons to the Lock Hospital—Mr. McCheane, Mr. F. W. Lowndes.

The Infirmary contains nearly 300 beds. There are special wards for the treatment of Uterine and other Diseases of Women.

The Lock Hospital, adjoining the Infirmary, contains sixty beds.

SCHOLARSHIPS AND PRIZES.

Roger Lyon Jones Scholarship.—By the will of the late R. L. Jones, Esq., of Liverpool, the sum of £2000 has been left to the School for the purpose of founding a scholarship, to be named after the donor. One-half (£21 for two years) is awarded each October to the applicant who has taken highest place at the matriculation examination of the London University on condition that he becomes a composition-ticket holder of the School. The other half (£21 for two years) is awarded to second-year students for proficiency in Anatomy, Physiology, Chemistry, Botany, Materia Medica, and Practical Chemistry.

Torr Medal.—A gold medal for Anatomy and Physiology, presented by Mr. John Torr, M.P., is awarded to the first student in the second year subjects.

Bligh Medal.—This gold medal, which is presented annually by Dr. John Bligh, Liverpool (also for the encouragement of the study of Anatomy and Physiology), is awarded to the first student in the first year subjects.

FEES.

Composition Fee.—A payment of £52 10s. on entrance or in two equal instalments (one-half on entrance, and the remainder within twelve months), entitles the student to attendance on all the lectures and demonstrations required for the Membership of the Royal College of Surgeons, the Licence of the College of Physicians and the Apothecaries' Society.

Library.—All medical students on registering are required to pay an annual fee of 10s. 6d. to the library and reading-room, or a perpetual fee of £1 1s.

The perpetual Hospital fee (£33 12s.) and the School composition fee for lectures required by the licensing bodies (£52 10s.) amount together to £86 2s. In addition to this must be reckoned Vaccination fee (£1 1s.), Dissecting-room expenses (roughly estimated at £3 3s.), and a summer course of Practical Anatomy, which, though not absolutely essential, is generally taken (£2 2s.), in all amounting to £6 6s. The total expenses of the education necessary to procure a medical and surgical qualification thus amount to somewhat over £90.

LIVERPOOL ROYAL SOUTHERN HOSPITAL.

Physicians.
Dr. Cameron. | Dr. Carter.

Surgeons.
Mr. Hamilton. | Mr. Little.
Mr. Ransford.

Senior House-Surgeon—Mr. Owen Gwatkin.

Junior House-Surgeons.
Mr. Wearing. | Mr. Roughton.

Two hundred beds. Clinical Lectures given by the Physicians and Surgeons during the winter and summer sessions. Clinical Clerkships and Dresserships open to all students. A special ward for Accidents and Diseases of Children. Rooms for a limited number of resident students.

FEES FOR HOSPITAL PRACTICE AND CLINICAL LECTURES.

Perpetual, £26 5s.; one year, £10 10s.; six months, £7 7s.; three months, £4 4s.

The practice of the Hospital is recognised by all the examining bodies.

LIVERPOOL NORTHERN HOSPITAL.

The winter session will commence on Monday, October 1.

MEDICAL AND SURGICAL STAFF.

Physicians.

Dr. Dickinson. | Dr. Caton.

Surgeons.

Mr. Manifold. | Mr. Puzey.
Dr. Campbell.

The Hospital contains 144 beds.

FEES FOR HOSPITAL PRACTICE AND CLINICAL LECTURES.

Perpetual, £26 5s.; one year, £10 10s.; six months, £7 7s.; three months, £4 4s. Students can enter to the medical or surgical practice separately on payment of half the above fees. The Hospital receives one resident pupil, fee £63 per annum. Attendance on the practice of this Hospital qualifies for all the examining boards.

For further particulars apply to the House-Surgeon, Mr. Craigmile.

LEEDS SCHOOL OF MEDICINE.

CLASSES AND LECTURES.

Chemistry (at the Yorkshire College of Science) — Professor T. E. Thorpe.
Clinical Medicine—Dr. J. D. Heaton, Dr. T. Clifford Allbutt, and Dr. John Edwin Eddison.
Clinical Surgery—Mr. C. G. Wheelhouse, Mr. T. P. Teale, Mr. T. R. Jessop, and Mr. Edward Atkinson.
Demonstrations of Anatomy—Mr. E. Robinson, Mr. A. F. McGill, and Mr. Robson.
Descriptive Anatomy—Dr. Robert T. Land, Mr. John A. Nunneley, and Mr. Edmund Robinson.
Forensic Medicine—Mr. Thomas Scattergood.
Materia Medica—Dr. T. Churton.
Medicine—Dr. T. Clifford Allbutt and Dr. John Edwin Eddison.
Mental Diseases—Dr. H. Major.
Midwifery—Mr. W. N. Price, and Dr. James Braithwaite.
Pathology—Mr. A. F. McGill.
Physiology—Mr. C. J. Wright and Mr. John Horsfall.
Practical Chemistry (at the Yorkshire College of Science)—Professor T. E. Thorpe.
Practical Physiology—Mr. James Walker.
Surgery (including the Practical Course)—Mr. T. R. Jessop, and Mr. Edward Atkinson.

LEEDS GENERAL INFIRMARY.

MEDICAL AND SURGICAL STAFF.

Consulting Physician—Dr. Charles Chadwick.
Consulting Surgeon—Mr. Samuel Hey.

Physicians.	*Surgeons.*
Dr. John Deakin Heaton.	Mr. C. G. Wheelhouse.
Dr. T. Clifford Allbutt.	Mr. T. Pridgin Teale.
Dr. John Edwin Eddison.	Mr. T. R. Jessop.
	Mr. Edward Atkinson.

Surgeons to the Eye and Ear Department.
Mr. John A. Nunneley, Dr. Robert T. Land, Mr. R. P. Oglesby.

SCHOLARSHIPS AND PRIZES.

The Hardwick Scholarship in Clinical Medicine.—Candidates for this prize must be in registered attendance upon the medical practice of the Hospital, and have served the office of Clinical Clerk, or be holding that office at the time of competition. The prize is given annually for the best set of reports of medical cases in the Hospital during the winter session, subject to such regulations as may be laid down at the commencement of the session. Its value is £10 in money. Should the funds admit, a second prize may be given.

The Surgeons' Clinical Prizes.—Three prizes of the value of £8, £5, and £3 in money will be given annually by the Surgeons of the Hospital, subject to conditions similar to those relating to the Hardwick Prize.

The Thorp Scholarship in Forensic Medicine.—This is a prize of £10 (founded by a former member of Council), awarded at the close of each summer session, subject to such regulations as may be made from time to time, of which due notice will be given. A second prize of £5 is given.

FEES.

The composition fee for attendance upon all the required courses of school lectures is £46 4s., to be paid on entrance; or £24 3s. on entrance, and £24 3s. in twelve months. The fees for the Comparative Anatomy course and for a second course of Practical Chemistry are not included in the composition fee. The entrance fee to the library and reading-room, £1 1s., is paid by all students on joining the School. Instruction in vaccination, as required by the College of Surgeons and by the Poor-law Board, is given by one of the Public Vaccinators—fee £1 1s.; students must attend during a period of six weeks. The fees for attending the medical practice or the surgical practice alone are as follows:—One winter session, £7 7s.; one summer session, £6 6s.; twelve months, £12 12s.; eighteen months, £15 15s.; three years, £21.

The fee of £21 for surgical practice is payable at the commencement of the first winter session, and that for medical practice at the commencement of the second winter session.

OWENS COLLEGE (MANCHESTER ROYAL) SCHOOL OF MEDICINE.

PROFESSORS AND LECTURERS.—WINTER SESSION.

Chemistry—Dr. Henry E. Roscoe.
Comparative Anatomy—Mr. W. C. Williamson.
Descriptive and Practical Anatomy—Dr. Morrison Watson.
General Pathology and Morbid Anatomy—Dr. Henry Simpson, Dr. Julius Dreschfeld.
Medicine — Dr. William Roberts, Dr. J. E. Morgan.
Hospital Instruction — The Physicians and Surgeons to the Royal Infirmary.
Organic Chemistry—Mr. C. Schorlemmer.
Physiology and Histology — Dr. Arthur Gamgee.
Surgery—Mr. Edward Lund.
Practical Surgery — Mr. S. M. Bradley.

SUMMER SESSION.

Botany—Mr. W. C. Williamson.
Materia Medica and Therapeutics—Mr. Alexander Somers, Dr. Leech.
Medical Jurisprudence and Public Health—Dr. Arthur Ransome.
Midwifery and Diseases of Women and Children.—Dr. J. Thorburn.
Obstetrics—Dr. John Thorburn.
Ophthalmology—Dr. D. Little.
Practical Chemistry—Dr. Henry E. Roscoe.
Practical Morbid Histology — Dr. J. Dreschfeld.
Practical Physiology and Histology —Dr. Arthur Gamgee.

Demonstrators in Anatomy—Mr. A. H. Young, M.B., and Mr. A. Fraser, M.B., C.M.
Demonstrator in Physiology—Mr. J. Priestley.
Registrar—Mr. J. Holme Nicholson.
Dean of the Medical School—Professor Gamgee, M.D., F.R.S.

EXHIBITIONS, PRIZES, ETC.

A *Turner Scholarship* of £25 for third year's students, a Scholarship of £15 for second year's students, and one of £10 for first year's students. Prizes will also be given for general proficiency.

Platt Physiological Scholarships.—Two Scholarships of £50 each, tenable for two years, one of which is offered annually, are open to the competition of all students of the College who shall have studied Physiology in the College laboratory during one entire session, and whose age on January 1 preceding the examination shall not be under eighteen nor over twenty-five years. The next examination will be held on the 7th and 8th of October, 1878. The Scholarship will be awarded for the best original investigation in Physiology prosecuted in the College laboratory, and on the results of a written examination in Physiology and such subjects connected therewith as shall be prescribed. The Scholarship will not be awarded on the ground of comparative merit only. The candidate elected to the Scholarship will be required to attend during one year of his tenure the practical class in the physiological laboratory of the College, and during the other year the same or some other physiological laboratory in England or on the Continent approved of by the Council and the Senate of the College. If no original investigation shall have been carried on worthy of the Scholarship, the Council may, if they think fit, award one or more exhibitions to the candidate or candidates who shall have been most distinguished in the examination.

Platt Exhibitions.—Two of the value of £20 each to be competed for by first and second years' students in the class of Physiology during the session 1878-9.

Dumville Surgical Prize, value £20.—The Prize will consist of books or surgical instruments at the option of the winner. Candidates must have studied in the Medical Department and the Manchester Royal Infirmary during the winter session of 1877-8, the summer session of 1878, and the winter session of 1878-9, and have attended four courses of lectures, including one, at least, on Surgery. The examination will be conducted by means of written answers to questions on the Principles and Practice of Surgery, including Surgical Anatomy, and, at the option of the examiners, will also include the examination of patients and operations on the dead subject, together with reports of three surgical cases which have occurred in the wards of the Manchester Royal Infirmary during the preceding six months—the reports to comprise the history, progress, treatment, and results (with observations thereon) of these cases. The examination will take place on the 29th and 30th of April, 1879. Notice of intention to compete must be sent to the Registrar in writing on or before March 31, 1879.

Gilchrist Scholarships.—Three of £50 each, tenable for three years, one of which is annually awarded to the candidate who shall stand highest at the Matriculation Examination of the

University in London in June, provided that he pass in the honours division, and, failing such, two of £25 each will be given to the two candidates who stand highest in the first division. Further particulars will be found in the "Calendar" and in the prospectus of scholarships, exhibitions, and prizes.

FEES.

A composition fee, of £63, payable in two sums of £31 10s. each at the commencement of the first and second years of studentship, admits to the four years' course of study. Students desirous of repeating attendances on any class after the expiration of the four years' course, will be allowed to do so on paying for each class attended one-third of the fee payable by students who do not compound. A student, however, who desires to continue his study of Practical Anatomy beyond two sessions, will be required to pay at the rate of £2 2s. for a three months' or £3 3s. for a six months' course.

Extra fees of £1 1s. will be charged for attendance on the Demonstrations in Botany and in Comparative Anatomy; and of £2 2s. for each of the courses of Morbid Histology, Operative Surgery, and the Medical Tutor's Class.

A charge of £1 1s. is also made for the chemicals used in the class of Practical Chemistry.

MANCHESTER ROYAL INFIRMARY.

MEDICAL AND SURGICAL STAFF.

Consulting Physicians—Dr. R. F. Ainsworth, Dr. Frank Renaud, Dr. T. H. Watts, and Dr. Henry Browne.

Physicians.	*Surgeons.*
Dr. William Roberts.	Mr. F. A. Heath.
Dr. Henry Simpson.	Mr. Edward Lund.
Dr. John E. Morgan.	Mr. George Bowring.
Dr. Daniel J. Leech.	Mr. S. M. Bradley.
Assistant-Physicians.	*Assistant-Surgeons.*
Dr. Julius Dreschfeld.	Mr. W. Whitehead.
	Mr. J. Hardie.
Obstetric Physician.	*Ophthalmic Surgeon.*
Dr. John Thorburn.	Dr. Little.

Dental Surgeon—Mr. G. W. Smith.
Resident Medical Officer—Dr. Graham Steele.
Medical Supt. of the Royal Lunatic Hospital at Cheadle—Mr. G. W. Mould.
Pathological Registrar—Dr. Ross.
Secretary and Superintendent—Mr. E. C. Saunder.

CLINICAL PRIZES.

One Medical and one Surgical Clinical Prize is offered annually for the best reports and commentaries on six medical and on six surgical cases respectively. The cases must be selected from those treated in the Infirmary within the preceding twelve months.

The reports shall be signed with a motto, and transmitted (together with a sealed envelope containing the name and address of the student and the motto chosen by him) to the Chairman of the Medical Committee not later than September 1.

The two prizes shall be open respectively to the medical and surgical pupils for the current year; they shall be each of the value of £6 6s., and shall consist of books or instruments, at the option of the successful candidates.

STUDENTS' FEES.

Medical Practice.—Three months, £6 6s.; six months, £9 9s.; twelve months, £12 12s.; full period required by the examining board, £18 18s.

Surgical Practice.—Three months, £9 9s.; six months, £12 12s.; twelve months, £18 18s.; full period required by the examining board, £31 10s.

Composition Fee.—The fees for the full period required by the examining boards of both medical and surgical practice may be paid by a composition fee of £42 on entrance, or by two instalments of £22 each at an interval of twelve months.

In addition to the practice of the Infirmary, the Monsall Fever Hospital and the Barnes Convalescent Home will also be open, under certain regulations, to students for the purposes of instruction.

SHEFFIELD SCHOOL OF MEDICINE.

LECTURES—WINTER SESSION.

Anatomy, Descriptive and Surgical—Mr. E. Skinner. Mr. Snell.
Chemistry—Mr. Allen.
Clinical Surgery—The Surgeons of the Infirmary and Public Hospital and Dispensary.
Clinical Medicine—The Physicians of the Infirmary and Public Hospital and Dispensary.
Dental Mechanics—Mr. G. Mosely.
Physiology—Dr. O'Keefe, Dr. Dyson.
Demonstrations of Anatomy—Mr. R. J. Pye-Smith, Mr. W. D. James.
Principles and Practice of Medicine—Dr. Bartolomé, Dr. Banham, Dr. W. R. Thomas.
Principles and Practice of Surgery—Mr. W. F. Favell, Mr. A. Jackson.
Lecturer on Diseases of the Eye—Mr. Snell.

SUMMER SESSION.

Botany—Mr. Birks.
Demonstrations of Pathology and Microscopy—The House-Surgeon (at the Infirmary).
Demonstrations of Operative Surgery—Mr. Favell.
Demonstrations of Practical Histology and Physiology—Dr. Gwynne.
Dental Surgery—Dr. Merryweather.
Materia Medica and Therapeutics—Dr. Young.
Medical Jurisprudence and Toxicology—Mr. Harrison.
Midwifery and Diseases of Women—Dr. Hime.
Practical Chemistry—Mr. Allen.
Practical Surgery—The House-Surgeon (at the Infirmary).
Public Medicine—Dr. Drew.

SHEFFIELD GENERAL INFIRMARY.

MEDICAL AND SURGICAL STAFF.

Physicians.	*Surgeons.*
Dr. Bartolomé.	Mr. Barber.
Dr. Law.	Mr. Favell.
Dr. Banham.	Mr. Jackson.

Ophthalmic Surgeon—Mr. Snell.
House-Surgeon—Mr. Laver.

The Infirmary contains 180 beds for in-patients.

FEES.

The fees for perpetual attendance at the Infirmary are £15 15s. for medical, £21 for surgical practice. For twelve months' practice: Medical, £10 10s.; surgical, £6 6s. Six months': Medical, £6 6s.; surgical, £4 4s.

PUBLIC HOSPITAL and DISPENSARY.

Physicians.	*Surgeons.*
Dr. H. J. Branson.	Dr. Keeling.
Dr. Dyson.	Mr. Thorpe.
Dr. W. R. Thomas.	Mr. Pye-Smith.

House-Surgeon.—Mr. Shera.

This Hospital contains 100 beds. The fees are the same as those of the Infirmary. Recognised by the Royal College of Surgeons.

SHEFFIELD HOSPITAL FOR DISEASES OF WOMEN.

MEDICAL OFFICERS.

Dr. Jackson, Dr. Keeling, Dr. Hime, Mr. Woolhouse.

FEES.

Anatomy and Physiology, first course, £6 6s.; second course, £4 4s. Practice of Medicine, first course, £4 4s.; second course, £2 2s. Practice of Surgery, first course, £4 4s.; second course, £2 2s. Chemistry, first course, £4 4s. Midwifery and Diseases of Women, first course, £3 3s. Materia Medica, first course, £3 3s. Medical Jurisprudence, first course, £3 3s. Botany, first course, £3 3s. Practical Chemistry, first course, £3 3s. Practical Physiology, £3 3s. Practical Surgery, £3 3s. These fees include demonstrations.

Perpetual fee for attendance on all the lectures required by the Royal College of Surgeons and the Apothecaries' Hall, £42.

All further information may be obtained on application to the Hon. Secretary, Arthur Jackson, St. James's-row, Sheffield.

SCHOOLS AND HOSPITALS IN SCOTLAND.

UNIVERSITY OF EDINBURGH.—FACULTY OF MEDICINE.

SESSION 1878-79.

Principal—Sir Alexander Grant, Bart., LL.D.

WINTER SESSION.

The session will be opened on Tuesday, October 29, 1878, at two o'clock, when an address will be delivered by the Principal.

Anatomy—Prof. Turner.
Anatomical Demonstrations—Prof. Turner.
Botany—Prof. Balfour.
Chemistry—Prof. Crum Brown.
Clinical Medicine—Profs. Maclagan, Sanders, Grainger Stewart, and T. R. Fraser. (Prof. Simpson on Diseases of Women.)
Clinical Surgery—Prof. Annandale. Surgery—Prof. Spence.
General Pathology—Prof. Sanders.
Institutes of Medicine or Physiology—Prof. Rutherford.
Materia Medica—Prof. T. R. Fraser.
Midwifery and Diseases of Women and Children—Prof. Simpson.
Natural History—Prof. Sir C. Wyville Thomson.
Practice of Physic—Prof. Grainger Stewart.

WINTER AND SUMMER SESSION.

Anatomical Demonstrations—Prof. Turner.
Bandaging and Surgical Appliances—Prof. Spence.
Operative Surgery—Prof. Spence.
Obstetrical and Gynæcological Operations—Prof. Simpson.
Practical Physiology, including Histology, Chemical Physiology, and Experimental Physiology—Prof. Rutherford.
Practical Anatomy—Prof. Turner.
Practical Chemistry—Prof. Crum Brown.

SUMMER SESSION.

Practical Instruction in Mental Diseases at an Asylum — Prof. Grainger Stewart.
Practical Natural History — Prof. Sir C. Wyville Thomson.
Practical Morbid Anatomy and Pathology—Prof. Sanders.
Practical Botany—Prof. Balfour.
Vegetable Histology—Prof. Balfour.
Tutorial Class of Clinical Medicine in the Wards of the Royal Infirmary by the Clinical Tutor, Mr. Jas. Murdoch Brown.

During the summer session lectures will be given on the following subjects :—

Anatomical Demonstrations—Prof. Turner.
Botany—Prof. Balfour.
Chemistry—Prof. Crum Brown.
Clinical Medicine—Profs. Maclagan, Sanders, Grainger Stewart, T. R. Fraser, and Simpson (Diseases of Women).
Medical Psychology and Mental Diseases—Prof. Grainger Stewart.
Medical Jurisprudence—Prof. Maclagan.
Natural History — Prof. Sir C. Wyville Thomson.
Obstetrical and Gynæcological Operations—Prof. Simpson.
Clinical Surgery—Prof. Lister.

Information relative to matriculation and the curricula of study for degrees, examinations, etc., will be found in the University Calendar, and may be obtained on application to the Secretary at the College.

A list of fees is given in the next column.

During the summer session the following means are afforded for practical instruction :—

The *Dissecting Rooms* are open daily, under the Superintendence of the Professor, assisted by D. J. Cunningham, M.D., and W. Watson Cheyne, M.B.

The *Royal Edinburgh Asylum* is open to members of the class of Medical Psychology exclusively for practical instruction in Mental Diseases by Professor Grainger Stewart and the Physician-Superintendent, Dr. Clouston.

Chemical Laboratories.—The laboratory for instruction in Analytical Chemistry and for chemical investigation, under the superintendence of the Professor, assisted by R. M. Morrison, B.Sc., and G. C. Robinson, is open from ten to four. The Laboratory for Instruction in Practical Chemistry, under the superintendence of the Professor, assisted by A. P. Aitken, M.A., D.Sc.

The *Physiological Laboratory* is open daily for physiological investigation, under the superintendence of the Professor, assisted by De Burgh Birch, M.B.

The *Physical Laboratory* is open daily from ten to three, under the superintendence of Professor Tait.

The *Medical Jurisprudence Laboratory* is also open daily from ten to three, under the superintendence of the Professor, assisted by J. O. Affleck, M.D.

The practice of Obstetrical and Gynæcological Operations is carried out in the Obstetrical Museum, under the superintendence of the Professor, assisted by David B. Hart, M.B.

The *Natural History Laboratory* is open daily, under the superintendence of the Professor, Sir C. Wyville Thomson, assisted by George Leslie.

The *Natural History Museum* in the Museum of Science and Art, Chambers-street, is accessible to the students attending the Natural History Class.

The *Royal Botanic Garden*, *Herbarium*, and *Museum* are open daily.

MEDICAL FELLOWSHIPS, SCHOLARSHIPS, BURSARIES, AND PRIZES.

Fellowships.—The Falconer Memorial Fellowship, value £100, tenable for two years. It is for the encouragement of the study of Palæontology and Geology, and is open to graduates in Science or Medicine of the University of not more than three years' standing.

The Syme Surgical Fellowship, value about £100, tenable for two years, open to competition among Bachelors of Medicine of not more than three years' standing, who shall present the best thesis on a surgical subject, giving evidence of original research.

Scholarships.—The Sibbald Scholarship, value about £40, tenable for four years.

Bursaries.—The Abercromby Bursary of £20, tenable for four years, is open to students who have been brought up in Heriot's Hospital during their medical curriculum. The Sibbald Bursaries are open to the sons of duly registered medical men practising, or who may have practised in Scotland, and to the sons of parents who are, or who may have been, householders in Edinburgh. They are of the value of £30 each, tenable for four years, and available for the Faculty either of Arts, Law, Medicine, or Divinity. Four Grierson Bursaries of £20 a year. One Tyndall-Bruce Bursary of £25, tenable for one year, to be competed for by students who have reached the end of their third winter session—subjects of examination to be Materia Medica and Pathology. Competitors for the above bursaries must have studied the subjects of examination at the University of Edinburgh; and these are not to be held along with any other bursary or fellowship.

PRIZES.

The Ettles Medical Prize is awarded annually to the graduate in Medicine whom the Medical Faculty may consider the most distinguished of the year. Value about £40.

The Hope Chemistry Prize, open to all students of the University of not more than twenty-five years of age, who have worked for eight months, or for two summer sessions, in the Chemical Laboratory of the University. Value £100.

A Hope Scholarship, value £30; particulars as to which may be obtained on application to the Professor of Chemistry.

The Neil Arnott Prize, of about £40, is awarded to the candidate who shall pass with the greatest distinction the ordinary examination in Natural Philosophy for the degree of M.A. Candidates must have been medical students of this University during either a summer or a winter session, and the successful candidate must continue a medical student of this University during the winter session. No student can appear for examination after the completion of his third *annus medicus;* no candidate shall be allowed to offer himself more than once.

The Ellis Prize for the best essay "On the Respiration of Plants as distinguished from their Nutrition," is open to students or graduates of five years' standing. Value, proceeds of the sum of £500 accumulated for three years.

The Goodsir Memorial Prize of £60 is awarded triennially for the best essay containing results of original investigations in Anatomy or in Experimental Physiology.

The Medical Faculty Prizes.—Gold medals are given on the day of graduation to Doctors of Medicine whose theses are deemed worthy of that honour.

LECTURESHIP.

The Swiney Lectureship on Geology, value £144, tenable for five years, is open to Doctors of Medicine of the University of Edinburgh. It is in the patronage of the trustees of the British Museum.

MINIMUM COST OF ATTENDING THE MEDICAL CLASSES, WITH THE ORDER OF STUDY.

Whilst there is no authorised order of study, the usual course is given below—Preliminary Examination in Arts to be taken in the month of March or October, before entering medical classes. By order of the General Medical Council, all medical students require to be registered as such within fifteen days after the commencement of the session. Students are recommended to commence their medical studies by attending the summer session.

First Summer Session.—Preliminary examination fee, 10s.; matriculation fee, 10s.; Botany (garden fee, 5s.), £4 4s.; Natural History, £4 4s.; total, £9 8s.

First Winter Session.—Matriculation (for whole year), £1; Anatomy, £4 4s.; Practical Anatomy, £3 3s.; Chemistry, £4 4s.; hospital, £5 5s. (perpetual ticket, £10); total, £17 16s.

Second Summer Session.—Botany or Natural History, if not attended previously; Practical Chemistry, £3 3s.; examination in Botany, Natural History, and Chemistry, in October following,(a) £5 5s.; total, £8 8s.

Second Winter Session.—Matriculation, £1; Institutes of Medicine, £4 4s.; Surgery, £4 4s.; hospital, £5 5s.; examination in Botany, Natural History, and Chemistry, in April, if not previously passed; total, £14 13s.

Third Summer Session.—Practical Pharmacy, £2 2s.; dispensary, £2 2s.; hospital; total, £4 4s.

Third Winter Session.—Matriculation, £1; Materia Medica, £4 4s.; Pathology, £4 4s.; Clinical Surgery, £4 4s.; dispensary, £1 1s.; hospital; examination in Anatomy, Physiology, Materia Medica, Pathology, in April or July, £5 5s.; total, £19 18s.

Fourth Summer Session.—Medical Jurisprudence, £4 4s.; hospital and clinical lectures; total, £4 4s.

Fourth Winter Session.—Matriculation, £1; Practice of Medicine, £4 4s.; Midwifery, £4 4s.; Practical Midwifery, £1 4s.; Clinical Medicine, £4 4s.; Vaccination, £1 1s.; hospital; total, £15 17s.

Fifth Summer Session.—Hospital; final examination for M.B. and C.M., £10 10s.; total minimum expenses for M.B. and C.M., £104 18s.

Only one course of instruction on each subject is here stated, that being the minimum.

Fees for Degrees.—Examination in Botany, Chemistry, chemical testing, and Natural History, £5 5s.; examination in Antomy, Institutes of Medicine, Materia Medica, Pathology, £5 5s.; final examination in Surgery, Midwifery, Practice of Physic, Clinical Medicine, Clinical Surgery, Medical Jurisprudence, and prescriptions, during last summer session, £5 5s.; total fees for M.B. diploma, £15 15s. Additional fee for C.M. diploma, £5 5s.; additional fee for M.D. diploma, £5 5s.; Government stamp-duty (for M.D. only), £10.

Note.—Total fees and stamp for graduating as M.D. only, by regulations for students commencing before February, 1861, £25.

N.B.—The above fees include all charges for the diplomas.

ROYAL INFIRMARY, EDINBURGH.

In this Hospital a portion of the beds is set apart for clinical

(a) For those who have certificates for two summer sessions and one winter session, and who have attended two courses during each of these three sessions.

instruction by the Professors of the University of Edinburgh. Courses of Clinical Medicine and Surgery are also given by the ordinary Physicians and Surgeons. Special instruction is given in the Medical Department on Diseases of Women, Physical Diagnosis, etc., and in the Surgical Department on Diseases of the Eye. Separate wards are devoted to fever, venereal diseases, diseases of women, diseases of the eye; also to cases of incidental delirium or insanity. Post-mortem examinations are conducted in the Anatomical Theatre by the Pathologist, who also gives practical instruction in Pathological Anatomy and Histology.

MEDICAL DEPARTMENT.

Professors of Clinical Medicine—Dr. Maclagan, Dr. Sanders, Dr. Grainger Stewart.

Extra Physicians and Lecturers on the Diseases peculiar to Women—Dr. J. Matthews Duncan, Dr. Alex. R. Simpson.

Ordinary Physicians and Lecturers on Clinical Medicine—Dr. Rutherford Haldane, Dr. George W. Balfour, Dr. T. Grainger Stewart, Dr. Claud Muirhead.

Assistant-Physicians—Dr. John Wyllie, Dr. David J. Brakenridge.

SURGICAL DEPARTMENT.

Consulting Surgeons—Dr. Dunsmure, Dr. J. D. Gillespie.

Professor of Surgery—Mr. Spence.

Ordinary Acting Surgeons—Dr. P. H. Watson, Mr. Thos. Annandale (Lecturers on Clinical Surgery); Dr. Joseph Bell.

Professor of Clinical Surgery—Mr. Lister.

Ophthalmic Surgeons—Mr. Walker, Dr. D. A. Robertson.

Extra Surgeon for Treatment of Ovarian Diseases—Dr. Thomas Keith.

Assistant-Surgeons—Dr. John Duncan, Dr. John Chiene.

Dental Surgeon—Dr. John Smith.

Pathologist—Dr. John Wyllie.

HOSPITAL TICKETS.

Perpetual, in one payment, £10; annual, £5 5s.; half-yearly, £3 3s.; quarterly, £1 11s. 6d. Separate payments for two years entitle the student to a perpetual ticket.

THE SCHOOL OF MEDICINE, EDINBURGH.

On October 1 the Practical Anatomy Rooms and Chemical Laboratories will be opened. On October 29 the inaugural address will be delivered by Dr. Claud Muirhead, at eleven o'clock. The courses of lectures will be commenced—winter session, October 30; summer session, May 1.

WINTER SESSION.

Anatomy: Practical Anatomy, Course of Lectures, Course of Demonstrations—Dr. P. D. Handyside.
Chemistry: Lectures, Practical Chemistry, Analytical Chemistry—Dr. Stevenson Macadam, Mr. J. Falconer King, and Mr. Ivison Macadam.
Materia Medica and Therapeutics—Dr. Francis W. Moinet.
Surgery—Dr. P. H. Watson, Mr. Chiene, Dr. John Duncan, and Dr. A. G. Miller.
Midwifery and Diseases of Women and Children—Dr. Angus Macdonald.
Institutes of Medicine or Physiology—Dr. James.
Clinical Medicine (Royal Infirmary)—Drs. G. W. Balfour, Claud Muirhead, and Brakeuridge. Dr. Angus Macdouald (Diseases of Women).
Clinical Surgery (Royal Infirmary)—Mr. Joseph Bell.
Medical Jurisprudence and Public Health—Dr. Littlejohn.
Practice of Physic—Dr. Claud Muirhead and Dr. John Wyllie.
Natural History, Zoology, and Comparative Anatomy—Dr. Andrew Wilson.
General Pathology and Pathological Anatomy—
Diseases of the Ear—Dr. Kirk Duncanson.
Vaccination (Royal Dispensary)—Dr. Husband.
Diseases of Children—Dr. R. Peel Ritchie.
Diseases of the Skin—Dr. Allan Jamieson.
Practical Gynæcology—Dr. Halliday Croom.
Practical Midwifery—Dr. Charles Bell.

SUMMER SESSION.

Anatomy: Practical Anatomy, Course of Demonstrations—Dr. P. D. Handyside.
Chemistry: Practical Chemistry, Analytical Chemistry—Dr. Stevenson Macadam, Mr. J. Falconer King, and Mr. Ivison Macadam.
Materia Medica and Therapeutics—Dr. Francis W. Moinet and Dr. William Craig.
Midwifery and Diseases of Women and Children—Dr. Keiller, Dr. Underhill, Dr. Halliday Croom, and Dr. Charles Bell.
Medical Jurisprudence and Public Health—Dr. Littlejohn.
Clinical Medicine (Royal Infirmary)—Drs. Geo. W. Balfour, Claud Muirhead, and Brakenridge. Dr. Angus Macdonald (for Diseases of Women).
Clinical Surgery (Royal Infirmary)—Mr. Joseph Bell.
Practical Physiology—Dr. James.
Natural History, Zoology, and Comparative Anatomy—Dr. Andrew Wilson.
Diseases of the Eye—Dr. Argyll Robertson.
Diseases of the Ear—Dr. Kirk Duncanson.
Vaccination—Dr. Husband.
Pathological Histology—
Insanity—Dr. J. Batty Tuke.
Syphilology—Dr. Cadell.
Diseases of Children—Dr. R. Peel Ritchie.
Operative and Practical Surgery—Dr. P. H. Watsou.
Surgical Anatomy and Operative Surgery—Mr. Chiene.
Practical Surgery—Dr. John Duncan.
Operative Surgery—Dr. A. G. Miller.

The lectures qualify for the University of Edinburgh and the other Universities; the Royal Colleges of Physicians and Surgeons of Edinburgh, London, and Dublin, and the other medical and public Boards.

FEES.

For a first course of lectures, £3 5s.; for a second, £2 4s.; perpetual, £5 5s. To those who have already attended a first course in Edinburgh the perpetual fee is £2 4s. Practical Anatomy (six months' course), £3 3s. Course of Demonstrations, £2 2s.; perpetual, £4 4s.; Practical Anatomy, with course of Demonstrations, £4 4s. Practical Chemistry, £3 3s.; Analytical Chemistry, £2 a month, £5 for three months, or £10 for six months. Vaccination, £1 1s. Syphilology, £1 1s. For summer courses of Clinical Surgery and Clinical Medicine, each £2 4s.; Practical Anatomy (including Anatomical Demonstrations), Medical Anatomy, Operative Surgery, Diseases of the Ear, Diseases of the Skin, Insanity, and Diseases of Children, each £2 2s.

The minimum cost of the education in this School of Medicine for the double qualification of Physician and Surgeon from the Royal College of Physicians and Surgeons, including the fees for the joint examination, is £85, which is payable by yearly instalments during the period of study; whilst the minimum cost for the single qualification of either Physician or Surgeon, including the fee for examination, is £85.

UNIVERSITY OF GLASGOW.—FACULTY OF MEDICINE.

LECTURES AND CLASSES.—WINTER SESSION.

Anatomy, Junior; Anatomy, Senior; Practical Anatomy—Prof. Cleland and Demonstrator.
Chemistry, Chemical Laboratory—Prof. Ferguson.
Clinical Medicine—Prof. McCall Anderson.
Clinical Surgery—Prof. George Buchanan.
Forensic Medicine—Prof. Simpson.
Materia Medica—Prof. Cowan.
Midwifery—Prof. Leishman.
Pathology—The Pathologists of the Infirmaries.
Physiology—Physiological Laboratory: Prof. McKendrick.
Practice of Physic—Prof. Gairdner.
Surgery—Prof Macleod.

SUMMER SESSION.

Botany, Botanical Demonstrations—Prof. A. Dickson.
Clinical Medicine—Prof. McCall Anderson.
Clinical Surgery—Prof. Buchanan.
Embryology, and Demonstrations on Anatomy, Elementary Anatomy, Practical Anatomy—Prof. Cleland and Demonstrator.
Lectures on the Eye—Dr. T. Reid.
Operative Surgery—Prof. Macleod.
Practice of Medicine—Prof. Gairdner.
Practical Chemistry, Chemical Laboratory—Prof. Ferguson.
Practical Pharmacy—Prof. Cowan.
Practical Physiology—Prof. McKendrick.
Zoology—Zoological Laboratory: Prof. Young.

CLASS FEES.

Fee for each course, £3 3s., except lectures on the Eye, for which the fee is £1 1s.

In addition to the University courses, the following Hospitals and Dispensaries afford ample means for practical instruction in the various departments of Medicine and Surgery:—

WESTERN INFIRMARY.

This Hospital contains beds for medical and surgical patients, with wards for skin diseases and for diseases of women.

MEDICAL AND SURGICAL STAFF.

Physicians.	*Surgeons.*
Prof. W. T. Gairdner.	Prof. George H. B. Macleod.
Prof. T. McCall Anderson.	Prof. George Buchanan.
Dr. James Finlayson.	Dr. Alexander Patterson.

Diseases of Women—Prof. W. Leishman.

Dispensary Physicians—Dr. Gavin P. Tennent, Dr. Joseph Coats, and Dr. D. C. McVail.

Extra Dispensary Physician—Dr. Gemmell.

Dispensary Surgeons—Dr. Jas. G. Lyon, Dr. D. N. Knox, and Dr. Christie.

Extra Dispensary Surgeon—Dr. Renton.

Pathologist—Dr. Joseph Coats.

Medical Superintendent—Dr. Alexander.

Lady Superintendent—Miss E Clyde.

The hour of visit is 9 a.m.

FEES.

The fees for admission to the practice of this Infirmary are—First year, £10 10s.; second year, £10 10s.; afterwards free. The fees for clinical lectures are included in the foregoing.

GLASGOW ROYAL INFIRMARY SCHOOL OF MEDICINE.

The winter session commences on October 29, and the summer session on May 1. Lectures are delivered on the subjects necessary for qualifying, and extra courses are given on practical subjects now required by examining boards. During summer, lectures on Insanity will be given by Dr. A. Robertson, and the City Parochial Asylum under his charge is free to students of this School.

LECTURES AND DEMONSTRATIONS.

Anatomy—Mr. H. E. Clark.
Chemistry—Dr. John Clark.
Clinical Medicine and Clinical Surgery—The Physicians of Hospital.
Dental Surgery—Dr. J. C. Woodburn.
Diseases of the Ear—Dr. Cassells.
Diseases of the Eye—Mr. H. E. Clark.
Forensic Medicine—Dr. Macewen.
Materia Medica—Dr. John Dougall.
Medicine—Dr. A. Wood Smith.
Mental Diseases—Dr. A. Robertson.
Midwifery—Dr. J. Stirton.
Pathology—Dr. D. Foulis.
Physiology—Mr. W. J. Fleming.
Practical Physiology and Operative Surgery—Mr. Fleming and Dr. Cameron.
Surgery—Dr. H. C. Cameron.

The Royal Infirmary contains 570 beds. Of these 240 are for medical and 320 for surgical cases, with special wards for the treatment of venereal disease in males and diseases of women. Diseases of the ear and throat are specially treated at the outdoor department.

MEDICAL AND SURGICAL STAFF.

Physicians.
Dr. Perry.
Dr. Maclaren.
Dr. Wood Smith.
Dr. Charteris.

Physician for Diseases of Women.
Dr. Stirton.

Surgeons.
Dr. Cameron.
Dr. Morton.
Dr. Macewen.
Dr. E. Watson.
Dr. Dunlop.

Dispensary Physicians.
Dr. Mather.
Dr. Lawrie.

Extra Dispensary Physicians.
Dr. J. W. Anderson.
Dr. Weir.
Dr. Dougall.

Dispensary Surgeons.
Mr. Clark.
Dr. Lothian.

Extra Dispensary Surgeons.
Dr. Whitson.
Mr. Fleming.
Dr. Foulis.

Vaccinator.
Dr. Tannahill.

Pathologist.
Dr. Foulis.

Diseases of the Throat.
Dr. Eben Watson.

Aural Surgeon—Dr. J. P. Cassells. | *Dental Surgeon*—Dr. J. C. Woodburn.

APPOINTMENTS.

There are five Physicians' and five Surgeons' Assistants, who are boarded and lodged in the Hospital at the rate of £25 per annum, and who perform all the duties of House-Physicians and House-Surgeons. These appointments are held for twelve months—six in the medical, and six in the surgical wards—and are open to those students of the Infirmary who have passed all their examinations except the last, or who have a qualification in Medicine or Surgery.

Clinical Assistants, Dressers, and Dispensary Clerks are selected from the students without any additional fee; and from the large number of accident cases and cases of acute disease received into the wards, these appointments are numerous, and invaluable to the student. The number of capital operations last year was ninety. The total number of operations was 371. Attendance at the Dispensary for the treatment of out-patients, and admission to the Pathological Museum, are also free.

FEES.

For each course of lectures, first session, £2 2s; second ditto, and perpetual, £1 1s.

The Anatomy Class fees are—first session, £4 4s.; second ditto, £4 4s.; afterwards, £1 1s. per annum for Practical Anatomy.

HOSPITAL FEE.

The fee for unlimited attendance on the practice of the Infirmary and on the courses of clinical instruction and lectures does not exceed £21.

Prospectuses can be obtained from Dr. Thomas, the Superintendent of the Hospital.

ANDERSON'S COLLEGE, GLASGOW.

LECTURES AND CLASSES.

Anatomy—Dr. Buchanan.
Chemistry—Mr. Dittmar.
Institutes of Medicine or Physiology—Dr. McVail.
Medical Jurisprudence (in Summer)—Dr. Alex. Lindsay.
Midwifery (in Summer)—Dr. J. G. Wilson.
Materia Medica—Dr. Morton.
Ophthalmic Medicine and Surgery—Dr. Wolfe.
Practice of Medicine—Dr. Charteris.
Surgery—Dr. Dunlop.
Hygiene and Public Health (in summer)—Dr. Christie.

FEES.

Fee for each class, £2 2s.; second session, £1 1s. The fees for all lectures and hospital practice required for a diploma do not exceed £48.

Hospital practice and clinical lectures in the Royal Infirmary, containing 600 beds.

Dispensary practice in Anderson's College Dispensary.

The lectures at Anderson's College qualify for the various licensing boards in the kingdom.

Students may also attend the Maternity Hospital (Physicians-Accoucheur—Drs. J. G. Wilson and Tannahill), Eye Infirmary, Ophthalmic Institution, Dispensary for Skin Diseases, etc.

A syllabus, with full information, may be obtained by applying to Dr. A. M. Buchanan, 201, St. George's-road, Glasgow, Dean of the Medical Faculty.

UNIVERSITY OF ABERDEEN.—FACULTY OF MEDICINE.

LECTURES.—WINTER SESSION.

Anatomy—Professor Struthers.
Chemistry—Professor Brazier.
Institutes of Medicine—Professor W. Stirling.
Materia Medica—Professor Harvey.
Medical Logic and Medical Jurisprudence—Professor Ogston.
Midwifery and Diseases of Women and Children—Prof. Stephenson.
Practical Anatomy and Demonstrations—Professor Struthers and Assistants.
Practice of Medicine—Professor Smith-Shand.
Surgery—Professor Pirrie.
Zoology with Comparative Anatomy—Professor Nicol.

SUMMER SESSION.

Botany—Professor Trail.
Practical Pharmacy—Professor Harvey and Assistant.
Practical Midwifery and Gynæcology, and Clinical Diseases of Children—Professor Stephenson.
Practical Chemistry—Professor Brazier.
Practical Anatomy and Demonstrations—Professor Struthers and Assistants.
Practical Physiology—Professor Stirling.
Zoology with Comparative Anatomy—Professor Nicol.

The Anatomical Course in summer includes instruction in Histology and in the use of the microscope; and instruction in Osteology for beginners.

FEES.

Matriculation fee (including all dues) for the winter and summer session, £1; for the summer session alone, 10s.

Pathological Anatomy, Dr. Rodger, £2 2s. Practical Ophthalmology, Dr. A. D. Davidson. Practical Toxicology, Dr. F. Ogston, jun. Dental Surgery (in summer), Mr. Williamson.

The regulations relative to the registration of students of Medicine, and the granting of degrees in Medicine and Surgery, may be had of Professor Brazier, Secretary of the Faculty of Medicine.

Full information regarding the classes and degrees in the Faculties of Arts, Law, and Divinity, and in regard to Bursaries and Scholarships, will be found in the University Calendar, published by Messrs. Wyllie and Son, Union-street, Aberdeen, by post 2s. 2d.

ABERDEEN ROYAL INFIRMARY.

The Aberdeen Royal Infirmary contains about 300 beds.

MEDICAL AND SURGICAL STAFF.

Consulting Physician—Dr. A. Harvey.
Consulting Surgeon—Mr. David Fiddes.

Physicians.
Dr. J. W. F. Smith-Shand.
Dr. R. Beveridge.
Dr. Angus Fraser.

Surgeons.
Mr. W. Pirrie.
Mr. A. Ogston.
Mr. J. O. Will.
Mr. R. J. Garden.

Resident Assistant-Physician.
Mr. D. M. Fraser.

Resident Assistant-Surgeon.
Mr. J. H. Walker.

Ophthalmic Surgeon—Dr. Alex. D. Davidson.
Dental Surgeon—Mr. Williamson.
Chloroformist—Dr. P. B. Smith.
Resident Superintendent and Apothecary—Dr. R. Rattray.
Pathologist and Curator of Museum—Dr. J. Rodger.
Treasurer and Secretary—Mr. W. Carnie.

UNIVERSITY OF ST. ANDREWS.

There is no proper Faculty of Medicine in this University, but it is possible for the student to make an *annus medicus* by attendance on certain of the courses—as Natural History, Professor Nicholson, M.D.; Chemistry, Professor Heddle, M.D.; and Anatomy and Medicine, Professor Pettigrew, M.D.

SCHOOLS AND HOSPITALS IN IRELAND.

UNIVERSITY OF DUBLIN.—SCHOOL OF PHYSIC.

THE School of Physic is under the conjoint superintendence of the University authorities and those of the King and Queen's College of Physicians.

LECTURES AND CLASSES.

Anatomy and Surgery—Dr. Benjamin G. M'Dowel.
Botany—Dr. E. Percival Wright.
Chemistry—Dr. G. Emerson Reynolds.
Comparative Anatomy and Zoology—Dr. Alexander Macalister.
Institutes of Medicine—Dr. J. M. Purser.
Materia Medica and Pharmacy—Dr. Aquilla Smith.
Medical Jurisprudence—Dr. Robert Travers.
Midwifery—Dr. Edward B. Sinclair.
Natural Philosophy—Rev. J. Loslie.
Operative Surgery—Dr. Richard G. Butcher.
Ophthalmic Surgery—Mr. Henry Wilson.
Physic—Dr. Alfred Hudson.
Practice of Medicine—Dr. W. Moore.
Surgery—Dr. William Colles (Trin. Coll., Dr. Edward H. Bennett).
University Anatomist—Dr. Thomas E. Little.

Winter Session, 1878-79.—The winter session commences on October 1. Lectures will commence on November 1. The dissecting-room will be opened on October 1.

SCHOLARSHIPS AND EXHIBITIONS.

Medical Scholarships.—Two medical scholars are elected annually, by the Board of Trinity College, at an examination held at the end of June—subject to conditions stated in the College Calendar. Each scholarship is worth £20 per annum, and is tenable for two years.

Medical Exhibitions.—The Professors of the School of Physic give three exhibitions annually, amounting altogether in value to £40—subject to conditions prescribed by the Professors themselves.

SIR PATRICK DUN'S HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Consulting Physician.—Dr. Alfred Hudson.
Consulting Surgeon.—Dr. W. Colles.

Clinical Physicians.	*Clinical Surgeons.*
Dr. John Malet Purser.	Dr. Benjamin G. M'Dowel.
Dr. William Moore.	Dr. Thomas E. Little.
Dr. Aquilla Smith.	Dr. Edward H. Bennett.
Midwifery Physician.	*Lecturer in Operative Surgery.*
Dr. Edward B. Sinclair.	Dr. Richard G. Butcher.

FEES.

Clinical Lectures and Hospital Attendance.—The payment of £3 3s. to the Hospital entitles any student to attend the clinic of the Hospital for twelve months, and to attend the lectures delivered by Dr. R. G. Butcher, University Lecturer in Operative Surgery. Students who have taken out the degrees of Bachelor in Medicine and Master in Surgery in Trinity College are entitled to attend the Hospital as perpetual free pupils. In addition to the Hospital fee, the payment of a fee of £6 6s. is required for the privilege of attending the clinical lectures. Total fees for Hospital and lectures for twelve months, £12 12s.

Practical Midwifery.—Students desirous of entering for twelve months' instruction in Practical Midwifery are required to pay a maternity fee of £3 3s. each. Students of Trinity College are not liable to any other payment for instruction in Practical Midwifery. Other students are required to pay £3 3s. each to the King's Professor for twelve months' practical instruction, in addition to the Hospital maternity fee. Students who have paid the Hospital maternity fee are entitled to attend the demonstrations in Obstetric Surgery given by the King's Professor. Total fees for College Students, £3 3s.; total fees for Externs, £6 6s.

PRIZES.

Clinical Medals.—The Governors of the Hospital award a Silver Clinical Medal in Medicine to the student who shall pass the best examination on the medical cases treated in the Hospital during the year; and a Silver Clinical Medal in Surgery to the student who shall pass the best examination on the surgical cases treated in the Hospital during the year.

QUEEN'S COLLEGE, BELFAST.

The lectures will commence on Tuesday, October 29.

Anatomy and Physiology—Dr. P. Redfern.	Natural Philosophy—Dr. Everett.
Chemistry—Dr. Thomas Andrews.	Practice of Medicine—Dr. James Cuming.
Materia Medica—Dr. J. S. Reid.	Practice of Surgery—Dr. A. Gordon.
Medical Jurisprudence—Dr. J. F. Hodges.	Zoology and Botany—Dr. R. O. Cunningham.
Midwifery—Dr. R. F. Dill.	

The demonstrations in Anatomy are delivered by Dr. Anderson. The lectures in Midwifery and in Medical Jurisprudence, and the courses of Botany and Practical Chemistry, and a second course of Experimental Physics, will commence in May.

FEES.

Anatomy and Physiology—First course, £3; each subsequent course, £2. Anatomical Demonstrations and Practical Anatomy—each course, £3. Practical Chemistry, £3. Other medical lectures—first course, £2; each subsequent course, £1.

SCHOLARSHIPS.

Two Medical Scholarships are awarded to the students of each year of the medical course. The examinations commence on October 17.

BELFAST GENERAL HOSPITAL.

FEES.

Clinical Instruction—A winter session, £5 5s. A summer session, £2 2s. Perpetual fee, payable in one sum of £10 10s., or two instalments of £5 5s. each on entering for the first and second years. Hospital fee, 10s. 6d. each winter or summer session.

BELFAST LYING-IN HOSPITAL.

Fee for the session, £3 3s.

QUEEN'S COLLEGE, GALWAY.—FACULTY OF MEDICINE.

LECTURERS.

Anatomy and Physiology, and Practical Anatomy—Dr. J. P. Pye.	Medical Jurisprudence—Dr. R. J. Kinkead.
Botany and Zoology—Dr. A. G. Melville.	Midwifery and Diseases of Women and Children—Dr. R. J. Kinkead.
Chemistry—Dr. T. H. Rowney.	Natural Philosophy—Dr. A. H. Curtis.
Logic and Mental Philosophy—Dr. T. W. Moffett.	Practice of Medicine — Dr. N. Colahan.
Materia Medica—Dr. N. W. Colahan.	

Practice of Surgery—Dr. J. V. Brown.

The County Galway Infirmary, Town, and Fever Hospitals are in the immediate vicinity of the Queen's College.

SCHOLARSHIPS AND EXHIBITIONS.

Eight scholarships of the value of £25 each, and exhibitions varying in value from £12 to £16, are appropriated to students pursuing the course for the degree of M.D.

FEES.

Anatomy and Physiology, £3 first session; afterwards £2. Practical Anatomy, £3; Practical Chemistry, £3; Operative Surgery, £3; other classes, £1 for each course extending over one term only, £2 for each course extending over more than one term, and £1 for each re-attendance on the same.

For further information, application may be made to Professor Curtis, M.A., LL.D., Registrar.

QUEEN'S COLLEGE, CORK.—FACULTY OF MEDICINE.

LECTURERS.

Anatomy and Physiology—Dr. J. J. Charles.	Practical Anatomy—The Professor, assisted by Demonstrators.
Chemistry and Practical Chemistry—Dr. Maxwell Simpson.	Practice of Medicine—Dr. D. C. O'Connor.
Materia Medica—Dr. M. O'Keefe.	Practice of Surgery—Dr. W. K. Tanner.
Midwifery—Dr. J. R. Harvey.	Zoology and Botany—Prof. Robert Harkness.
Natural Philosophy — Prof. John England.	

SCHOLARSHIPS.

Eight scholarships are awarded to students in Medicine, if qualified. Two junior scholarships of £25 each to students commencing their first, second, third, and fourth years. Clinical Medicine and Surgery at the North and South Infirmaries, and Clinical Midwifery at the Lying-in Hospital.

THE ADELAIDE HOSPITAL, PETER-STREET, DUBLIN.

MEDICAL AND SURGICAL STAFF.

Physicians.	*Surgeons.*
Dr. Henry H. Head.	Dr. John K. Barton.
Dr. James Little.	Mr. Benjamin Wills Richardson.
Obstetric Physician.	Dr. Kendal Franks.
Dr. Richd. Purefoy.	*Ophthalmic Surgeon.*
Assistant-Physician.	Dr. Richard Rainsford.
Dr. Walter G. Smith.	

Further particulars can be obtained from Mr. Richardson, 22, Ely-place, or any other member of the medical staff.

ST. VINCENT'S HOSPITAL, DUBLIN.

HOSPITAL STAFF.

Physicians.	*Surgeons.*
Dr. Francis J. B. Quinlan.	Dr. Edward D. Mapother.
Dr. Robert Cryan.	Mr. William H. O'Leary, M.P.

Gynæcologist—Dr. J. A. Byrne.
Surgeon-Dentist—Mr. William J. Doherty.
Apothecary—Mr. C. T. Boland.

FEES.

Winter and summer session, £12 12s.; separately, £8 8s. and £5 5s.

Further particulars may be learned on application to the Secretary, or at the Hospital during the hours of attendance.

DR. STEEVENS' HOSPITAL AND MEDICAL COLLEGE, DUBLIN.

MEDICAL AND SURGICAL STAFF.

Visiting Physicians—Dr. W. M. Burke and Dr. H. Freke.
Visiting Surgeons—Mr. S. G. Wilmot and Mr. C. Fleming.

Physicians.	*Surgeons.*
Dr. T. W. Grimshaw.	Mr. W. Colles.
Dr. Bookey.	Mr. E. Hamilton.
	Mr. R. M'Donnell.
Physician-Accoucheur.	*Resident Surgeon.*
Dr. James Isdell.	Dr. R. Johnston.

Surgeon-Dentist—Mr. J. A. Baker.
Surgeon-Oculist—Mr. Henry R. Swanzy.

LECTURERS.

Anatomy—Dr. Warren, Mr. Fox, Mr. Johnston, Mr. Hayes, and Mr. Pentland.
Anatomy and Physiology—Mr. E. Hamilton.
Botany—Dr. Fox.
Chemistry—Mr. McHugh.
Institutes of Medicine—Dr. Bookey.
Materia Medica—Dr. Johnston.
Medical Jurisprudence—Dr. H. J. Tweedy.
Medicine—Dr. Grimshaw.
Midwifery—Dr. James Isdell.
Surgery—Mr. W. Colles.
Curator of the Museum—Dr. F. W. Warren.

FEES.

Hospital Practice, nine months, £12 12s.; ditto, six months, £8 8s. Practical Anatomy, £5 5s. Lectures, each course, £3 3s.

Further particulars may be learned from any of the Professors; from the Resident Surgeon at the Hospital; or from Dr. Edward Hamilton, Hon. Sec., 120, Stephen's-green West.

JERVIS-STREET HOSPITAL, DUBLIN.

MEDICAL AND SURGICAL STAFF.

Physicians.

Dr. Stephen M. MacSwiney. | Dr. William Martin.

Surgeons.

Mr. M. Harry Stapleton. | Mr. Austin Meldon.
Dr. J. Stannus Hughes. | Mr. James Edward Kelly.
Mr. J. K. Forrest. | Mr. M. J. Kilgarriff.
Dr. E. W. Collins.

This Hospital, which is at present being rebuilt upon an extensive scale, is most central in situation, and in the immediate vicinity of the Catholic University and Carmichael Medical Schools. From its proximity to the quays and principal factories it presents unrivalled opportunities to the students of seeing every form of surgical injury. An extensive Dispensary for out-door patients is attached to the Hospital, at which the students are allowed to perform minor operations, under the guidance of the Surgeon on duty, and are rendered familiar with the details of dispensary practice.

Instruction is given by the Physician and Surgeon on duty on alternate mornings, between nine and eleven o'clock, at the bedside, when the nature, progress, and treatment of each case are explained. Two clinical lectures are delivered each week on the most important cases under treatment, when pathological specimens are exhibited. Surgical instruments and appliances of all kinds are constantly made the subject of special instruction.

Surgical Operations are performed on Saturday mornings, at ten o'clock, except in cases of emergency, when due notice is given, if possible.

Practical Pharmacy is taught under the superintendence of the Apothecary.

Resident Pupils and Dressers are selected from among the most attentive of the advanced students, without payment of any additional fee. Two Interns are appointed each half-year, and are provided with apartments, etc., free of expense. Special Certificates are given to the Resident Pupils and Dressers who have performed their respective duties to the satisfaction of the Physicians and Surgeons.

Certificates of attendance are recognised by all the licensing bodies and examining boards in the United Kingdom.

CARMICHAEL SCHOOL OF MEDICINE, DUBLIN.

WINTER SESSION.

Anatomy—Drs. Storey and Gunn.
Chemistry—Dr. Tichborne.
Midwifery—Drs. Jennings and Macan
Surgery—Messrs. Barton and Corley.
Ophthalmic Surgery—Dr. C. E. Fitzgerald.
Practice of Medicine—Drs. Gordon and Moore.
Physiology—Dr. Harvey.

SUMMER SESSION.

Botany—Mr. Blakeley.
Materia Medica—Dr. Duffey.
Medical Jurisprudence—Mr. H. A. Auchinleck.
Pathology—Dr. Woodhouse.
Practical Physiology—Dr. Harvey.
PracticalChemistry—Dr. Tichborne.

Prizes to the value of £64 on the foundation of the late Richard Carmichael, Esq., and the Mayne Scholarship, value £15, are awarded annually.

For further particulars apply to the Registrar at the School.

MEATH HOSPITAL AND COUNTY DUBLIN INFIRMARY.

MEDICAL AND SURGICAL STAFF.

Physicians.

Dr. Arthur Wynne Foot. | Dr. John William Moore.

Surgeons.

Mr. George H. Porter. | Mr. Rawdon Macnamara.
Mr. James H. Wharton. | Mr. R. Perssé White.
Mr. Philip Crampton Smyly. | Mr. Lambert H. Ormsby.

The ensuing winter session will commence on October 1, and the course of clinical lectures on the first Monday in November.

Clinical lectures, of which four will be delivered weekly, and instructions in Medicine and Surgery, will be given on alternate days.

The Physicians and Surgeons on duty will visit the Hospital at 9 a.m., so as to allow the members of the class to be in attendance at their respective Schools of Medicine at 11 a.m.

The Hospital, which contains 120 beds for the reception of medical and surgical cases, and to which an extensive dispensary (open daily), lending library, and physical laboratory are attached, is within a few minutes' walk of the University, the College of Surgeons, and the Ledwich School of Medicine.

An additional ward has been erected for the reception of children, in which the pupils will have an opportunity of studying that highly important subject—infantile disease.

Certificates of attendance at this Hospital are recognised by all the universities, colleges, and licensing bodies in the United Kingdom.

Prizes will be given at the termination of the winter course to the best answerers in their respective classes.

The office of Resident Pupil is open to pupils as well as apprentices.

Further information may be obtained on application to Lambert H. Ormsby, Esq., Hon. Sec., 12, Lower Fitzwilliam-street, Dublin; or at the Hospital.

CATHOLIC UNIVERSITY SCHOOL OF MEDICINE, CECILIA-STREET, DUBLIN.

LECTURES AND CLASSES.

Anatomy and Physiology—Dr. Hayden and Dr. Cryan.
Anatomical Demonstrations—The Professors of Anatomy and Physiology.
Botany—Dr. Sigerson.
Chemistry—Dr. Campbell.
Dissections—Drs. Coppinger and Kilgarriff, and Messrs. Carroll, Redmond, and Kehoe.
Medical Jurisprudence—Dr. MacSwiney.
Materia Medica—Dr. Quinlan.
Natural Physiology—The Rev. Dr. Molloy.
Pathology—Dr. Lyons.
Practical Chemistry—Dr. Campbell.
Theory and Practice of Medicine—Dr. Lyons.
Theory and Practice of Midwifery—Dr. Byrne.
Theory and Practice of Surgery—Mr. Tyrrell.
Ophthalmology—Dr. Hayes.
Institutes of Medicine—Dr. Nixon.

PRIZES AND EXHIBITIONS.

At the termination of the winter session, public examinations will be held, when, in addition to prizes in each class, the University Exhibition, value £20, will be awarded for the subjects mentioned in the School prospectuses.

At the termination of the summer session, the University Gold Medal, value £7, will be awarded, in addition to the usual prizes in each class.

FEES.

For each course £3 3s., excepting Dissections and Practical Chemistry, which are £5 5s. A reduction of one-sixth is made to perpetual pupils paying the entire of their fees in advance, or in two instalments at the commencement of the first and second years of their course. Parents and guardians are recommended to forward all fees directly, by cheque or order, to the Registrar, Dr. Hayes, 29, Westland-row, or at the School.

Further particulars may be learned from any of the Professors; from the Medical Registrar, Dr. Hayes, 29, Westland-row; or on application at the School.

MATER MISERICORDIÆ HOSPITAL, ECCLES-STREET, DUBLIN.(a)

MEDICAL AND SURGICAL STAFF.

Physicians.

Dr. John Hughes.
Dr. Thomas Hayden.
Dr. Christopher J. Nixon.

Assistant-Physician.

Dr. Christopher Gunn.

Surgeons.

Mr. Francis R. Cruise.
Mr. Henry J. Tyrrell.
Mr. Patrick J. Hayes.

Assistant-Surgeon.

Mr. Charles Coppinger.

This Hospital contains 210 beds, including fifty beds for fever and other contagious diseases.

Certificates of attendance upon this Hospital are recognised by all the licensing bodies in the United Kingdom.

PRIZES.

Two clinical prizes (the "Leonard Prizes") of £15 each, one medical and one surgical, will be given at the end of the winter session, in accordance with the directions contained in

(a) No return made.

the will of the late Mark Leonard, Esq., for the best report of not less than twenty cases for each prize; the cases reported to be those occurring in the Hospital during the winter session.

Fee for nine months, £12 12s.; six winter months, £8 8s.; three summer months, £5 5s.

Further particulars may be learned by application to Dr. Nixon, Secretary to the Medical Board, 32, Upper Merrion-street, or to any of the other medical officers.

CITY OF DUBLIN HOSPITAL, UPPER BAGGOT-STREET.

Consulting Physicians—Dr. James Apjohn and Dr. Charles Benson.
Consulting Surgeon—Mr. Joliffe T. Tufnell.
Physicians—Dr. Hawtrey Benson and Dr. J. Magee Finny.

Surgeons—Mr. Henry Gray Croly, Dr. William I. Wheeler, and Dr. Henry Fitzgibbon.
Ophthalmic and Aural Surgeon—Dr. Loftie Stoney.
Gynæcologist—Dr. Arthur V. Macan.

Fees.—Nine months' hospital attendance, £12 12s; six months, £8 8s; three months, £5 5s.

For further particulars apply to Dr. Wheeler, 27, Lower Fitzwilliam-street.

MERCERS' HOSPITAL, WILLIAM-STREET, DUBLIN.

STAFF.

Physicians—Dr. T. P. Mason and Dr. George F. Duffey.
Surgeons—Mr. E. Ledwich, Mr. E. S. O'Grady, and Mr. B. F. M'Dowell.

This Hospital, one of the first founded in Dublin, is situated in a central position, and is in close proximity to the Schools of the Royal College of Surgeons' Catholic University and the Ledwich.

ROYAL COLLEGE OF SURGEONS IN IRELAND. SCHOOL OF SURGERY.

LECTURES.—WINTER SESSION.

Anatomy and Physiology — Dr. Mapother.
Descriptive Anatomy—Dr. Bevan and Mr. Thornley Stoker.
Midwifery—Dr. Roe.
Surgery—Mr. J. Stannus Hughes and Mr. Stokes.
Practice of Medicine—Dr. James Little.
Chemistry—Dr. Cameron.

SUMMER SESSION.

Materia Medica—Mr. Macnamara.
Medical Jurisprudence—Dr. Davy.
Botany—Dr. Minchin.
Practical Chemistry—Dr. Cameron.
Midwifery—Dr. Roe.
Hygiene—Dr. Cameron.
Ophthalmic and Aural Surgery—Mr. Swanzy.

A public course of lectures on Comparative Anatomy will be delivered by the Professor of Anatomy and Physiology, at the commencement of the session, and additional lectures on the same subject will be delivered during the winter.

The dissections are under the direction of the Professor of Anatomy, assisted by the demonstrators, who will daily attend to give instruction and to assist the students.

The fee for each course of lectures is £3 3s., excepting Descriptive Anatomy, which is £8 8s., Practical Chemistry, which is £5 5s., and Ophthalmic and Aural Surgery and Hygiene, which are free.

A composition fee of £56 17s. 6d. is taken as payment in full for all lectures and dissections required for the diploma in Surgery.

RICHMOND, WHITWORTH, AND HARDWICKE HOSPITALS.

MEDICAL AND SURGICAL STAFF.

Consulting Physician.—Sir D. J. Corrigan, Bart.

Physicians.	*Surgeons.*
Dr. J. T. Banks.	Mr. William Stokes.
Dr. B. G. M'Dowel.	Mr. William Thomson.
Dr. S. Gordon.	Mr. W. Thornley Stoker.
Dr. R. D. Lyons.	Mr. A. Corley.

Assistant Physician—Dr. Reuben J. Harvey.
Ophthalmic Surgeon—Dr. Charles E. Fitzgerald.
Dental Surgeon—Mr. W. B. Pearsall.
Resident Surgeon—Mr. R. J. Martyn.

Clinical instruction will commence on October 1. These Hospitals contain 312 beds—110 for surgical cases, 82 for medical cases, and 120 for fever and other epidemic diseases. Premiums will be awarded in Clinical Medicine and Surgery. The Richmond Institution for the Insane, containing over 1000 patients, adjoins these Hospitals.

FEES.

For the winter and summer session (nine months), £12 12s.; for the six winter months, £8 8s.; for the three summer months, £5 5s. Resident clinical clerks, £21 for the winter session, £15 5s. for the summer session, including certificate of attendance.

Application to be made to Dr. Gordon, 13, Hume-street, or to Mr. Stokes, 5, Merrion-square North, Dublin.

LEDWICH SCHOOL OF ANATOMY, MEDICINE, AND SURGERY, PETER-STREET, DUBLIN.

COURSES OF LECTURES.

Anatomy, Physiology & Pathology, etc.—Mr. E. Ledwich, Mr. T. P. Mason, and, Mr. J. E. Kelly.
Botany—Dr. McNab.
Forensic Medicine and Hygiene—Dr. R. Travers.
Materia Medica and Therapeutics—Dr. M'Dowel.
Midwifery and Diseases of Women and Children—Dr. S. A. Mason.
Theory and Practice of Medicine—Dr. Foot.
Surgical and Descriptive Anatomy, Demonstrations, and Dissections—Mr. Mason, Mr. Ledwich, Mr. Glanville, Mr. Ward, Mr. Robinson, Mr. Porter, and Mr. Kennedy.
Theory of Chemistry, Practical Chemistry, & Natural Philosophy—Dr. Griffiths.
Theory and Practice of Surgery—Mr. Wharton and Mr. Barton.
Ophthalmic Surgery—Dr. Rainsford.

The fee for each of the above courses will be £3 3s.

A course of operations to be performed by the students, under the superintendence of the lecturers (subjects, etc., included), £5 5s.

Further information may be obtained from any of the lecturers, or from Mr. Edward Ledwich, Secretary, 7, Harcourt-street, Dublin.

EDUCATIONAL VACCINATING STATIONS.

In order to provide for the granting of those special certificates of proficiency in vaccination which are required to be part of the medical qualification for entering into contracts for the performance of Public Vaccination, or for acting as deputy to a contractor, the following arrangements are made:—

1. The Vaccinating Stations enumerated in the subjoined list are opened under certain specified conditions, for the purposes of teaching and examination.

2. The Public Vaccinators officiating at the stations are authorised to give the required certificates of proficiency in vaccination to persons whom they have sufficiently instructed therein; and

3. The Public Vaccinators whose names in the subjoined list are printed in italic letters are also authorised to give such certificates, after satisfactory examination, to persons whom they have not themselves instructed:—

London.—Principal Station, Surrey Chapel, Blackfriars-road: *Dr. Robert Cory*, who attends on Tuesday and Thursday, at 1 p.m. North-west Stations—Marylebone General Dispensary, 77, Welbeck-street: Mr. William A. Sumner, on Tuesday, at 2 p.m.; Hall of the Working Men's Christian Association, Omega-place, Alpha-road: Mr. Wm. A. Sumner, on Wednesday, at 10 a.m. West Station—9, St. George's-road, Pimlico, S.W.: Mr. Edward Lowe Webb, on Thursday, at 10 a.m. East Station—Eastern Dispensary, Leman-street: Mr. Charles T. Blackman, on Wednesday, at 11 a.m. North Station — Tottenham-court Chapel, Tottenham-court-road: Mr. William Edwin Grindley Pearse, on Monday and Wednesday, at 1 p.m. South-west Station—2, Regent-place, Horseferry-road: Mr. Wm. Edwin Grindley Pearse, on Tuesday, at 2 p.m. Strand Station—14, Russell-street, Covent-garden: Mr. Robert William Dunn, on Thursday, at 11 a.m. St. Thomas's Hospital: Dr. Robert Cory, on Wednesday, at 11.30 a.m.

Birmingham.—At the School Room, 27, Old Meeting-street, Worcester-street, on Monday; the Assembly Rooms, 103, Constitution-hill, opposite Bond-street, on Tuesday; the Wesleyan Methodist Infant School Room, Icknield-street West, on Wednesday; and "The British Workman" Reading Rooms, Sherborne-street, near Grosvenor-street, on Thursday: *Dr. Edmund Robinson*, at 11 o'clock on the days before mentioned.

Bristol.—The Public Vaccination Station, Peter-street: *Dr. Henry A. P. Robertson*, on Wednesday, at 10 a.m.

Exeter.—Odd Fellows' Hall, Bamfyld-street: *Mr. Charles H. Roper*, on Thursday, at 3 p.m.

Leeds.—Heed-street: *Mr. Frederick Holmes*, on Tuesday, at 2.30 p.m.

Liverpool.—4, Oldham-street: *Mr. Arthur Browne Steele*, on Thursday, at 2 p.m.

Manchester.—72, Rochdale-road: *Mr. Ellis Southern Guest*, on Monday, at 2 p.m.

Newcastle-on-Tyne.—The Central Vaccination Station, 21, Nun-street: *Mr. John Hawthorn*, on Wednesday, at 3 p.m.

Sheffield.—The Public Vaccination Station, Townhead-street: *Mr. William Skinner*, on Tuesday, at 3 p.m.

Edinburgh.—The Royal Dispensary: *Dr. William Husband*, on Wednesday and Saturday, at 12. The New Town Dispensary: Dr. James O. Affleck, on Wednesday and Saturday, at 1.

Glasgow.—The Hall of the Faculty of Physicians and Surgeons: *Dr. Hugh Thomson*, on Monday, at 12. The Royal Infirmary: Dr. Robert Dunlop Tannahill, on Monday and Thursday, at 12.

Candidates for the Certificate by Examination are recommended to communicate some days beforehand with the Examiner at whose station they propose to attend.

THE STUDENT BEGINNING TO WORK.

TO ENTERING STUDENTS.

In offering a few words of direction, encouragement, and advice in regard to the career of the medical student, it will be understood that our remarks must in the main be of a general character. All special information suited to the special requirements of different individuals must of course be obtained from special sources. The possession of a medical friend who is competent to advise and instruct the parents or guardians of the would-be medical student in regard to his preliminary and early professional education will prove of inestimable value. When the student, after careful forethought and consideration, has once fairly entered on the course chalked out for him, his medical teachers will only be too glad to give him the benefit of their advice and direction, so that it is at the outset of his career that there is most danger of steps being taken which may afterwards cause bitter disappointment and regret. We would therefore take the opportunity of briefly touching on some points seldom alluded to with sufficient prominence in such addresses as the present one—points of the highest possible importance to

THE INTENDING MEDICAL STUDENT.

Many parents and guardians, to whom our remarks under this head must be addressed, rather than to the intending candidate himself, seem to look upon the preparation of a son or ward for the profession of Medicine from an entirely business point of view. They therefore naturally conclude that the cheapest and shortest route to a qualification is necessarily the best, or at least as good as any other. For this reason, or from thoughtless ignorance in regard to the different medical qualifications and their varying requirements, many grievous mistakes are made in the preliminary education and early steps of the student's career. Let all supervisors of youth therefore clearly understand that in Medicine, as in everything else, the preparation for any of the higher and more honoured diplomas must be accomplished at greater expenditure of time and money than is the case with the lower and more easily obtained qualifications. But whatever may be the particular curriculum selected, as on the whole the most suitable for any individual candidate, it cannot be too strongly impressed on the supervisors of youth that the last few years, and especially the last twelve months, of a youth's school-life, before entering on the study of medicine, must be very carefully regulated. Every year it is becoming more and more important that those who hope to become useful and honoured members of the medical profession should receive an excellent literary and general education as a preliminary to their professional studies. Deficiency in general education is a want which can hardly be supplied in the busy after-years of professional study and practice, and ought therefore to be seen to before the professional career is entered upon. It is a lamentable fact that even now, after the general enforcement of preliminary examinations in general knowledge, many practitioners of undoubted professional ability often find themselves hampered and hindered in many ways from a lack of fair literary and non-professional acquirements. During the last terms of a youth's school-life his education should therefore be carefully and intelligently directed so as to prepare him in the best available manner for entering upon his future career.

The best of all possible preliminary trainings for professional life is undoubtedly residence and graduation in arts at some one of the universities. But, for many reasons, that can be the lot of only a few aspirants to the medical profession, the greater number of whom will look forward to the passing of one of the preliminary examinations in general education, required of all commencing medical students, as the goal of their schoolboy life. It is in the selection of the special preliminary examination to be prepared for, that parents and teachers often make so serious mistakes, entailing much annoyance and disappointment on many of the best medical students. One of the easier preliminary examinations should never be selected if it can possibly be avoided: and this for several reasons. In itself it is, of course, a guarantee of only a minimum stock of general knowledge, and, as such, is the pathway only to the more easy, and therefore less honoured, professional diplomas. Many an excellent student discovers, when perhaps it is too late, that the inferior nature of the preliminary examination he was prepared for precludes him from obtaining one of the higher diplomas, for which his professional acquirements may be more than sufficient, and he is therefore often justly indignant at the culpable carelessness of those who were responsible for his preliminary education. The English College of Surgeons, for instance, has two different preliminary examinations, the easier one being regarded as sufficient for those who are to take the Membership qualification, while the more difficult one must be passed by those who are candidates for the higher diploma of Fellow. Now, what we want to impress upon parents and teachers is, that in a case such as this the pupil should, if possible, be prepared for passing the more difficult of the two examinations before beginning his medical career. The additional time and trouble required for one of the more difficult examinations will be very trifling as long as the boy is still at school, but may prove an insurmountable object to him afterwards should he entertain the laudable desire of taking a higher qualification than was originally marked out for him. To such a deserving young man, we repeat, it is most disappointing to find that his professional advancement is prevented, not by his own want of professional knowledge and ability, but by the culpable thoughtlessness of his youthful advisers and instructors. In England the most striking example of such carelessness refers to the matriculation examination at the University of London. Many of the best medical students as they pass through their curriculum become desirous of fitting themselves for obtaining the coveted diploma of M.D. of a university. With the exception of the very few who can by residence graduate at one of the older universities, most medical students in England must look for the attainment of the degree of doctor to the University of London, which requires as a preliminary step to its medical degrees the passing of its matriculation examination before the commencement of professional study. The discovery of this regulation is often, to our personal knowledge, made at a period when the accomplishment of the laudable object in view is a practical impossibility, and in this way many of the very best London students are prevented from ever being able to obtain a doctor's diploma. As the matriculation examination alluded to is in itself a very excellent one, and as such is recognised by almost all other examining bodies in the kingdom, and as it is an indispensable preliminary to the acquisition of the M.B. or M.D. diploma for the ordinary English student, we would strongly urge upon all the guardians and teachers of young men intended for the medical profession in England the

desirability of selecting it as the examination to be passed before the pupil leaves school and enters upon professional work.

But besides being prepared for such an examination as the one referred to, the pupil intended for the medical profession should be introduced during the last year or two of school-life to the study of some of the concrete sciences, especially Botany, Zoology, and Chemistry. For two of these sciences the country is obviously the most appropriate place of study; and these subjects, though always regarded as indispensable for the medical student, are beginning to be regarded more and more as preliminary to the proper professional work of the medical school. This latter is ever increasing, so that it will not only render less formidable the somewhat appalling array of new facts presented to the first year's man to find that he already knows something of one or two of the subjects of the curriculum, but the previous proper study of them will also introduce him betimes to methods of careful observation and manipulation, and thus place him on a vantage-ground for the study of important practical and clinical departments of school and hospital work.

We hope, therefore, that we have said enough to impress upon "all whom it may concern" that the young man who is intended for the medical profession ought to receive a very careful and thorough preliminary education in literary and general subjects, and that, for the prevention of lifelong disappointment and regret, the greatest care should be exercised in the selection of the preliminary examination which is to regulate his concluding studies at school, and in all that has a bearing on the qualifications it will be in his power to acquire.

These remarks we consider to be of so much importance that we here reiterate them, though elsewhere given with less substantive connexion.

THE ENTERING STUDENT.

The student, either before or after passing his preliminary examination, will have the scene of his medical studies selected for him. This is another very important matter, which should not be settled rashly or without due consideration. Many *pro's* and *con.'s* must influence the choice of a school. The reader will find elsewhere some remarks on the subject, but we may notice here a new element, which must now for the first time have some influence in the selection as regards the schools attached to the metropolitan hospitals—the consideration, namely, of the difference in the amount of the fees. Some time ago we announced that at all the metropolitan medical schools, except those of the London, Middlesex, Charing-cross, and Westminster Hospitals, the fees were to be raised 25 per cent., beginning with the present session. But besides the mere money consideration, many others must be taken into account in the choosing of a medical school, for the discussion of which we beg to refer the reader to the remarks found in another column.

The scene of medical study having been selected, and the preliminary examination passed, the quondam schoolboy will forthwith enter upon a new and most important period of his life. We have no desire to preach anything like a sermon to the entering medical student upon the duties and responsibilities of his position, recollecting how unlikely we ourselves were to listen to such an utterance in our own student-days. But it is just because we are so anxious that he should retain through life the characteristic cheerfulness and gentlemanly bearing of his student-life that we would desire him to realise the fact that upon the manner in which he spends the few short years at the medical school may be truly said to depend his whole future success and happiness. For it is not only during this period that many men enjoy the only opportunities they ever can have of prosecuting professional studies successfully and confidently under careful supervision, but it is at this time of life that the whole character of a man acquires its individual peculiarities and tone. It is at this period, if ever, that the young man will learn to respect, for their own sakes, honest work, integrity, and every quality which is characteristic of the true gentleman. In saying this we do not for a moment mean to hint that the opposite qualities are at all common among medical students; in fact, we doubt very much whether there is among any similar class of young men so high a standard of honour and so respectful an appreciation of deserving merit. The old popular idea of the medical student as a rough, unkempt Philistine, ready for any row or noisy brawl, is being fast replaced by a truer estimate of his proper character. Any justification of the old opinion of him is furnished by so few and exceptional specimens of the genus, that none are more ashamed of such frivolous and undignified conduct than the majority of the students themselves.

It is, nevertheless, true that, when a young man leaves the restraints of home or school for the comparatively free and self-regulated career of a medical student, there are several circumstances that tend to make him forgetful of the duty he owes to himself, to his friends, and to the noble profession he has chosen for his life's work. First, for example, the mere fact that he now finds himself his own master, and that, too, amid all the attractions and temptations of town life, is very apt to make the buoyant youth lose his mental equilibrium in the first rebound from the constraint of his former life. Here let us not be misunderstood. A moderate and seasonable indulgence in the ordinary recreations and amusements of town life, we look upon as not only admissible, but as most advisable. A hard-working student will probably be all the better a student for an occasional Friday or Saturday evening at the theatre or opera-house, for, if judiciously selected, his amusements may not only be recreative, but also highly educative in many important particulars. What we wish to protest against is the too frequent indulgence in amusements, to the neglect of the proper daily and weekly work of the student. A second deleterious influence on the young medical student is the evil example of some of the senior students. At all schools there are found a few idlers and triflers, who, having been gradually left behind by the working men of their own year, are glad to make friends of the unwary new-comers. These last naturally consider themselves highly honoured by the patronage of their seniors, and are thus liable to be drawn into habits for which they may have no spontaneous desire. Entering students should therefore be very cautious in regard to the friendships they form, and should be peculiarly suspicious of the proffered patronage of any of their idling seniors. When a young student wants advice and assistance in regard to his work, he need not put himself under obligations to the senior students, but should apply at once to his teachers, who will be only too happy to give him the best advice and assistance he may require. Other depressing influences, arising from the nature and extent of his work, may conspire to render the student careless or indifferent. One of these is the fact that very few of the examinations for qualifying come on before the end of the student's second winter session. As a consequence of this, he is apt to think that during his first year he need do but little work, hoping that he will be able to get through it all in sufficient time before the day of trial arrives. This is a most serious mistake for more than one reason. In the first place, if he allow himself to get into careless and lazy habits during his first winter, there is but little hope that he can ever shake himself free of these habits in future sessions; and, in the second place, it will always be the best and easiest policy for the student to try to master carefully every subject as it is brought before him in the curriculum. He will then have the benefit of the assistance of the lecturer on the subject,

whose lectures and explanations will dispel many a difficulty which cannot afterwards be so easily disposed of. There are other depressing circumstances in regard to his work; but, as these are discussed in another section, we shall here only caution him against the mistake of devoting too much of his energy and attention to one or more favourite subjects, to the neglect of the others. Any degree of excellence in one or more subjects will not make up for defects in other departments in the examination-room. Some subjects are undoubtedly more difficult or less congenial to certain minds than other subjects are; but that is only a reason for the bestowal of additional care and energy on those departments that present most difficulty or fewest attractions.

There is only one other subject on which we would here give a word of warning. From the moment a youth thinks of entering the medical profession, the din of examinations is ever ringing in his ears. Examinations are indeed of the highest importance so far as they go, but, like all other human institutions, they are often very fallacious and unsatisfactory; and the earnest student will endeavour to rise above the dull level of duty and conduct which is sure to result from a slavish attention only to what is supposed to be useful for the examination-room. The great ambition of the real student should be, not merely to be able to pass this or that examination with credit, but to fit himself in every respect—in many of which no examination can act as a test—for the efficient and honourable discharge of the multifarious duties of the noble profession of Medicine.

THE WORK OF THE MEDICAL STUDENT.

Perhaps no young man starts upon the course of life that he has determined to follow with more enthusiasm than the Student of Medicine. He is commencing a profession which he has chosen for the love of it—a love kindled by a first acquaintance with nature, and increased by it and by contact with scientific men. It is our pleasing duty at this time to offer some words of advice to the student whose heart is thus earnestly set on his work, upon the manner in which this enthusiasm may be most successfully directed, in the hope that he may be spared much unnecessary labour, and derive the greatest amount of pleasure from the busy life which he will presently begin.

Advice to be useful must be timely. The student's very zeal may threaten at once to swamp him; and this chiefly from the nature of his work, which will be in a great measure new to him. He will suddenly find himself brought face to face with innumerable *facts*. He will now have bidden farewell to written authority, hearsay, and easy belief, and will be introduced to nature, observation, and stern reality. In the character and amount of this new work will lie the first difficulty of the eager student. Plunging at once *in medias res* he will speedily be bewildered by the amount of information offered to him; and his enthusiasm may be changed into indifference, distaste, or even despair. Let us, in anticipation of such a result, assure the student that this is an almost universal experience, and that it will certainly be but of short duration. Herein lies the comfort which the student must be prepared to adopt when he threatens to become disheartened.

This stage past, the student will the better appreciate the advice which we would next offer him—namely, that his work should be done after *a definite plan*. At hospital during the day, and in his room during the evening, he must work methodically according to some system which he cannot too early arrange and adopt. The circumstances of different men are so different that we cannot do more here than indicate the principles on which such an arrangement may best be made. But we can give this advice (and we give it most earnestly), that every first year's student should at once seek the direction of his best professional friend, who will fully appreciate his circumstances, and will see that his precious time is occupied to the greatest advantage. The value at this juncture of a friend possessed of experience and sound judgment is inestimable; and the want of such a friend, or the disregard of his advice, may be the cause of many serious mistakes.

During the day the student will be fully occupied with lectures and practical work in the school and hospital. He will find when he begins that his time there is arranged for him, and that he has only to be careful that his attendance is regular. Systematic lectures cannot be too carefully listened to. They are delivered by men who have paid special attention to their subject, who know their students, and who are acquainted with the precise ordeal which the students have to pass. Careful notes should therefore be taken of the lectures, to be used at home as we shall presently direct. As for the strictly practical work in the dissecting-room, laboratory, or hospital—we cannot insist too strongly upon the necessity that the student should devote himself to it heart and soul. If we who have gone before him were now to be asked what we would chiefly do were we students again, we would unhesitatingly reply—Work practically. Reading is always possible; but the dissecting scalpel may never be touched again, and even the microscope and the test-tube are used by a lamentable minority only, when the medical school has been left.

But the student will chiefly want advice on how he is to spend his evening to most advantage. The evening has to be devoted to reading. Some practical work may possibly be done, but only occasionally. The material for reading consists of text-books and the lecture-notes taken during the day; and upon the happy combination of these two sources of knowledge will depend, in a great measure, the student's success. The necessary text-books will be indicated by the respective lecturers; they must be recent editions, and they should comprise a single good authority on each subject, which is to be selected and followed, that there may be no risk of conflict in description or in opinion. Taking up a certain subject, the student should first read the notes of the day's lecture upon it: he will then read the description of the same subject given in the text-book; and from this he will be able to amend and amplify his knowledge. He will next proceed to read in the text-book the subject of next day's lecture, so that he may listen to it with intelligent interest. Many successful students have completed this system of reading by revising once more every evening the subject of the preceding day—thus reviewing every evening the work of yesterday, to-day, and to-morrow. Finally, the student should never fail to think over the subjects of his practical work during the day, and to test his acquaintance with what he has seen and handled by reference to written authority. When he finds a record of some point which may have escaped him, let him take a note of it, and verify it on the following day. The student will best test his knowledge by discussion with a friend, and by using his pen and pencil. Each of these methods should be adopted and regularly employed, for when his knowledge as a student is put to the final test it will be by written papers and oral examinations; and the value of daily exercise in the art of correct and elegant description cannot be overrated.

We believe that if the student follows such a method of study as the one that we have just indicated he cannot fail to find his work both easy and attractive. He will now naturally inquire *how much* he ought to work; how many hours he ought to read. The time required by students will necessarily vary with individual capacity. The work of the medical student has lately increased enormously; it is now very great but we can assure him that it is still easily within the powers and faculties of the earnest man of moderate ability. Even

now the amount of knowledge expected of the medical student at public examinations bears a very moderate relation to its actual extent. These examinations are made to reject the ignorant and idle, not to obstruct the eager and industrious; and the student that does his work faithfully from first to last need never fear the result. He cannot hope, however, to be free from certain other more immediate sources of discouragement. Every undertaking is difficult at first; and, as we have already indicated, a short period of disheartening is the universal experience of beginners in our profession. At all times the accomplishment of much work will be attended with a certain amount of weariness and exhaustion. Lastly, the student must expect to find himself often beaten by his fellows. All these are unavoidable causes of discouragement, but, one and all, they may be surmounted by steady application and the consciousness of the honest employment of one's powers.

There is yet another part of our system which we would earnestly recommend to our student-readers. Let them never shrink, when the opportunity offers, from making a straightforward exhibition of their knowledge and accomplishments. Diffidence is one of the most deadly enemies of the man that is learning a profession, and may, if encouraged, land him, when he comes to practise, in something sadly resembling quackery. Let the student, therefore, while he is still surrounded by kind, even if severe critics, never hesitate to use his hands before them, and to tell what he has seen and what he believes. For the time will surely come when both these faculties will have to be publicly exercised for the getting of his daily bread.

We have already said a word on recreation. It should be abundant and, we need not say, carefully selected; and, however taken, it has this remarkable recommendation, that it is really work. For the student of medicine is a student of nature in every aspect, and there is not a moment in his life when he may not be adding to the knowledge which the practice of his profession will require him to display.

THE STUDENT'S FIRST WINTER SESSION.

Let us suppose, then, that the young student comes to his medical studies with a good sound English education, and some little knowledge of Physics and Chemistry; his attention during the first winter will be mainly devoted to Chemistry, Anatomy, and Physiology. In Chemistry, he will find an enormous advantage in the little knowledge he brings with him. It would greatly assist teachers of Chemistry in fulfilling their duty to be able to address gentlemen whose knowledge extended to the most important facts relating to Inorganic Chemistry, for then the time of the medical student could be directed mainly to Organic Chemistry, the part which is to be of most use to him in after-life: whereas, as matters now stand, he rarely reaches those studies, and still more rarely masters them. We would very strongly, therefore, endeavour to impress on the minds of those about to become students of Medicine the importance of acquiring some knowledge of Chemistry, and still more of Botany, before entering a medical school. In most public schools nowadays both of these subjects are taught, and every effort ought to be made to encourage the practice. Be that, however, as it may, let the student work hard to master the science of Chemistry during this his first year, for each succeeding session brings its own work with it.

Turning next to Anatomy, the first thing to which a student directs his attention is the "bones," and these should be mastered as soon as possible. This is, as a rule, not very difficult; he will have plenty of aid from his fellow-students. A thorough knowledge of the bones is invaluable, and carries with it much knowledge of the soft parts. Each groove, ridge, foramen, and channel has its own story, and the knowledge of how each is occupied must be constantly exercised in after-life. The next step should be a thorough study of the joints and ligaments; but the method varies a good deal in different schools. In some—and perhaps this is the best plan—after the joints and ligaments, the student is sent at once to the study of muscles, as to origin, insertion, course, shape, composition, and mode of action. These three subjects may be said to the foundation of all surgical knowledge. In other schools, however, the student is at once turned into the dissecting-room to study all parts—muscles, nerves, vessels, fasciæ—as they are laid bare. This plan, too, has its excellencies; but on the whole, it is better, if there is material for the purpose, to acquire a knowledge of the bones, ligaments, and muscles before attempting the more difficult concrete Anatomy. But whatever plan be adopted, let the knowledge acquired be real—a knowledge not of the memory, but of the understanding; for at the basis of Surgery, and of much of Medicine also, lies a sound knowledge of Anatomy. This leads us to point out another thing the student should do early—that is, to acquire some knowledge of the relative positions of the different viscera, and their external indications. This is best acquired in the post-mortem-room, which from the first the student should frequent. What of dissecting? The student should take to it as early as possible. He should endeavour, it is true, to master everything laid bare, but if he only acquire a manual dexterity in his operations, that at least is something.

And now as regards Physiology. Here we are almost reduced to despair. The absurd existing regulations compel a man to enter on the study of the very highest branches of Chemistry, in the shape of Physiological Chemistry, on the same day on which he begins to study its rudiments; to study the minute structure of a part or organ with whose shape or outward appearance he is altogether unacquainted. We can only tell him to do his best, and to learn as much as he can by means of his eyes; he must trust more to his ears another session.

Finally, as regards Hospital Practice, the sooner the young student begins to study what is, after all, to be the great business of his life, the better; but it should be begun with reason. Students should not be let loose like an undisciplined crowd of star-gazers; there should be rule in everything. In some hospitals the preposterous system of introducing the raw student into the medical wards did at one time prevail, and Sir Astley Cooper used to congratulate his class on having left the study of Medicine for the higher walk of Surgery. The sooner the young man understands that time spent in the medical wards at this period of his career is wasted, the better for him. Let him instead go at once to the surgical out-patient room; here he can *see* something. He can learn what an ulcer is, and how to dress it; what to do for a bad wound or bruise; that in many cases it is necessary to use a knife. He will see how different kinds of bandages are put on, and the different dodges, if one may say so, necessary to bandage different parts properly. In short, it is here that the student can best spend his time, thence proceeding in due course to the surgery of the wards. On the other hand, we would anxiously warn the young student against the physician's out-patient department. Here he will do no good, and he may be much harmed by it. He sees a gentleman busy prescribing for a crowd of patients, and he sees them rapidly disposed of; but he does not see the years of study and hard work which have enabled the physician to make in a few minutes a trenchant diagnosis. Vast numbers of these patients suffer from the same kind of illness: they are subject to the same influences—close, ill-smelling houses in foul alleys; a want of light and air; improper or badly cooked food, partaken of at improper times; and, above all, the only solace they have for so much squalor and discomfort—that which ever tends to perpetuate this—too much beer

and gin. But we are diverging from our subject. Let, however, the young student avoid such studies until he is better qualified to appreciate them, and let him stick to those things he can see for himself in the surgical section.

In due time comes the First Summer Session. This is commonly devoted to the study of Botany, Materia Medica, and Practical Chemistry. About these we have a word to say, especially as regards the first. Botany and its uselessness is a favourite subject of declamation with some; but with these we can in nowise agree. Like other studies, it might well be excluded from the medical curriculum, but it certainly ought not to be excluded from the scheme of medical education. Botany is far best and easiest learnt at school; of all branches of natural science it is that which requires fewest appliances. Its material is everywhere; and, rightly taught and rightly learned, it is a source of unfailing delight. Hunting for plants is quite as exciting as hunting anything else. Let Botany be taught and studied, then, but let it be out of the curriculum; or, if in it—as needs must be sometimes—let the student acquire the principles here, and apply them for himself in the fields and lanes. Materia Medica, too, has come in for much abuse; but was it so when men went through an apprenticeship? Then they imbibed Materia Medica, as it were, insensibly; by constant handling they knew the colour, smell, taste, relative weight, and a hundred other things concerning drugs. But that system has passed away, and something must take its place if men are to live by their profession. Therapeutics, again, which some men would substitute, should be taught at a later period of the student's course of study. Fortunately, we are all agreed on the necessity for practical Chemistry, but that should really take the shape of the analysis of vegetable and animal solids and fluids, not of simple solutions.

SECOND WINTER SESSION AND FIRST EXAMINATION.

With the Second Winter comes the near approach of the First Professional Examination. At the Royal College of Surgeons, whither nearly all students flock, the subjects are Anatomy and Physiology, not separately, but conjointly. This arrangement is unfortunate, for it leads the student to the study of Anatomy at the expense of Physiology, the idea having got abroad that it is the more important subject of the two. As a consequence, we believe we are right in saying that the majority of those plucked are so in Physiology. We mention this because it is in the second winter that a competent knowledge of Physiology is to be acquired, and the student should pay at least as much attention to it as to Anatomy. But there is another thing the student should also look after—that is, the art of passing an examination. It is not enough that a student should have a full knowledge of his subjects: that knowledge should be methodised, and so formulated as to be at hand when wanted. There is nothing does this so well as class examinations, which are now held almost everywhere; but the student should also accustom himself to note-taking and to writing answers to questions, such as those set at the College, and regularly published in our columns. This will give him that ease and accuracy of expression so essential for passing a good written examination. There should be no "shots" at answering questions, no beating about the bush; with an examiner everything should be straightforward, simple, and unmistakable. Finally—a little thing—when sitting down to an examination, read over your paper carefully, and see what question you can best answer; write down that answer first on one piece of paper; take the next one that suits you, and do likewise; and so on, gradually attacking the more difficult, until you finish. In this way you are left with plenty of time on your hands, whereas, did you hesitate and bungle over the first difficulty, you might be unable to finish the writing out of the answers to those questions with which you were best acquainted.

By the time the student has passed his First Examination he should be out of leading-strings, and able, with the advice of his teachers, to employ his time to good advantage. He has passed beyond the class we have meanwhile specially in view.

DEGREES IN SCIENCE IN THE DEPARTMENT OF PUBLIC HEALTH.

UNIVERSITY OF CAMBRIDGE.

EXAMINATION IN STATE MEDICINE.

An examination in so much of State Medicine as is comprised in the functions of Officers of Health will be held in Cambridge, beginning on the first Tuesday in October, 1878.

Any person whose name is on the Medical Register of the United Kingdom may present himself for this examination provided he is twenty-four years of age. The examination will be in two parts.

Part I. will comprise:—Physics and Chemistry. The principles of Chemistry, and methods of analysis with especial reference to analyses of air and water. Application of the microscope. The laws of heat, and the principles of pneumatics, hydrostatics, and hydraulics, with especial reference to ventilation, water-supply, drainage, construction of dwellings, and sanitary engineering in general.

Part II. will comprise:—Laws of the realm relating to public health. Sanitary statistics. Origin, propagation, pathology, and prevention of epidemic and infectious diseases. Effects of overcrowding, vitiated air, impure water, and bad or insufficient food. Unhealthy occupations, and the diseases to which they give rise. Water-supply and drainage in reference to health. Nuisances injurious to health. Distribution of diseases within the United Kingdom, and effects of soil, season, and climate.

Candidates may present themselves for either part separately, or for both together, at their option; but the result of the examination in the case of any candidate will not be published until he has passed to the satisfaction of the examiners in both parts. Every candidate will be required to pay a fee of £4 4s. before admission to each part of the examination. Every candidate who has passed both parts of the examination to the satisfaction of the examiners will receive a certificate testifying to his competent knowledge of what is required for the duties of a Medical Officer of Health.

All applications for admission to this examination, or for information respecting it, should be addressed to Professor Liveing, Cambridge.

Candidates who desire to present themselves for examination in October next must send in their applications and transmit the fees on or before September 18.

UNIVERSITY OF LONDON.

EXAMINATION IN SUBJECTS RELATING TO PUBLIC HEALTH.

A special examination shall be held once in every year in subjects relating to Public Health, and shall commence on the second Monday in December.

No candidate shall be admitted to this examination unless he shall have passed the second examination for the degree of Bachelor of Medicine in this University at least one year previously; nor unless he shall have given notice of his intention to the Registrar at least two calendar months before the commencement of the examination.

Candidates shall be examined in the following subjects:—

1. Chemistry and Microscopy, as regards the examination of air, water, and food.

2. Meteorology as regards general knowledge of meteorological conditions, and the reading and correction of instruments.

3. Geology, as regards general knowledge of rocks, their conformation and chemical composition, and their relation to underground water, and to drainage and sources of water-supply.

4. Physics and Sanitary Apparatus. The laws of heat, mechanics, pneumatics, hydrostatics, and hydraulics, in relation (for sanitary purposes) to the construction of dwellings, and to the principles of warming, ventilation, drainage and water-

supply, and to forms of apparatus for these and other sanitary uses. And the reading of plans, sections, scales, etc., in regard of sanitary constructions and appliances.

5. Vital Statistics, as regards the methods employed for determining the health of a community; birth-rate; death-rate; disease-rate; life-tables; duration and expectancy of life. Present amount of mortality at the various ages, and its causes in different classes and communities. Practical statistics of armies, navies, civil professions, asylums, hospitals, dispensaries, lying-in establishments, prisons, indoor and outdoor paupers, friendly societies, sick clubs, medical and surgical practice, towns.

6. Hygiene, including the causation and prevention of disease, in which branch of examination reference shall be had to such matters as the following :—

Parentage, as influencing the individual expectation of health; temperaments; morbid diatheses; congenital diseases and malformations; effects of close inter-breeding. Special liabilities of the health at particular periods of life; physical regimen of different ages. Earth and climate and changes of season in their bearing on the health of populations; dampness of soil; malaria. Conditions of healthy nourishment: dietaries and dietetic habits; stimulants and narcotics in popular use; dietetic privation, excesses, and errors, as respectively causing disease; drinking-water, and the conditions which make water unfit for drinking; adulterations of food. Conditions of healthy lodgment: ventilation and warming, and the removal of refuse-matters, in their respective relations to health; filth as a cause of disease; sanitary regimen of towns and villages; "nuisances" (as defined by law) with regard to the sanitary bearing and the removal of each; trade-processes causing offensive effluvia; common lodging-houses and tenement houses. Conditions of healthy activity: work, over-work, rest, and recreation; occupations of different sorts in relation to the health of persons engaged in them—*e.g.*, factory work in general, occupations which produce irritative lung-disease, occupations which promote heart-disease, occupations which deal with poisons, etc. Hygiene of particular establishments and particular classes of population: factories and workplaces; schools; workhouses; asylums; hospitals; prisons. Disease as distributed in England: classifications of disease for various purposes of medical inquiry; excesses of particular diseases and injuries at particular places and at particular times. Particular diseases, as regards their intimate nature, causation, and preventability: *e.g.*, enteric fever, cholera, typhus, small-pox, scarlatina, diphtheria, erysipelas, pyæmia, tubercular diseases, rheumatism, ague, cretinism, ophthalmia, porrigo, venereal diseases, scurvy, ergotism, leprosy, insanity. Processes of contagion in different diseases; incubation in each case; particular dangers of infection—at schools, workplaces, etc., and from laundries, dairies, etc. Disinfectants and establishments for disinfection. Quarantine. Hospitals for infectious disease. Conveyance of the sick. Vaccination: existing knowledge as to its protectiveness; revaccination; precautions which vaccination requires; arrangements for public vaccination in town and country; natural cow-pox. Prostitution as regards the public health. Diseases of domestic animals in relation to the health of man: rabies; farcy and glanders; anthrax; parasites, especially trichina and the tæniadæ; aphtha; tubercle; meat and milk of diseased animals. Diseases of the vegetable kingdom, and failures of vegetable crops, in relation to the health of man; famine-diseases. Poisons in manufacture and commercial and domestic use—*e.g.*, arsenic, lead, phosphorus, mercury; poisonous pigments.

7. Sanitary Law, as regards the leading purposes of the following statutes, and the constitution and modes of procedure of the respective authorities, and any existing orders, regulations, or model by-laws of the Local Government Board in sanitary matters. The Public Health Act, 1875. The Vaccination Acts. The Rivers' Pollution Prevention Act, 1876. The Sale of Food and Drugs Act, 1875. The Artisans and Labourers' Dwellings Improvement Act, 1875. The Acts regulating the medical profession. The Acts regulating the practice of pharmacy. The Acts relating to factories and workplaces. The Acts relating to the detention and care of lunatics.

UNIVERSITY OF DURHAM.

STATE MEDICINE.

For the certificate of proficiency in Sanitary Science:—1. That the candidate shall be a registered medical practitioner. 2. That the candidate shall have attended one course of lectures on Public Health at the University of Durham College of Medicine, Newcastle-upon-Tyne, extended over one winter session. 3. That the candidate shall be required to pass an examination on the following subjects:—

1. Physics.—Laws of light, heat, hydro-dynamics, and pneumatics.

2. Chemistry.—As applied to the detection of noxious gases and atmospheric impurities; analysis of air and water.

3. Sanitary Legislation.—Knowledge of the Acts of Parliament in force for the preservation and protection of health.

4. Vital Statistics.—Rates of births, deaths, and marriages. The methods of calculation, classification, and tabulation of returns of sickness and mortality; data and conclusions deducible therefrom.

5. Meteorology, Climatology, and Geographical Distribution of Diseases in the United Kingdom.

6. Sanitary Medicine, more especially epidemic, endemic, epizootic, and communicable diseases. Diseases attributable to heat, cold, or damp; insufficiency or impurity of air, food, or drink; habitation, occupation, over-exertion, intemperance, heredity; preventive measures, vaccination, isolation, disinfection; the regulation of noxious and offensive manufactures and trades, the removal of nuisances.

7. Practical Hygiene, in reference to site, materials, construction, lighting, ventilation, warmth, dryness, water-supply, and refuse disposal of dwellings, schools, hospitals, and other buildings of public and private resort; action with respect to nuisances and outbreaks of disease. Other duties of a medical officer of health.

UNIVERSITY OF EDINBURGH.

In consequence of the great demand which now exists for Medical Officers of Health, and the importance to the public of some means of ascertaining that members of the medical profession have specially studied the subject of Public Health, Science Degrees in the Department of Public Health have been instituted by the University of Edinburgh under the following conditions:—

1. Candidates for graduation in Science in the Department of Public Health must be graduates in Medicine of a British University, or of such foreign or colonial Universities as may be specially recognised by the University Court.

2. Candidates who have not passed an *annus medicus* in the University of Edinburgh must, before presenting themselves for examination, have attended as matriculated students in the University at least two courses of instruction, scientific or professional, bearing on the subjects of the examinations.

3. There are two examinations for the degree of Bachelor of Science in the Department of Public Health. Candidates who have passed the first examination may proceed to the second, immediately or at any subsequent Medical or Science examination.

4. Candidates must produce evidence that, either during their medical studies or subsequently, they have attended a course of lectures in which instruction was given on Public Health, and that they have studied Analytical Chemistry practically for three months with a recognised teacher.

5. The examinations are written, oral, and practical, and are conducted by University examiners selected by the University Court.

6. The subjects of the examinations for the degree of Bachelor of Science in the Department of Public Health are as follows:—

FIRST EXAMINATION.

1. *Chemistry.*—Analysis of air, detection of gaseous emanations and other impurities in the atmosphere; analysis of waters for domestic use, and determination of the nature and amount of their mineral and organic constituents; detection, chemical and microscopical, of adulterations in articles of food and drink, and in drugs: practical examination, including at least two analytical researches.

2. *Physics.*—Hydraulics and hydrostatics, in reference to water-supply, drainage, and sewerage; pneumatics, in reference to warming and ventilation; meteorology, and methods of making meteorological observations; mensuration in reference to the plans and sections of public and private buildings, mines, waterworks, and sewers.

3. *Sanitary Law.*—Knowledge of the leading sanitary Acts of Parliament.

4. *Vital Statistics.*—Knowledge of statistical methods and data in reference to population, births, marriages, and deaths.

Examination.—First day: Chemistry and Physics. Second day: Sanitary Law and Vital Statistics.

An oral examination and an examination in practical chemistry in the laboratory will take place a few days after the written examination.

SECOND EXAMINATION.

1. *Medicine.*—Origin, nature, and propagation of epidemic and contagious diseases; prevention of contagion and infection; endemic diseases and the geographical distribution of disease; insalubrious trades; overcrowding; epizootics, including pathological changes.

2. *Practical Sanitation.*—Duties of a Health Officer in reference to water-supply; insalubrious dwellings and public buildings; removal and disposal of sewage and other refuse and impurities; cemeteries; nuisances from manufactories, etc.: bad or insufficient supplies of food; outbreaks of zymotic diseases

quarantine; disinfectants and deodorisers; construction of permanent and temporary hospitals.

The written examinations will take place in October. 1878, and April, 1879. Candidates who intend to present themselves for examination in October are required to lodge with the Secretary of the Senatus proof of their being eligible, and to pay the fee on or before October 1; and for the examination in April, on or before March 1.

DOCTOR OF SCIENCE.

A Bachelor of Science in the Department of Public Health may, after the lapse of one year, proceed to the degree of Doctor in the same department on producing evidence that he has been engaged in practical sanitation since he received the degree of Bachelor of Science, and on presenting a thesis on some subject embraced in the Department of Public Health. Every such thesis must be certified by the candidate to have been composed by himself, and must be approved of by the examiners.

The candidate for the degree of D.Sc. must lodge his thesis with the Dean of the Medical Faculty on or before January 31 in the year in which he proposes to graduate. No thesis will be approved which does not contain either the results of original observations on some subject embraced in the examination for B.Sc., or else a full digest and critical exposition of the opinions and researches of others on the subject selected by the candidate, accompanied by precise references to the publications quoted, so that due verification may be facilitated.

The fees for the degrees in Science in the Department of Public Health shall be—For the First B.Sc. in Public Health examination, £5 5s.; for the Second B.Sc. in Public Health examination, £5 5s.; for the degree of D.Sc. in Public Health, £5 5s.

The following are recommended as books to be studied in preparation for the above examinations:—E. Parkes' "Practical Hygiene"; George Wilson's "Handbook of Hygiene"; Edwd. Smith's "Manual for Public Officers of Health" and "Handbook for Inspectors of Nuisances"; Michael, Corfield, and Wanklyn's "Manual of Public Health," edited by E. Hart; Eassie's "Healthy Houses"; Baldwin Latham's "Sanitary Engineering"; Henry Law's "Rudiments of Civil Engineering"; George Monro's "The Public Health (Scotland) Act"; Alexander Buchan's "Introductory Text-book of Meteorology."

UNIVERSITY OF GLASGOW.

THE QUALIFICATION IN PUBLIC HEALTH.

A special examination will be held once in every year in subjects relating to Public Health, and will commence on the second Tuesday in April. The examination will consist of two divisions, viz.:—First Division, embracing Physics, Chemistry, Meteorology, Geographical Distribution of Diseases. Second Division, embracing State Medicine, Sanitary Law, Vital Statistics. Fee for each division of the examination, £4 4s.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

GENERAL REGULATIONS.

Candidates shall be already on the Medical Register, and be entered there as possessing a qualification in Medicine. Candidates shall not, in the meantime, be required to attend any special courses of instruction; but their attention is directed particularly to courses of lectures on State Medicine, and to the practice of Analytical Chemistry. Candidates shall be subjected to two examinations. Such examinations may be taken simultaneously, or with an interval not exceeding twelve months. The examinations shall be written, oral, and practical. The examinations shall be held in the Physicians' Hall, or elsewhere if found more convenient. Rejected candidates shall not be admitted for re-examination till after the expiry of six months. Fees will not be returned, except in the case mentioned in the paragraph relating to fees given below.

EXAMINATIONS.

I. The First Examination shall embrace—1. Physics: Especially pneumatics, hydrostatics, hydraulics, and engineering in relation to sanitary operations, including a knowledge of architectural and other plans, sections, etc. 2. Chemistry: Especially analysis of air, water, food, including the biology of putrefaction and allied processes. 3. Meteorology: Including climate, topographical and seasonal influences in relation to health and disease.

II. The Second Examination shall embrace—1. Epidemiology and Endemiology: Including the corresponding departments in the diseases of animals and plants; contagious diseases; diseases of periods of life, professions, trades, seasons, and climates. 2. Practical Hygiene: Duties of a health officer; food; water-supply; sewerage and drainage; construction of hospitals, public buildings, dwellings; manufactories; cemeteries; nuisances. 3. Sanitary Law and Vital Statistics.

Meetings for both examinations shall be held annually in April and October. The first examination shall be held on the second Tuesday of the month, and shall occupy two days; the second examination on the immediately succeeding Thursday of the same week, and shall occupy two days. Candidates may enter for both examinations in the same week, or for one only. The examinations must be passed in their order, first and second. Candidates must appear for the second examination not later than twelve months after having passed the first. A candidate remitted at his second examination will be allowed to come up again after a further period of six months; but if he then fail to pass, he will be required again to undergo the first as well as the second examination before obtaining the certificate.

FEES.

No one shall be recognised as a candidate till he has paid the fee for the first examination. The fees for examinations must be paid at least a week before the day of examination. The whole charges by the College for the certificate amount to £10 10s. The fee for the first examination is £3 3s.; the fee for the second examination is £3 3s.; the fee payable before receiving the certificate is £4 4s. Candidates forfeit the fee for the examination which they have been unsuccessful in passing. If a candidate who has offered himself for both examinations fail to pass the first, he shall not be allowed to present himself for the second, and his fee for the second shall be returned to him.

DENTAL SURGERY.

REGULATIONS RELATING TO THE DIPLOMA IN DENTAL SURGERY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

EDUCATION.

Candidates are required to produce the following certificates:—

1. Of being twenty-one years of age.
2. Of having been engaged during four years in the acquirement of professional knowledge.
3. Of having attended, at a school or schools recognised by this College, not less than one of each of the following courses of lectures, delivered by lecturers recognised by this College, namely:—Anatomy, Physiology, Surgery, Medicine, Chemistry, and Materia Medica.
4. Of having attended a second winter course of lectures on Anatomy, or a course of not less than twenty lectures on the Anatomy of the Head and Neck, delivered by lecturers recognised by this College.
5. Of having performed dissections at a recognised school during not less than nine months.
6. Of having completed a course of chemical manipulation, under the superintendence of a teacher or lecturer recognised by this College.
7. Of having attended, at a recognised hospital or hospitals in the United Kingdom, the practice of Surgery and clinical lectures on Surgery during two winter sessions.
8. Of having attended, at a recognised school, two courses of lectures upon each of the following subjects, viz.:—Dental Anatomy and Physiology (human and comparative), Dental Surgery, Dental Mechanics, and one course of lectures on Metallurgy, by lecturers recognised by this College.
9. Of having been engaged, during a period of not less than three years, in acquiring a practical familiarity with the details of Mechanical Dentistry, under the instruction of a competent practitioner.
10. Of having attended at a recognised dental hospital, or in the dental department of a recognised general hospital, the practice of Dental Surgery during the period of two years.

N.B.—The students of the London schools are required to register the above certificates at this College; and special returns will be required from the provincial schools.

[*Note.*—All candidates who shall commence their professional education on or after October 1, 1877, will, in addition to the certificates enumerated in the foregoing clauses, be required to produce a certificate of having, prior to such commencement, passed the preliminary examination in general knowledge for the diploma of Member of the College, or an examination recognised as equivalent to that examination.]

Candidates who were in practice as dentists, or who had commenced their education as dentists prior to September, 1859—the date of the Charter—and who are unable to produce the certificates required by the foregoing regulations, shall furnish the Board of Examiners with a certificate of moral and professional character, signed by two members of this College, together with answers to the following inquiries:—Name, age, and professional address. If in practice as a dentist, the date of the commencement thereof. Whether member or licentiate of any College of Physicians or Surgeons of the United Kingdom; and, if so, of what College. Whether graduate of any University in the United Kingdom; and, if so, of what University; and whether graduate in Arts or Medicine. The date or dates of any such diploma, licence, or degree. Whether member of any learned or scientific society; and, if so, of what. Whether his practice as a dentist is carried on in connexion with any other business; and, if so, with what business. Whether since September, 1859, he has employed advertisements or public notices of any kind in connexion with the practice of his profession. The particulars of professional education, medical or special. The Board of Examiners will determine whether the evidence of character and education produced by a candidate be such as to entitle him to examination.

N.B.—In the case of candidates in practice or educated in Scotland or Ireland, the certificate of moral and professional character may be signed by two Licentiates of the Royal College of Surgeons of Edinburgh, or of the Faculty of Physicians and Surgeons of Glasgow, or of the Royal College of Surgeons in Ireland, as the case may be.

EXAMINATION.

The examination is partly written and partly oral. The written examination comprises general Anatomy and Physiology, and general Pathology and Surgery, with especial reference to the practice of the dental profession. The oral practical examination comprises the several subjects included in the curriculum of professional education, and is conducted by the use of preparations, casts, drawings, etc. Members of the College, in the written examination, will only have to answer those questions set by the section of the Board consisting of persons skilled in Dental Surgery; and in the oral examination will be examined only by that section. A candidate whose qualifications shall be found insufficient will be referred back to his studies, and will not be admitted to re-examination within the period of six months, unless the Board shall otherwise determine. Examinations will be held in January and June. The fee for the diploma is £10 10s., over and above any stamp duty.

[*Note.*—A ticket of admission to the museum, to the library, and to the College lectures will be presented to each candidate on his obtaining the diploma.]

LONDON SCHOOL OF DENTAL SURGERY AND DENTAL HOSPITAL OF LONDON.

HOSPITAL STAFF.

Consulting Physician—Sir Thomas Watson, Bart., M.D.

Consulting Surgeon—Mr. Christopher Heath.

Consulting Dental Surgeons—Mr. S. Cartwright and Mr. John Tomes.

Dental Surgeons.	*Assistant Dental Surgeons.*
Mr. Fox.	Mr. Moon.
Mr. Medwin.	Mr. A. Gibbings.
Mr. Gregson.	Mr. D. Hepburn.
Mr. Coleman.	Mr. R. Woodhouse.
Mr. H. Harding.	Mr. Bartlett.
Mr. A. Hill.	Mr. S. J. Hutchinson.

Chloroformists—Mr. Clover, Mr. Braine, and Mr. Bailey.

Medical Tutor—Mr. Storer Bennett. | *Demonstrator*—Mr. Claude Rogers.

The winter session will commence on Tuesday, October 1, when a short address will be given by Mr. A. Coleman, Senior Surgeon.

LECTURES.—WINTER SESSION.

Mechanical Dentistry—Mr. J. S. Turner.

Metallurgy in its Application to Dental Purposes—Mr. G. H. Makins.

LECTURES.—SUMMER SESSION.

Dental Surgery and Pathology—Mr. S. H. Cartwright.

Dental Anatomy and Physiology (Human and Comparative)—Mr. C. S. Tomes.

SCHOLARSHIPS AND PRIZES.

The Saunders Scholarship of £20 per annum and prizes are open for competition.

FEES.

General fee for special lectures required by the curriculum, £15 15s. Fee for two years' hospital practice required by the curriculum, £15 15s. Fees for lectures and practice, £31 10s. Additional fees for a general hospital for the two years to fulfil the requirements of the curriculum vary from £40 to £50.

For further particulars, apply to T. F. Ken Underwood, Dean.

THE NATIONAL DENTAL HOSPITAL AND COLLEGE.

HOSPITAL STAFF.

Dental Surgeons.	*Assistant Dental Surgeons.*
Mr. James Stocken.	Mr. F. Henri Weiss.
Mr. Oakley Coles.	Mr. W. Taylor Smith.
Mr. G. Williams.	Mr. Thomas Gaddes.
Mr. A. F. Canton.	Mr. L. Stevens.
Mr. H. T. K. Kempton.	
Mr. Harry Rose.	

LECTURERS.

Dental Anatomy and Physiology—Mr. Thomas Gaddes.

Dental Mechanics—Mr. G. Williams.

Dental Surgery and Pathology—Mr Oakley Coles.

Dental Metallurgy—

SUPPLEMENTAL LECTURERS.

Dental Materia Medica—Mr. James Stocken.

Elements of Histology—Mr. Thomas Gaddes.

Demonstrator of Dental Mechanics—Mr. Harry Rose.

Deformities of the Mouth—Mr. Oakley Coles.

Arts and Literature—Rev. H. R. Belcher, M.A.

Special arrangements for the education of dental students are made at Charing-cross and Middlesex Hospitals.

PHARMACEUTICAL CHEMISTRY.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN. SCHOOL OF PHARMACY.

THE session will commence on October 2, 1878, and extend to July 31, 1878.

Lectures on Chemistry and Pharmacy will be delivered by Professor Redwood on Monday, Tuesday, and Wednesday mornings at nine o'clock, commencing on Wednesday, October 2. The course consists of sixty lectures, comprising an exposition of the leading principles and doctrines of the science of Chemistry, and of those branches of allied physical science, the applications of which are involved in the highest qualifications required for the practice of Pharmacy. There will be two of these courses during the session—the course which commences in October and ends in February being repeated in the following five months. Each course will be complete in itself, and will include a description of all the most important chemical and Galenical preparations used in medicine, which will be fully illustrated with experiments, diagrams, and specimens.

Lectures on Botany and Materia Medica by Professor Bentley, on Thursday, Friday, and Saturday mornings at nine o'clock, commencing Friday, October 4. During the session two courses of lectures will be delivered, each consisting of sixty lectures. The first course, extending from October to the end of February, will comprise Botany and Materia Medica, with especial reference to Structural Botany, and the use of the microscope in distinguishing the various drugs; and the second course, which commences in March and extends to the end of July, will also comprise Botany and Materia Medica, with especial reference to Systematic and Practical Botany. Each course will be complete in itself, although each will have a definite object in view. The portion of the second course on Systematic and Practical Botany, consisting of twenty lectures, commences in May and ends in July. Separate entries may be made for this portion.

The Laboratories for the study of Practical Chemistry will be opened on Tuesday, October 1, at 10 a.m., under the direction of Professor Attfield. The Laboratories are fitted up with every convenience for the study of the principles of Chemistry by personal experiment. They are specially designed for the study of Pharmacy, but are also well

adapted for the acquirement of a knowledge of Chemistry in its application to manufactures, analysis, and original research. There is no general class for simultaneous instruction, each student following an independent course of study always determined by his previous knowledge; pupils can therefore enter for any period at any date. A complete course of instruction, including the higher branches of Quantitative Analysis, occupies ten full months, and dates from the day of entry to that day twelvemonth. The Laboratories are open from ten o'clock in the morning until five in the afternoon daily, except on Saturdays, when they are closed at two o'clock. Vacation months, August and September.

SPECIAL INSTRUCTION.

SCHOOLS AND OTHER PLACES OF GENERAL AND SPECIAL INSTRUCTION.

Besides the regular Schools with their various departments, there are many other institutions—devoted, some of them, to special purposes—where students and practitioners may acquire a sound knowledge of various subjects which hardly enter into the ordinary curriculum. We have already indicated that in the plan of studies the student may avail himself of a year at the beginning or at the end for such purposes. If at the beginning, we could not do better than advise him to take a session at the Royal School of Mines, studying especially Chemistry and Natural History, the value of which we have already inculcated. If he takes the year at the end, then such special studies as Eye Diseases, Skin Diseases, Lunacy, Diseases of Women and Children, may well engage his attention. These may, as a rule, be studied in connexion with his school; or, if a wider field is desired, in some one or other of the following institutions:—

Preliminary.

ROYAL SCHOOL OF MINES.

Department of Science and Art.

During the twenty-eighth session, 1878-79, which will commence on October 1, the following courses of lectures and practical demonstrations will be given:—

Applied Mechanics—Mr. Goodeve.
Chemistry—Dr. E. Frankland.
Geology—Mr. John W. Judd.
Metallurgy—Dr. John Percy.
Mechanical Drawing—Rev. J. Edgar.
Minera logy and Mining—Mr. Warington W. Smyth.
Natural History—Professor T. H. Huxley.
Physics—Mr. Frederick Guthrie.

The lecture fees for students desirous of becoming Associates are £30 in one sum, or two annual payments of £20, exclusive of the laboratories. Tickets to separate courses of lectures are issued at £3 and £4 each. Officers in the Queen's service, her Majesty's Consuls, Acting Mining Agents and Managers, may obtain tickets at reduced prices. Science teachers are also admitted to the lectures at reduced fees. For a prospectus and information apply to the Registrar, Royal School of Mines, Jermyn-street, London, S.W.

SOUTH LONDON SCHOOL OF CHEMISTRY AND PHARMACY,

325, Kennington-road, and Central Public Laboratory, Kennington-cross, S.E.—Director—Dr. Muter.

Daily lectures in Classics, Chemistry, Physics, Botany, Materia Medica, and Pharmacy. Laboratory open for Practical Chemistry from ten till five. Special instruction for Medical Officers of Health in Water, Air, Gas, and Food Analysis. For fees, etc., apply to W. Baxter, Secretary, Laboratory, Kennington-cross, S.E.

LONDON SCHOOL OF MEDICINE FOR WOMEN,

30, Henrietta-street, Brunswick-square, W.C.

LECTURERS.

Anatomy — Mr. Reeves, London Hospital.
Physiology—Mr. Schäfer, University College.
Chemistry—Mr. Heaton, Charing-cross Hospital.
Botany—Dr. P. H. Stokoe, Guy's Hospital.
Materia Medica—Dr. Sturges, Westminster Hospital, and Dr. H. Donkin, Westminster Hospital.
Practice of Medicine — Dr. King Chambers, St. Mary's Hospital, and Mrs. Garrett-Anderson, M.D.
Midwifery and Diseases of Women —Dr. Ford Anderson and Dr. Louisa Atkins.
Forensic Medicine — Dr. Dupré, Westminster Hospital, and Mr. T. Bond, Westminster Hospital.
Clinical Medicine—Dr. O'Connor, Royal Free Hospital, and Dr. Cockle, Royal Free Hospital
Surgery—Mr. Cowell, Westminster Hospital.
Clinical Surgery—Mr. F. J. Gant, Royal Free Hospital, and Mr. W. Rose, Royal Free Hospital.
Ophthalmic Surgery—Mr. Critchett, Royal Ophthalmic Hospital, and Mr. James Adams, London Hospital.
Pathology—Dr. Cheadle, St. Mary's Hospital.
Mental Pathology — Dr. Sankey, University College.
Comparative Anatomy—Dr. Murie, Middlesex Hospital.
Hygiene—Drs. Sophia Jex Blake and Edith Pechey.

Dean of the School—Mr. A. T. Norton, St. Mary's Hospital.

The Winter Session of 1878-79 will commence on October 1, and will comprise classes in Anatomy, Physiology, Practice of Medicine and Practice of Surgery, and Practical Anatomy with Demonstrations. Clinical instruction will be given at the Royal Free Hospital, and will include lectures on Clinical Medicine, Clinical Surgery, and Hospital attendance. Dressers, Clinical Clerks, and a Pathological Registrar will be selected from among the senior students

Fees for ordinary curriculum of non-clinical lectures £80, or £40 the first year, £30 the second, and £15 the third. Fees for clinical instruction and lectures for four years £45, or £20 the first year, £15 the second year, and £15 the third, the fourth being free. Apply for information to the Dean, or to the Hon. Sec., Mrs. Thorne.

THE HARTLEY INSTITUTION, SOUTHAMPTON.

In the department of preliminary medical education, which is recognised by the Royal College of Surgeons and Physicians, students are prepared for the regular curriculum of the medical schools, one winter and two summer sessions thus passed counting towards the four years' professional study required of all candidates for a diploma. Students in this department also receive instruction in dressing, taking notes of cases, etc., at the Southampton Royal Infirmary. For further information address the Principal.

DOWNING COLLEGE, CAMBRIDGE.

Every alternate(a) year an election to a Fellowship takes place, the holder of which must be engaged in the active pursuit of the studies of Law or Medicine. These Fellowships are of the annual value of £200, and are tenable for twelve years. They are not vacated by marriage, and the Fellows are not required to reside. Foundation Scholarships of £50 per annum (in some cases with rooms and commons) are offered annually for distinction in Natural Science, tenable until the B.A. degree, and in cases of special merit for three years longer. Minor Scholarships of £60 and upwards per annum, tenable for two years, are offered each year for competition before entrance, and one or more of these is awarded for proficiency in Natural Science.

UNIVERSITY OF DURHAM COLLEGE OF PHYSICAL SCIENCE, NEWCASTLE-ON-TYNE.

The College has taken over the laboratories, lecture-room, etc., of the College of Medicine, and provides the full courses in Chemistry required by the licensing boards. A chair of Natural History in connexion with the College has been established, and the course qualifies for the F.R.C.S. Eng.

LONDON.

General Hospitals.

GREAT NORTHERN HOSPITAL,

Caledonian-road.

Physicians—Dr. Leared, Dr. Cholmeley, Dr. Crucknell, Dr. R. Bridges, Dr. Cook.
Obstetric Physician—Dr. Gustavus C. P. Murray.
Diseases of the Eye—Mr. B. T. Lowne.
Surgeons—Mr. Gay, Mr. W. Adams, Mr. W. H. Cripps, W. Spencer Watson.
Aural Surgeon—Mr. A. E. Cumberbatch.
Dental Surgeon—Mr. C. J. Fox.
Chloroformist—Mr. G. Eastes. House-Surgeon—Mr. T. H. Gillam.
Junior Resident Medical Officer—Mr. A. Wharry.
Dispenser—Mr. J. W. Burgess.
Registrar of Out-Patients—Mr. F. Adams.

SEAMEN'S HOSPITAL (late *Dreadnought*), GREENWICH, S.E.

Consulting Physicians—Drs. George Budd and Stephen H. Ward.
Visiting Physicians—Dr. Chas. H. Ralfe, Mr. Harry Leach, M.R.C.P.L.
Visiting Surgeon—Mr. N. Davies-Colley.
Surgeon—Mr. W. Johnson Smith.
House-Physician—Dr. Foumartin. House-Surgeon—Mr. H. P. Dunn.
Secretary—Mr. Henry C. Burdett.

Special Hospitals.

ST. LUKE'S HOSPITAL FOR LUNATICS,

Old-street, E.C.

Physicians—Dr. Henry Monro and Dr. William Wood.
Surgeon—Mr. Alfred Willett.
Resident Medical Superintendent—Dr. George Mickley.

There are two resident Clinical Assistants, whose appointments are tenable for six months. The Visiting Physicians are also allowed by the Committee to take pupils. Patients admitted gratuitously, or on payment according to their circumstances. For information address the Secretary, H. Crespin, Esq.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST,

Victoria-park.

Office—24, Finsbury-circus, E.C.

Consulting Physicians—Dr. T. B. Peacock, Dr. J. R. Bennett, and Dr. E. L. Birkett.
Consulting Surgeon—Mr. J. Hilton.
Physicians—Dr. S. H. Ward, Dr. J. Andrew, Dr. J. C. Thorowgood, Dr. A. B. Shepherd.
Assistant-Physicians—Dr. Eustace Smith, Dr. J. B. Berkart, Dr. J. M. Fothergill, Dr. Samuel West, and Dr. G. A. Heron.
Resident Medical Officer—Mr. Hotham G. Orlebar, M.B.

The Hospital affords accommodation for 164 in-patients. Information respecting medical instruction at the Hospital may be obtained on application to the Physicians.

(a) In the present yea a Fellowship has been suspended, pending the University Commission.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON. (Number of beds, 192.)

Consulting Physicians—Dr. C. J. B. Williams, Dr. W. H. Walshe, and Dr. Richard Quain.
Consulting Surgeon—Prof. John Marshall
Physicians—Dr. Jas. E Pollock, Dr. E. Symes Thompson, Dr. C. Theodore Williams, Dr. R. Douglas Powell, and Dr John Tatham.
Assistant-Physicians—Dr. Reginald E. Thompson, Dr. I. Burney Yeo, Dr. Fredk. T. Roberts, Dr. T. H. Green, and Dr. J. Mitchell Bruce.
Dental Surgeon—Mr. W. Penny Bartlett.
Resident Medical Officer—Dr. W. T. Law.
Honorary Secretary—Philip Rose.
Secretary—Henry Dobbin.

The clinical practice of this Hospital is open to students of Medicine and practitioners. Fee for three months, £3 3s.; six months, £5 5s.; perpetual, £10 10s.

A course of clinical instruction in Auscultation will be given by the medical officers.

Certificates of attendance on the medical practice of this Hospital are recognised by the University of London, the Apothecaries' Society, and by the Army, Navy, and Indian Boards.

THE HOSPITAL FOR SICK CHILDREN,

48 and 49, Great Ormond-street, W.C., and Cromwell House, Highgate.

Physicians—Dr. Dickinson, Dr. Gee, and Dr. W. B. Cheadle.
Assistant-Physicians—Dr. R. J. Lee, Dr. O Sturges, Dr. Thos. Barlow, Dr. D. B. Lees, Dr. Bridges.
Surgeon—Mr. Thomas Smith.
Assistant-Surgeons—Mr. Howard Marsh, Mr. Edmund Owen, and Mr. J. H. Morgan.
Surgeon-Dentist—Mr. Alex. Cartwright.
Secretary—Samuel Whitford.

156 beds. In-patients, 1877, 927. Out-patients attending, 9872. The practice of the Hospital, in both in- and out-patient departments, is open at nine every morning.

BELGRAVE HOSPITAL FOR CHILDREN.(a)

1, Cumberland-street, and 72, Winchester-street, Eccleston-square, S.W.
Twenty beds.
President—His Grace the Duke of Westminster.
HONORARY MEDICAL STAFF.
Physicians—Dr. Farquharson and Dr. Hope.
Surgeons—Mr. Thos. P. Pick and Mr. Stirling.
House-Surgeon—Mr. Drewitt.

New patients last year—in, 103; out, 1014. Pupils will be admitted to the practice of the Hospital upon producing a certificate of being duly registered as medical students, and on such other conditions as the Committee may from time to time direct.

EVELINA HOSPITAL FOR SICK CHILDREN,

Southwark-bridge-road.
Founded in 1869 by the Baron F. de Rothschild.—100 beds.
Consulting Physician—Dr. W. S. Playfair.
Consulting Surgeon—Mr. Prescott C. Hewett.

Physicians — Dr. E. Buchanan Baxter and Dr. Fredk. Taylor.
Physicians to Out-Patients — Dr. T. Crawford Hayes and Dr. Jas. Goodhart.
Surgeons—Mr. W. Morrant Baker and Mr. H. G. Howse.
Surgeon to Out-Patients—Mr. R. Clement Lucas.
House-Surgeon—Mr. W. E. Paley.
Secretary—Mr. Frank Livesay.

VICTORIA HOSPITAL FOR CHILDREN,

Gough House, Queen's-road, Chelsea, and Churchfields, Margate.

This Hospital contains seventy beds—viz., sixty at Gough House and ten at Margate,—and has a large Out-patient Department of over 400 weekly. The Physicians attend daily at 9 a.m., and on Mondays and Thursdays at noon. The Surgeons attend at 10 a.m., except on Wednesday and Saturday. The Surgeon-Dentist attends on Saturday at 9.30 a.m.

Physicians—Dr. Julian Evans and Dr. T. Ridge Jones.
Assistant-Physicians — Dr. Grigg, Dr. Pearson Irvine, Dr. W. H. Allchin, and Dr. Albert Venn.
Surgeon—Mr. George Cowell.
Assistant-Surgeons—Mr. Fisher and Mr. F. Churchill
Dental-Surgeon—Mr. Risdon.
House-Surgeon and Registrar—Mr. Alfred J. Bisdee.
Secretary—Captain Blount, R.N.

EAST LONDON HOSPITAL FOR CHILDREN.

This institution contains thirty-six beds.

Consulting Physicians—Dr. Barnes and Dr. Andrew Clark.
Physicians—Dr. Eustace Smith and Dr. Horatio B. Donkin.
Assistant-Physicians—Dr. Warner and Dr. Crocker.
Administrator of Anæsthetics—Mr. Thomas Bird.
Consulting Surgeon—Mr. B. Shillitoe.
Consulting Ophthalmic Surgeon—Mr. George Cowell.
Surgeons—Mr. A. Cæsar and Mr. H. A. Reeves.
Assistant-Surgeon — Mr. R. W. Parker.

House-Surgeons—Mr. T. E. Hayward, Mr. A. Lapthorne Smith, and Mr. C. De Lisle Brock.
Secretary—Ashton Warner.

ROYAL INFIRMARY FOR CHILDREN AND WOMEN.

Waterloo-bridge-road.—Instituted 1816.

Consulting Physicians—Dr. Samuel Wilks and Dr. John Williams.
Consulting Surgeon—Mr. J. Cooper Forster.

Physicians—Dr. G. V. Poore, Dr. Wm. Park, Dr. George Roper, and Dr. W. Allen Sturge.
Surgeon—Mr. Edwin Canton.
Surgeon-Dentist—Mr. R. M. Drury.
Resident Medical Officer — Mr. Edmund Overman Day.
Secretary—Mr. William Champion

Advanced students in Medicine, and such practitioners as may desire it, are permitted to attend the practice of this Hospital gratis. If a certificate signifying such attendance be required, the sum of £5 5s. must be paid to the Physicians and Surgeons in ordinary conjointly.

(a) No return.

LONDON FEVER HOSPITAL, ISLINGTON.

260 beds.

Consulting Surgeon—Mr. W. S. Savory, F.R.C.S.
Consulting Physicians—Dr. A. Tweedie and Dr. C. Murchison.
Physicians—Dr. Broadbent and Dr. Cayley.
Assistant-Physician—Dr. Mahomed.
Resident Medical Officer—Mr. H. F. Harvey.
Secretary—Mr. Charles Finn.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL,

King William-street, Charing-cross.

The Hospital contains thirteen wards with fifty beds, and the patients (10,000 new cases annually) are seen daily at 1 p.m., and operations performed at 2 p.m. The following are the days of attendance of the Surgical Staff:—Monday and Friday, Mr. Power and Mr. Rouse; Tuesday and Thursday, Mr. Macnamara; Wednesday and Saturday, Mr. Cowell.

The practice of the Hospital is open to students. Fees—for six months, £3 3s.; perpetual, £5 5s.

Secretary—Mr. Geo. C. Farrant.

ROYAL LONDON OPHTHALMIC HOSPITAL,

Blomfield-street, Moorfields, E.C.—Founded 1804.—100 beds.

Consulting-Physician—Dr. F. J. Farre.
Consulting-Surgeons—Mr. J. Dickson, Mr. G. Critchett, Mr. W. Bowman, and Mr. J. Hutchinson.
Surgeons—Messrs. Wordsworth, Streatfeild, J. W. Hulke, G. Lawson, J. Couper, Dr. J. Soelberg Wells, Waren Tay, J. Eddams, and J. Tweedy.
House-Surgeons—Messrs. R. M. Gunn and G. H. Burnham.

HOSPITAL FOR DISEASES OF THE SKIN,

52, Stamford-street, Blackfriars, S.E.

Surgeons—Mr. Jonathan Hutchinson and Mr. Waren Tay. Assistant-Surgeons—Mr. Wyndham Cottle and Dr. E. Buchanan Baxter.

THE BRITISH HOSPITAL FOR DISEASES OF THE SKIN,

West Branch, Great Marlborough-street, W.; East Branch, Finsbury-square, E.C.; and South Branch, Newington-butts, S.E.

Surgeons—Mr. Balmanno Squire and Mr. George Gaskoin.

ST. PETER'S HOSPITAL FOR STONE AND GENITO-URINARY DISEASES,

54, Berners-street, W.

The practice is free to hospital students.
Surgeons—Mr. Walter J. Coulson and Mr. W. F. Teevan.
Assistant-Surgeon—Mr. F. R. Heycock.

HOSPITAL FOR DISEASES OF THE THROAT,

Golden-square, W.

Consulting Physician—Dr. Billing, M.D.
Physicians—Dr. Morell-Mackenzie, Dr. Semple, Dr. Prosser James, Dr. W. MacNeill Whistler, and Dr. F. Semon.
Surgeons—Mr. Edward Woakes and Mr. W. R. H. Stewart.
Dental Surgeon—Mr. Oakley Colls.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC,

23, 24, and 25, Queen's-square, Bloomsbury.

The Hospital contains 90 beds, of which 15 (contained in the In Memoriam Wing) are allotted to patients able to contribute a portion of the bare cost of their maintenance whilst in the Hospital; the County Convalescent Branch, at Finchley, 20 beds. The Physicians attend every Monday, Tuesday, Wednesday, and Friday, at half-past two o'clock. In- and out-patients' electrical room and general practice at that hour.

Physicians—Drs. Ramskill, Radcliffe, Hughlings-Jackson, Buzzard.
Physician for Out-patients—Dr. Charlton Bastian.
Assistant-Physicians—Drs. Maclure, Gowers.
Surgeon—W. Adams, F.R.C.S.
Resident Medical Officer and Registrar—A. E. Broster, M.R.C.S., L.R.C.P.

Medical practitioners and students will be admitted on showing their card.

PROVINCIAL.

LIVERPOOL ROYAL SOUTHERN HOSPITAL.

200 beds.

Physicians—Dr. Cameron and Dr. Carter.
Surgeons—Mr. Hamilton, Dr. Little, and Mr. Ransford.
Senior House-Surgeon—Mr. R. Wearing.
Junior House-Surgeons—Mr. J. Milner Helme and Mr. L. W. Davies.

Clinical lectures given by the Physicians and Surgeons during the winter and summer sessions. Clinical Clerkships and Dresserships open to all students. Special wards for Accidents and Diseases of Children. Rooms for a limited number of resident students.

Fees for hospital practice and clinical lectures:—Perpetual, £26 5s.; one year, £10 10s.; six months, £7 7s.; three months, £4 4s.

The practice of the Hospital is recognised by all examining bodies.

NORFOLK AND NORWICH HOSPITAL.

120 beds.

One year's attendance recognised by Examining Boards. Fees: for the Physicians' practice, £10 10s.; for the Surgeons' practice—three months, £11; six months, £15; one year, £20; a year and a half, £25; two years, £30; perpetual, £40. Pupils resident and non-resident.

Physicians—Dr. Copeman, Dr. Eade, Dr. Bateman.
Honorary Consulting Surgeon—Mr. Nichols.
Surgeons—Mr. Firth, Mr. Cadge, Mr. Crosse.
Assistant-Surgeons—Mr. Williams, Dr. Beverley.
Resident Medical Officer—Mr. Charles Firth.

WEST RIDING LUNATIC ASYLUM, WAKEFIELD.

Dr. Herbert Major, the Medical Director of the West Riding Lunatic Asylum, lectures on Mental Diseases during the summer session. The systematic lectures are given at the School, and the clinical lectures at the Asylum, which now accommodates over 1400 patients. It is needless to point out how great and unusual an advantage is here presented to those inclined to make themselves conversant with the improvement made of late years in the treatment and management of the insane.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.

(A Clinical and Training Institution for Gentlemen intended for the Medical Profession.)

Medical Officers—Dr. Millington, Dr. Totherick, Dr. Joseph Hunt, Mr. Vincent Jackson, Mr. J. O'B. Kough, Mr. C. A. Newnham.

This Hospital contains 210 beds; large male and female accident wards; wards for cases of burn; general medical and surgical wards; a ward for diseases peculiar to women; a children's ward, and a detached fever wing; also a commodious semi-detached out-patient department. To the general wards a clinical-room is attached, in which the analysis and microscopic inspection of the urine are conducted, also ophthalmoscopic and laryngoscopic examinations. Instruction is given in Chemistry, in Natural Philosophy, and in the Anatomy of the Dry Bones, Ligaments, Viscera, and Topographical Anatomy. The course of Practical Surgery includes the use of surgical apparatus, the performance of surgical operations, and the demonstration of Morbid Surgical Anatomy. In the Hospital the pupils are required to attend daily in the casualty-room, in the out-patient department, and in the wards, the instruction afforded being of a practical nature, including bandaging, the application of splints, tooth-drawing, and every kind of elementary professional detail, likewise how to observe and examine patients. The art of dispensing, the preparation of drugs and of pharmaceutical compounds, can also be learnt in the Hospital Dispensary and Laboratory. Operations are performed every Thursday at eleven o'clock, and practitioners are admitted. The practice of the Hospital is recognised by all the examining boards.

Lectures are given in Elementary Medicine by Dr. Totherick and by Dr. Hunt; and in Elementary Surgery (in accordance with the regulations of the Royal College of Surgeons) by Mr. V. Jackson.

Fees for hospital practice—For one year, £10 10s.; perpetual, £21. Some members of the honorary staff receive resident pupils. For further particulars apply to Mr. Vincent Jackson (Honorary Secretary to the Medical Committee), Waterloo-road South, Wolverhampton.

GLASGOW ROYAL ASYLUM, GARTNAVEL.

The Asylum contains nearly 600 patients, including all classes. Dr. Yellowlees, Physician-Superintendent, lectures on Mental Diseases in summer; fee, £2 2s.

THE ROYAL DISPENSARY, EDINBURGH.

Consulting Physician—Professor Sanders.
Consulting Surgeon—Professor Spence.
Consulting Physician-Accoucheur—Dr. Keiller.
Medical Officers—Dr. Linton, Dr. W. Husband, Dr. James Andrew, Dr. D. Wilson, Dr. F. W. Moinet, Dr. A. J. Sinclair, and Dr. W. Gordon.
Midwifery Department—Dr. Andrew and Dr. Allan Jamieson.
Vaccination—Dr. Husband.
Apothecary—Mr. R. Urquhart.
Secretary to Medical Officers—Dr. Andrew.

ROYAL HOSPITAL FOR SICK CHILDREN, MEADOWSIDE HOUSE, EDINBURGH.

Consulting Physicians—Professor Sir Robert Christison, Bart., Drs. Charles Wilson, Graham Weir, and George W. Balfour.
Consulting Surgeon—Professor Spence.
Pathologist—Professor Sanders.
Ordinary Physicians—Drs. Ritchie, Linton, Dunsmure, and Andrew.
Extra Physicians—Drs. Cumming and Underhill.
Assistant-Physician—Dr. David Grant.
Surgeon-Dentist—Dr. Smith.
Ophthalmic Surgeon—Dr. Argyll Robertson.
Resident Physician—Dr. W. R. Gibson.
Honorary Secretary—Mr. John Henry, 20, St. Andrew-square.
Hon. Treasurer—R. S. Wyld, LL.D., 19, Inverleith-row.

Fees: To Hospital, three months, £1 1s.; to Dispensary Department, three months, £1 1s.

GLASGOW EYE INFIRMARY,

Berkeley-street, and 76, Charlotte-street.
Consulting Surgeon—Dr. George Buchanan.
Surgeons—Drs. Thomas Reid, Thos. S. Meighan, and Henry E. Clark.
Assistant-Surgeons—Drs. J. Crawford Renton, D. N. Knox, and Johnston Macfie.
Resident Clerk—Mr. J. Johnstone Weir.
Secretary—George Black, 88, West Regent-street.

Hour of visit, 1 p.m. Sixty-four beds. Student's fee for six months, attendance, £2 2s.; or for one year's attendance, £3 3s. To those attending, or who have attended, the lectures on the Eye in Glasgow University, £1 1s. for six months; or £1 11s. 6d. for twelve months.

GLASGOW DISPENSARY FOR DISEASES OF THE EAR,

241, Buchanan-street.

A course of lectures and clinical instruction are given to the students attending the Dispensary during the months of May, June, and July. Average number of cases treated, 800 annually.

Surgeon and Lecturer—Dr. James Patterson Cassells.

ST. MARK'S OPHTHALMIC HOSPITAL AND DISPENSARY FOR DISEASES OF THE EYE AND EAR.

Attending Surgeons—Richard Rainsford, M.B., M.Ch., F.R.C.S.I., and John B. Story, M.B., B.Ch.
Assistant-Surgeon (Resident)—Arthur H. Benson, M.B.T.C.D., L.R.C.S.I.

Instruction is given daily from ten to twelve o'clock, and operations performed on Wednesdays and Saturdays at eleven o'clock. Fee for three months' attendance, £3 3s.

Special courses on the Ophthalmoscope and the Anomalies of Refraction and Accommodation are held from time to time.

ROTUNDA HOSPITALS, DUBLIN.(a)

Master—Dr. Lombe Atthill.
Assistant-Physicians—Dr. R. D. Purefoy and Dr. Wm. Smyly.
Pathologist—Dr. G. F. Duffey.

This institution consists of two distinct Hospitals—namely, the Lying-in Hospital, into which 1200 labour cases are on an average admitted annually, and the Auxiliary Hospital, set apart for the reception and treatment of patients suffering from the various forms of uterine and ovarian disease; about 500 patients are received into this Hospital during each year.

There is also a large Extern Maternity in connexion with the Hospital, and a Dispensary for Diseases Peculiar to Women, which is open daily.

Pupils are admitted to the practice of all these departments.

Accommodation is provided for a number of Intern Pupils.

Applications to be made to the Master or Assistant-Physicians, at the Hospitals, Rutland-square, Dublin.

THE PUBLIC SERVICES.

ARMY MEDICAL DEPARTMENT, WHITEHALL-YARD.

SCHEDULE OF QUALIFICATIONS

Necessary for Candidates desirous of obtaining Commissions in the Army Medical Department, with extracts from the Regulations prescribed by the Royal Warrant of April 28, 1876 (*Clause* 58, *Army Circulars*, 1876), *by which the Pay, Promotion, and Retirement of Medical Officers are regulated and determined.*

(I.)—1. Every candidate desirous of presenting himself to compete for a commission in the Army Medical Department must be twenty-one years of age and not over thirty-two years at the date of commencement of the competitive examination. He must produce an extract from the registrar of his birth, or, in default, a declaration, made before a magistrate by one of his parents or guardians, giving his exact age. He must also produce a recommendation from some person of standing in society—not a member of his own family—to the effect that he is of regular and steady habits, and likely in *every* respect to prove creditable to the Department if a commission be granted; and also a certificate of moral character from the parochial clergyman, if possible.

2. The candidate must sign a declaration upon honour that both his parents are of unmixed European blood, and that he labours under no mental or constitutional disease, nor has any hereditary tendency thereto, nor any imperfection or disability that can interfere with the efficient discharge of the duties of a Medical Officer in any climate; also that he does not hold, and has never held, any commission or appointment in the public services. His physical fitness will be determined by a Board of Medical Officers, who are required to certify that the candidate's vision is sufficiently good to enable him to perform any surgical operation without the aid of glasses. A moderate degree of myopia will not be considered a disqualification, provided it does not necessitate the use of glasses during the performance of operations, and that no organic disease of the eyes exists. The Board must also certify that he is free from organic or other disease, and from constitutional weakness, or tendency thereto, or other disability of any kind likely to unfit him for military service in any climate.

3. Certificates of age, registration of diplomas, etc., and of character, must accompany the declaration when signed and returned.

4. Candidates will be examined by the Examining Board in the following compulsory subjects, and the highest number of marks attainable will be distributed as follows:—*a.* Anatomy and Physiology, 1000 marks; *b.* Surgery, 1000; *c.* Medicine, including Therapeutics, the Diseases of Women and Children, 1000; *d.* Chemistry and Pharmacy, and a practical knowledge of drugs, 100 marks. N.B.—The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside. The eligibility of each candidate for the Army Medical Service will be determined by the result of the examinations in these subjects only. Examinations will also be held in the following voluntary subjects, for which the maximum number of marks will be—French and German (150 each), 300 marks; Natural Sciences, 300 marks. The

(a) No return.

knowledge of modern languages being considered of great importance, all intending competitors are urged to qualify in French and German. The natural sciences will include Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany with special reference to Materia Medica. The number of marks gained in both the voluntary subjects will be added to the total number of marks obtained by those who shall have been found qualified for admission, and whose position on the list of successful competitors will thus be improved in proportion to their knowledge of modern languages and natural sciences.

5. After passing this examination, every candidate will be required to attend one entire course of practical instruction at the Army Medical School on—(1) Hygiene; (2) Clinical and Military Medicine; (3) Clinical and Military Surgery; (4) Pathology of Diseases and Injuries incident to Military Service.

The following extracts from the Royal Warrant of April 28, 1876 (Clause 58, Army Circulars, 1876), are republished for the information of candidates for commissions in the Army Medical Department:—

1. The ranks and rates of pay of the officers of the Army Medical Department shall be as follows:—Daily pay: Surgeon-General £2, after twenty-five years' service £2 5s., after thirty years' service £2 7s., after thirty-five years' service £2 10s.; Deputy Surgeon-General £1 10s., after twenty-five years' service £1 12s., after thirty years' service £1 15s., after thirty-five years' service £1 17s.; Surgeon-Major, on appointment £1, afterfive years' service as such £1 5s.; Surgeon, on appointment £250 a year, after ten years' service 17s. 6d. daily. Charge pay: The Principal Medical Officer of an army in the field consisting of 10,000 men and upwards, £1 daily; of 5000 men and upwards, 15s. daily; of less than 5000, 10s. daily. Or the Principal Medical Officer of a colony where the number of commissioned officers and enlisted men is 1500 and upwards, 5s. daily.

2. The pay of officers shall be issued monthly in arrear.

3. The relative rank of the officers of the Army Medical Department shall be as follows:—(1.) A Surgeon-General shall rank as Major-General, according to the date of his commission. (2.) A Deputy Surgeon-General shall rank as Colonel, according to the date of his commission. (3.) A Surgeon-Major shall rank as Major, according to the date of his commission; after twenty years' full-pay service as Surgeon and Surgeon-Major, he shall rank as Lieutenant-Colonel, but junior of the latter rank. (4.) A Surgeon shall rank as Lieutenant, according to the date of his commission; and, after six years' full-pay service, as Captain, according to the date of the completion of such service.

4. The relative rank of these officers shall regulate choice of quarters, rates of lodging-money, servants, fuel and light, or allowances in their stead, detention and prize-money, as well as allowances granted on account of wounds or injuries received in action, and pensions and allowances to widows and families.

5. Forage shall be granted to officers of the Army Medical Department for such number of horses as are necessarily kept by them for duty.

6. Admission to the Army Medical Department shall be by public competition.

7. Every candidate for appointment to the Army Medical Department shall possess two diplomas or licences, one to practise Medicine, and the other Surgery, in Great Britain or Ireland, and be registered under the Medical Act in force at the time of his appointment.

8. A successful candidate, who, having passed through a course of instruction at the Army Medical School at Netley, in Military Medicine, Surgery, Hygiene, and Pathology, shall have proved, after examination, that he possesses a competent knowledge of those subjects, shall receive a commission as Surgeon for a limited period of ten years' service on full pay. From the date of joining at Netley, and up to that of passing his final examination, a candidate shall receive 5s. a day.

9. On the completion of ten years' commissioned service, unless the Surgeon be specially selected for further employment in the Medical Department of our Army, or if he be unwilling to continue to serve therein, his services shall be dispensed with, and he shall be entitled to receive, in lieu of all pension or retirement, pension for wounds excepted, the sum of £1000.

10. A Surgeon of less than ten years' service, disqualified for duty by ill-health, certified by a Board of Medical Officers to have been contracted in and by the Service, may, at the discretion of our Secretary of State for War, be granted half-pay at a rate not exceeding 8s. a day if he have served five years or more, or 6s. a day if he have served less than five years, for a period not exceeding six months at one time.

11. At the expiration of that period of six months, if the Surgeon be able to resume his duties, he shall be entitled to complete his term of ten years' service. If he be unable to resume duty, as certified by a Board of Medical Officers, he shall be allowed, if he have not served five years, a further period of six months, without half-pay; at the expiration of which period, if still unable to resume duty, his services shall be dispensed with.

12. If the Surgeon have served five years on full pay, and be unable to resume duty as certified by a Board of Medical Officers, his services shall be dispensed with, and he shall be entitled to receive, in lieu of all further pension or pay, pension for wounds excepted, a gratuity at one of the following rates, viz.:—If he shall have completed nine years' full-pay service, £800; eight years' full-pay service, £700; seven years' full-pay service, £600; six years' full-pay service, £500; five years' full-pay service, £400.

13. If a Surgeon be unable to complete his ten years' service from any cause other than wounds or ill-health, certified by a Board of Medical Officers to have been caused in and by the service, or reduction of establishment, he shall be allowed not more than six months' leave without pay, after which, if unable to resume duty, his services shall be at once dispensed with, and he shall have no further claim on the Department.

14. If the services of an officer be temporarily dispensed with in consequence of a reduction of establishment, he shall be granted the rates of half-pay fixed by Article 10 until there be an opportunity of re-employing him, or if he have served five years, he may retire from the service with a gratuity according to the rates specified in Article 12.

15. Every year it shall be competent for our Commander-in-Chief, on the recommendation of the Director-General of the Army Medical Department, to select, with the approval of our Secretary of State, a number of Surgeons not exceeding six, who shall be retained in the service, and shall be promoted after twelve years' service on full pay to the rank of Surgeon-Major.

16. All promotion from the rank of Surgeon-Major to that of Deputy Surgeon-General, and from the rank of Deputy Surgeon-General to that of Surgeon-General, shall be given for ability and merit upon the selection or our Commander-in-Chief, with the approval of our Secretary of State; and the grounds of such selection shall be stated to us in writing, and recorded in the Department. In all such cases the amount of foreign service shall be expressly stated.

17. A Medical Officer retiring after full-pay service of twenty-five years and upwards, may, if recommended for the same by the head of his department, receive a step of honorary rank, but without any consequent increase of half-pay.

18. Good-service pensions shall be awarded to the most meritorious officers of the Army Medical Department, under such regulations as shall be from time to time determined by us, with the advice of our Secretary of State.

19. Six of the most meritorious officers of the Army Medical Department shall be named our Honorary Physicians, and six our Honorary Surgeons.

20. Medical Officers shall have a right to retire on half-pay after twenty years' service. Medical Officers of the rank of Surgeon-Major or Surgeon shall be placed on the retired list at the age of fifty-five, and all Surgeons-General and Deputy Surgeons-General at the age of sixty years.

21. Our Secretary of State may, when he shall deem it fit, employ Medical Officers on the half-pay list in special situations, at such rates of pay, in addition to half-pay, as he shall from time to time determine; but such officers shall vacate their appointments on attaining the age of sixty-five years.

22. A Medical Officer who, having voluntarily resigned his commission, has subsequently been permitted to re-enter the Department, shall not, except under very special circumstances to be approved by our Secretary of State, be allowed to reckon his former service.

SERVICE ON THE WEST COAST OF AFRICA.

23. Service of Medical Officers upon the West Coast of Africa shall be voluntary.

24. Each year or portion of a year shall be allowed to reckon double towards retirement or towards the gratuities fixed by

Articles 9 and 12, but not towards increased pay, provided that the officer shall serve at least twelve months on the West Coast of Africa.

25. For each year's service on the Coast, a Medical Officer shall be entitled to a year's leave at home, and for every additional period beyond a year he shall have an equivalent extension of leave.

26. Officers who may volunteer for service on the West Coast of Africa shall receive double pay while actually serving on the Coast.

NON-EFFECTIVE PAY.

27. A Medical Officer of more than ten years' service placed on half-pay by reduction of establishment, or on the report of a Medical Board in consequence of wounds or ill-health caused in and by the discharge of his duties, or on account of age (under Article 20), shall be entitled to half-pay in accordance with the following scale:—Daily pay: Surgeon-General, after thirty years' service, £1 17s. 6d.; after twenty-five years' service, £1 13s. 6d.; after twenty years' service, £1 10s. Deputy Surgeon-General, after thirty years' service, £1 5s. 6d.; after twenty-five years' service, £1 2s. 6d.; after twenty years' service, £1 1s. Surgeon-Major, after twenty-five years' service, £1; after twenty years' service, 16s. 6d.; after fifteen years' service, 13s. 6d.; after twelve years' service, 11s. Surgeon, after ten years' service, 10s.

28. The rate of half-pay awarded to officers retiring for their own convenience, after twenty years' service on full pay, under Article 20, shall not exceed one-half of their full pay at the time of retirement.

29. Every Medical Officer who shall retire after a service upon full pay of twenty-five years, shall be granted a rate of half-pay equal to seven-tenths of the daily pay he may have been in receipt of when thus retiring on half-pay, provided he shall have served three years in his rank, or shall have served abroad for ten years in all ranks, or for five years with an army in the field. An officer of twenty-five years' full-pay service, whose service falls within neither of these conditions, shall be entitled to only seven-tenths of the daily pay he was in receipt of prior to his last promotion.

30. A Medical Officer of twenty years' full-pay service, placed temporarily on half-pay on account of ill-health, may, however, be allowed to retire on permanent half-pay, at the rates fixed by Article 27, if after one year on half-pay he shall be reported by a Medical Board to be permanently unfit for further service.

31. In all matters not specially provided for in our present Warrant, the officers of the Medical Department of our Army shall be subject to the general regulations for the departments of our Army.

N.B.—The rates of pay, including allowances, while serving in India, will range from 317 rupees (£31 14s.) to 433 rupees (£43 6s.) per month, according to length of service.

DECLARATION.

Recommended by _____, I _____ _____ years of age on _____ last (*vide* accompanying Certificate), a Candidate for a commission in the Medical Department of the Army, do hereby engage for general service, under the conditions detailed in the Schedule of Qualifications, and attest my readiness to proceed on duty abroad whenever required to do so.

I declare upon my honour—(1st) That both my parents are of unmixed European blood; (2nd) that I am not at present suffering from, nor have I any tendency to, any form of disease or mental and bodily infirmity, nor have I any hereditary tendency or predisposition to mental or constitutional disease, or labour under any imperfection or disability that can or is likely to interfere with the efficient discharge of the duties of a Medical Officer in any climate; (3rd) that I will fully reveal to the Medical Board, when physically examined, all circumstances within my knowledge that concern my past and present health; (4th) that I do not now hold, nor have I ever held, any commission or appointment in the public services (if the contrary, specify here).

N.B.—A mis-statement by a candidate will invalidate any subsequent appointment, and cause forfeiture of all privileges for services rendered.

I forward the Certificate of Registration under the Medical Act, showing that I possess the following Degrees, Diplomas, and other Qualifications in Medicine and Surgery, which I will produce when called up for examination, viz.:—

Medicine _____

Surgery _____

I also possess a degree in Arts } _____
(or, if others, state particulars) }

I wish to be examined in the voluntary subjects, viz.:—

French, _____. German, _____. Natural Sciences, _____

Date, _____. Signature, _____

Address, _____

[When this Declaration is returned, it must be accompanied by an extract from the Register of Birth (not of Baptism), or in default a Declaration made by one of the parents or guardians before a magistrate, giving the exact age, also the Certificate of Registration under Medical Act, etc., and by a recommendation from some person of standing in society, not a member of the candidate's family, to the effect that he is of regular and steady habits, and likely in every respect to prove creditable to the Department, if an appointment be granted, as well as a Certificate of moral character from the parochial clergyman, if possible. Any omission of the particulars set forth will render this application void.]

TO BE FILLED IN BY THE EXAMINING MEDICAL OFFICERS AT THE ARMY MEDICAL DEPARTMENT.

The Diplomas and Qualifications produced by _____ have been examined and are found to be in accordance with regulations.

General health _____

Hearing _____

Vision _____

Opinion of Medical Board as to fitness _____

Date _____

ARMY MEDICAL SCHOOL.

President of the Senate.—Sir William M. Muir, K.C.B., M.D., Director-General of the Army Medical Department.

Members of the Senate.—Surgeon-General Sir Joseph Fayrer, M.D., K.C.S.I., F.R.S., Physician to the Council of India; Sir Alexander Armstrong, M.D., K.C.B., F.R.S.; The Principal Medical Officer, Royal Victoria Hospital (*ex officio*); and the Professors of the Army Medical School.

Professors.—Surgeon-General T. Longmore, C.B. (half-pay), Professor of Military Surgery; Inspectors-General W. C. Maclean, M.D., C.B., Professor of Military Medicine; William Aitken, M.D., F.R.S., Professor of Pathology: Surgeon-Major F. S. B. F. De Chaumont, M.D. (half-pay), Professor of Military Hygiene: Deputy Inspector-General J. W. Macdonald, M.D., F.R.S., R.N., Professor of Naval Hygiene.

Assistant-Professors.—Surgeons-Major J. H. Porter, H. R. L. Veale, M.D.; Surgeon J. L. Notter, M.D.; and Surgeon-Major J. P. H. Boileau, M.D.

Candidates for commissions in the Army and Navy and in the Queen's Indian Service proceed to Netley after passing the examination in London. At Netley they attend the medical and surgical practice of the Royal Victoria Hospital, and learn the system and arrangements of naval and military hospitals. During four months they attend the lectures given by the Professors and Assistant-Professors, and go through a course of practical instruction in the hygienic laboratory and microscopical room.

INDIAN MEDICAL SERVICE.

The regulations relating to the Indian Medical Service may be said to be identical with the Queen's. The rules as to service are now, however, different. Unification, however, we fear, looms in the distance.

The candidate for the Indian Medical Service may be either married or unmarried, and must not exceed twenty-eight years of age. After passing the final examination, pay is granted at the rate of 10s. a day. Indian pay and allowances only come into force after landing in India.

NAVAL MEDICAL DEPARTMENT, ADMIRALTY.

QUALIFICATIONS AND REGULATIONS FOR THE EXAMINATION OF CANDIDATES FOR COMMISSIONS IN THE MEDICAL SERVICE OF THE ROYAL NAVY.

The Lords Commissioners of the Admiralty are pleased to direct that the following regulations, relative to the examination of candidates for the appointment of Surgeon in the Royal Navy, shall in future be adopted:—

1. Every candidate desirous of presenting himself for admission to the Naval Medical Service must be not under twenty-one nor over twenty-eight years of age. He must produce a certificate from the District Registrar, in which the date of birth is stated; or, if this cannot be obtained, an affidavit from one of the parents or other near relative, who can attest the date of birth, will be accepted. He must also produce a certificate of moral character, signed by a clergyman or a magistrate to whom he has been for some years personally known, or by the president or senior professor of the college at which he was educated.

2. He must be free from organic disease, and will be required to make a declaration that he labours under no mental

or constitutional disease or weakness, nor any other imperfection or disability that can interfere with the most efficient discharge of the duties of a Medical Officer in any climate. His physical fitness will be determined by a Board of Medical Officers, who are to certify that his vision comes up to the required standard, which will be ascertained by the use of Snellen's test-types. He must also attest his readiness to engage for general service, and to proceed on foreign service when required to do so.

3. He must be registered under the Medical Act in force at the time of his appointment as licensed to practise Medicine and Surgery in Great Britain or Ireland.

4. Certificates of registration, character, and age must accompany the schedule when filled up and returned.

5. Candidates will be examined by the Examining Board in the following subjects:—Anatomy and Physiology; Surgery; Medicine, including Therapeutics and the Diseases of Women and Children; Chemistry and Pharmacy, and a practical knowledge of drugs. (The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside.) The eligibility of each candidate for the Naval Medical Service will be determined by the result of the examinations in these subjects only. Candidates who desire it will be examined in Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany with special reference to Materia Medica, also in French and German; and the number of marks gained in these subjects will be added to the total number of marks obtained in the obligatory part of the examination by candidates who shall have been found qualified for admission, and whose position on the list of successful competitors will thus be improved in proportion to their knowledge of these branches of science.

6. After passing this examination, every candidate will be required to attend one entire course of practical instruction in the Medical School at Netley on—(1) Hygiene, (2) Clinical and Naval and Military Medicine, (3) Clinical and Naval and Military Surgery, (4) Pathology of Diseases and Injuries incident to Naval and Military Service.

7. At its conclusion the candidate will be required to pass an examination on the subjects taught in the school. If he give satisfactory evidence of being qualified for the practical duties of a Naval Medical Officer, he will be eligible for a commission as Surgeon.

8. During the period of his residence at the Netley Medical School each candidate will receive an allowance of 5s. per diem with quarters, or 7s. per diem without quarters, to cover all costs of maintenance; and he will be required to provide himself with uniform (viz., the Regulation undress uniform of a Surgeon, but without the sword).

9. All candidates will be required while at Netley to conform to such rules of discipline as the Senate may from time to time enact.

10. After completing three years' full-pay service, Surgeons will be allowed to be examined for the rank of Staff Surgeon; but no Surgeon can be promoted to the rank of Staff Surgeon until he shall have served five years, two of which must have been in a ship actually employed at sea.

RANK, PAY, AND POSITION OF NAVAL MEDICAL OFFICERS.

1. Promotion to the rank of Fleet Surgeon is open to officers for distinguished or special service, although twenty years on full pay may not have been completed; such Fleet Surgeons will have 16s. a day half-pay.

2. Fleet Surgeons rank with Commanders, according to date of commission.

3. The whole time served on full pay as a Surgeon to be allowed to Staff Surgeons to qualify for the rank of Fleet Surgeon, provided the examination for Staff Surgeon is passed before the officer completes ten years' service, otherwise only ten years served as Surgeon will be allowed to count.

4. Fleet Surgeons are appointed to the flag-ships of commanders-in-chief on foreign stations, with an allowance of 5s. a day in addition to their established pay.

5. The hospital allowances for Naval Medical Officers at home and abroad, in lieu of provisions, for themselves and servants, and for fuel and light, are as follows:—Inspectors General of Hospitals, £85 at home, £130 abroad; Deputy Inspectors-General, £65 at home, £112 abroad; Fleet-Surgeons and Staff-Surgeons, £53 at home, £112 abroad; Surgeons, £39 at home, £108 abroad. In cases where Medical Officers draw provisions or fuel from public stores, they will be charged for the same at cost price.

6. The travelling allowances, extra pay, lodging money, and compensation for losses are fixed for Naval Medical Officers according to their relative rank in the service.

7. Medical Officers have cabins according to their relative rank in the service.

8. The full and half-pay of Naval Medical Officers is in accordance with the following scale:—

Full-pay: Surgeon—Under five years' service (except during the session at Netley) [see Regulations], 11s.; under eight years' service, 12s. 6d.; under eleven years' service, 14s.; under fourteen years' service, provided he passed his examination for Staff Surgeon while under ten years' service, 15s. 6d.; above fourteen years' service, ditto, 17s. Staff Surgeon—On promotion, or under fourteen years' service, 18s.; ditto, or under seventeen years' service, £1; and for each additional year of service 1s. a day more until the maximum is reached—namely, £1 2s. Fleet Surgeon—On promotion, or under twenty years' service, £1 3s.; ditto, or above twenty years' service, £1 4s.; and for each additional year of service 1s. a day more until the maximum is reached—namely, £1 10s. Deputy Inspector-General of Hospitals and Fleets—On promotion, or under twenty-two years' service, £1 11s.; ditto, or above twenty-two years' service, £1 12s.; and for each additional year of service 1s. a day more until the maximum is reached—namely, £1 18s. Inspector-General of Hospitals and Fleets—On promotion, or under twenty-five years' service, £2 5s.; ditto, or above twenty-five years' service, £2 6s.; and for each additional year of service 1s. a day more until the maximum is reached—namely, £2 10s. Half-pay: Surgeon—Under five years' service, 6s.; under eight years' service, 8s.; under eleven years' service, 10s.; above eleven years' service, provided he passed his examination for Staff Surgeon while under ten years' service, 17s. Staff Surgeon—On promotion, or under fourteen years' service, 11s.; ditto, or under seventeen years' service, 13s.; ditto, or above seventeen years' service, 14s. Fleet Surgeon—On promotion, or under twenty years' service, 16s.; ditto, or above twenty years' service, 16s. 6d.; and for each additional year of service 6d. a day more until the maximum is reached—namely, 18s. 6d. Deputy Inspector-General of Hospitals and Fleets—On promotion, or under twenty-two years' service, £1 1s.; ditto, or above twenty-two years' service, £1 2s.; and for each additional year of service 1s. a day more until the maximum is reached—namely £1 7s. Inspector-General of Hospitals and Fleets—On promotion, or under twenty-five years' service, £1 11s.; ditto, or above twenty-five years' service, £1 12s.; and for each additional year of service 1s. a day more until the maximum is reached—namely, £1 18s.

9. Retirement is provided for according to age and service, under special regulations.

DECLARATION.

Recommended by _____, I _____, _____ years of age in _____ last (*vide* accompanying Certificate), a candidate for appointment as a Medical Officer in the Royal Navy, do hereby engage for general service, and attest my readiness to proceed on duty abroad whenever required to do so.

I declare that I labour under no mental or constitutional disease or weakness, nor any other imperfection or disability which can interfere with the most efficient discharge of the duties of a Medical Officer in any climate.

Signature, _____

Date, _____

Place of residence, _____

SCHEDULE OF QUALIFICATIONS.

I have in my possession the following Degrees, Diplomas, and other Qualifications in Medicine, Surgery, and in Arts:—

_____

I wish to be examined in the following voluntary subjects, viz.:—

_____

Signature, _____

CIRCULAR No. 12, C.W.

Admiralty, March 6, 1875.

(*Medical Officers of the Navy.*)

My Lords Commissioners of the Admiralty having had under their consideration the position of the Medical Officers of the Navy, are pleased, under the authority of her Majesty's Order in Council of February 4, 1875, to establish the following regulations:—

1. Surgeons on entry to have the same relative rank as Paymasters, Chief Engineers, and Naval Instructors—namely, to rank with Lieutenants under eight years' seniority, and to wear uniform corresponding to such relative rank.

2. Staff Surgeons to be denominated "Fleet Surgeons," and Staff Surgeons second-class simply "Staff Surgeons"; the distinction in rank between these two grades to be denoted by a small difference in the uniform of the Staff Surgeon, who instead of three stripes of gold lace round the sleeve of the coat, which the Fleet Surgeon will wear, will wear two stripes of gold lace, with a stripe of narrow gold braid between them.

3. Inspectors-General to be compulsorily retired at the age of sixty; to be allowed £2 per day, provided they shall have completed the period of service now required to entitle them

to the maximum half-pay of their rank; should they not have completed such period of service, they will be retired at the rate of half, or retired pay, specified in the Order in Council of February 22, 1870.

4. Deputy Inspectors-General to be compulsorily retired at sixty; if in the first six of their rank, to be allowed 33s., others 30s. per diem, provided that they shall have completed the period of service now required to entitle them to the maximum half-pay of their rank; should they not have completed such period of service, they will be retired at the rate of half, or retired pay, specified in the Order of Council of February 22, 1870.

5. Fleet Surgeons and Staff Surgeons to be placed on the same scale of retirement as chaplains and naval instructors, secretaries and paymasters; that is, the maximum to be £450 per year instead of £400.

6. Fleet Surgeons to have the option of retiring after twenty years' full-pay service in all ranks at 15s. per day, and after twenty-five years' full-pay service 21s., subject in each case to their Lordships' approval; but of those now on the list, not more than ten to retire under this clause in each year (the Officers having the option according to seniority) unless their Lordships should approve (with the consent of the Treasury) of a larger number so retiring. Applications from Officers wishing to retire under this clause should be lodged at the Admiralty before November 30 in each year, in order that they may be dealt with, according to seniority, before the end of the year.

7. All Medical Officers hereafter entered to have the option of so retiring, subject to the approval of their Lordships in each case. By command of their Lordships,

ROBERT HALL.

To all Commanders-in-Chief, Captains, Commanders, and Commanding Officers of Her Majesty's Ships and Vessels.

THE INTRODUCTORIES.

THE following are the days and hours of the various Introductory Lectures, with the names of the respective lecturers:—

Hospital.	Date.	Lecturer.	Hour.
University College	Tues. Oct. 1	Prof. Lankester	8 p.m.
Charing-cross	„	Dr. J. P. Irvine	4 p.m.
Middlesex	„	Dr. A. W. Edis	3 p.m.
St. George's	„	Dr. Whipham	4 p.m.
King's College	„	Prof. Garrod	4 p.m.
St. Mary's	„	Dr. Farquharson	3 p.m.
St. Thomas's	„	Mr. Nettleship	4 p.m.
Westminster	„	Mr. Macnamara	3 p.m.

MEDICO-CHIRURGICAL SOCIETY OF GLASGOW.—The opening meeting of the Medico-Chirurgical Society of Glasgow for the session 1878-79 was held in the Faculty Hall, 242, St. Vincent-street, on the evening of Friday, September 6, when the following gentlemen were elected office-bearers for the present session:—*President*: Dr. Andrew Fergus. *Vice-Presidents*: Dr. A. Patterson and Dr. McCall Anderson. *Council*: Dr. Thomas Reid, Dr. T. Graham (Paisley), Dr. William Macgill, Dr. Hugh Miller, Dr. Alex. Robertson, Dr. A. L. Kelly, Dr. Bruce Goff (Bothwell), and Dr. J. B. Russell. *Secretaries*: Dr. Joseph Coats and Dr. W. L. Reid. *Treasurer*: Dr. Hugh Thomson.

THE IRISH GRADUATES' ASSOCIATION.—As formerly announced in our columns, the annual meeting of this Association was held at Bath on August 9, the retiring President, Dr. Balthazar Foster, of Birmingham, in the chair. After the adoption of the report in a somewhat amended form, and the transaction of other business matters, Mr. W. Mac Cormac, of St. Thomas's Hospital, London, was elected the President for the ensuing year. The financial statement showed a prosperous condition of the funds of the Association, and Dr. Foster was elected to the office of Treasurer. The members afterwards dined together, spending an enjoyable evening in true Irish fashion. The Association will meet next year at Cork, during the visit of the British Medical Association.

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TERMS FOR ADVERTISEMENTS.

Seven lines (60 words)	£0 4 6
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Half-column, or quarter page	1 5 0
Whole column, or half-page	2 10 0
Whole page	5 0 0

Births, Marriages, and Deaths are inserted Free of Charge.

THE MEDICAL TIMES AND GAZETTE *is published on Friday morning: Advertisments must therefore be sent to the Publishing Office not later than One o'clock on Thursday.*

Medical Times and Gazette.

SATURDAY, SEPTEMBER 14, 1878.

THE WEEK.

TOPICS OF THE DAY.

THE *Sanitary Record* publishes the following piece of information:—"We understand that the retirement of Major Graham, the Registrar-General, may be anticipated at an early date. The question is already under consideration of some modification in the arrangements of the General Register Office and its relations to other departments. It is at present a department of the Home Office, but it belongs naturally to the Department of Public Health. Public health is now very inefficiently cared for as a subordinate part of the Poor-law system, and the present condition of the public health arrangements is notoriously chaotic, the public health having practically broken down in the greater number of rural districts and small towns. It will probably be referred to a Royal Commission to consider whether the time has not arrived for consolidating the Public Health Departments of the Poor-law Board, Privy Council, Board of Trade, General Register Office, and Home Office, under the central administration, with the assistance of a Minister of Health. Some people think this should be a dual ministry of Health and Justice, but the union is unnecessary and unnatural. Some better organisation of the public health system is, however, urgently called for, and Major Graham's retirement is likely to be the signal for the beginning of a much-needed reform."

The appalling disaster on the Thames, to which we briefly alluded last week, has, as we feared would be the case, exceeded the ghastly expectations entertained as to its extent, and the bodies now recovered reach the terrible number of more than 600, though even yet the tale is not complete. Meantime it is satisfactory to be able to record that, on shore, everything that could be done has been done by the several authorities. The ambulance class of the Order of St. John at Woolwich have had ample opportunities of testing their

usefulness and capabilities, and the commandant of the garrison promptly placed the use of a number of ambulance waggons at the disposal of the authorities for the removal of the bodies. Mr. John Taylor, Chairman of the Board of Health, has also been active in taking measures to facilitate the interment of bodies in the Woolwich cemetery at Wickham, or their conveyance elsewhere.

At the post-office of Quarndon, near Derby, there has recently been an outbreak of scarlet fever, and it is positively stated that in the room in which the letters were sorted and stamps sold, two persons were lying ill of the disease. The imprudence of the person in charge of the post-office has been severely reprobated, and the matter has been taken up by the Belper sanitary authorities.

The Medical Officer of Health for the Bow and Bromley Division of the Poplar District, Dr. Talbot, points out in his annual report, just issued, that during the past year he has frequently been unable, through the want of accommodation at Highgate, to order the removal of private cases. He therefore contends that the action of the Poplar District Board of Works in proceeding to erect a non-pauper hospital for the district is only in accordance with what experience has proved to be necessary; and he expresses the conviction that the decision of the Board in this respect will do more to earn the thanks of the ratepayers than any local work hitherto attempted. He further urges that Section 37 of the Sanitary Act must be made compulsory, or the Poplar District will be supplied with cases from all parts of the metropolis, and adds that his experience justifies the belief that, when the requisite accommodation is provided, the public will become anxious to be removed to the hospitals.

The latest accounts of the virulent outbreak of yellow fever in the Southern States of America are, if anything, worse. On the 8th inst., at New Orleans alone, 223 new cases were reported, and on the same day eighty-one deaths. At Memphis there were 100 interments in one day, and the number of sick in that town is now estimated to amount to at least 3000. Four members of the Howard Association and eight physicians have already fallen victims to the epidemic, and the situation at Memphis is stated to be horrible beyond description. A committee of safety has been formed to send away those who have not yet been attacked by the epidemic. A slight abatement of the malady is noticeable at Hickman, but none elsewhere. Ninety thousand people are reported to be without employment and in a destitute condition.

A further telegram from Sir Anthony Home, K.C.B., V.C., reports another outbreak of fever in Cyprus. The 71st Regiment in Dali Valley has had a sudden increase of remittent fever, the number of admissions in two days being thirty-eight; there are eighty-seven cases now in hospital. Another death is recorded, making thirteen since landing. The 101st regiment at Larnaca has also a large increase of admissions to hospital; and the Royal Engineers are very sickly; the rate of mortality remains very low, however. Surgeon-General Home has been ill with fever, but reports himself as again well.

THE FISKE FUND.

At the annual meeting of the Rhode Island Medical Society, held on June 12, the following subjects for essays for the year 1879 were announced:—1. "Artificial Feeding of Infants." 2. "Cholera Infantum; its Causes, Nature, and Treatment." 3. "The True Value of Electricity in its Application to Surgery." For the best essay on either of these subjects, worthy of a premium, they offer the sum of $200. Essays must be forwarded, free of expense, to the Secretary of the Fiske Fund Trustees, Charles W. Parsons, M.D., Providence, Rhode Island, on or before May 1, 1879. Each essay should be marked with a motto, and accompanied by a sealed packet, bearing the same motto on the outside, and the author's name and residence within. The copyright of successful essays must be transferred to the trustees before receiving the premium. The competition is quite open.

A MODEL SOURCE.

When people go to the seaside it might be as well to imitate the gentleman herein alluded to—not after, but before the visit. The document is signed by a public analyst:—

"Dear Sir,—I herewith send you analysis of, and report on, sample of water from well in Redcar, at house where you were previously staying. Yours, &c., ———.

Analytical Report on Sample of Well-Water forwarded by yourself to my Laboratory on August 21, 1878:—

	Parts per million.		Grains per gallon.
Total solid matter . . .	1088·00	=	76·2
Chlorine	173·00	=	12·1
Organic matter, as—			
Free ammonia . . .	1·23		
Albuminoid ammonia . .	·68		

Example of Good Drinking-Water.

	Grains per gallon.
Total solids . . .	varies from 4·0 to 12·0
Chlorine	„ 0·3 to 0·8
Organic matter—	Parts per million.
Free ammonia . . .	„ ·00 to ·02
Albuminoid ammonia . .	„ ·05 to ·18

The well water is utterly unfit for human consumption, being highly charged with poisonous, decomposing sewage matter."

"SYPHILITIC PHTHISIS."

The various papers which during these last years have been published either in this country or abroad, and the discussion on visceral syphilis which towards the beginning of the year 1877 took place at the Pathological Society of London, have not yet settled the much debated question of syphilitic phthisis. With regard to white hepatisation of the lung occurring in infants affected with congenital syphilis, and as regards pulmonary gummata, everybody agrees. But the frequency, or even the reality, of the diffuse, infiltrated, or interstitial form of pulmonary syphilis is still doubted by many physicians and is absolutely denied by some. On the Continent, Dr. Fournier (Dr. Dobell's "Reports on Diseases of the Chest," vol. ii.), with most of the French authorities, and in this country some observers, amongst whom we find Dr. F. Robinson (*Lancet*, May 5, 1877) and Dr. Reginald Thompson (*Lancet*, September 15, 1877, and April 13, 1878), contend that syphilis produces in the lung a fibroid condition which differs, both clinically and pathologically, from other fibroid processes and from ordinary phthisis. In other terms, they hold that pulmonary syphilis is not a variety of ordinary phthisis which has been determined or has become modified by the syphilitic diathesis, but a pulmonary affection *sui generis*. On consulting Dr. Dobell's Reports, we find that, whilst histology, according to Dr. Green, affords diagnostic signs of pulmonary syphilis and of the other chest diseases, ordinary phthisis included, Dr. Pentimally in Italy, Dr. Tiffany in the United States of America, Dr. F. Robinson in England, Dr. MacSwiney in Ireland, and Dr. Frey in Germany, recognise pulmonary syphilis as being clinically distinct from ordinary phthisis, and state that in the former affection anti-syphilitic treatment produces rapid and excellent effects.

MEDICAL NEWS.

APOTHECARIES' HALL, LONDON.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, September 5 :—

Cuthbert, Charles Firmin, Mendlesham, Stowham, Suffolk.
Davies, James, Dee Bank, Chester.
Pollard, John Henry, Shair, near Oldham.
Woollett, Sidney Winslow, Chigwell, Essex.

The following gentlemen also on the same day passed their Primary Professional Examination : —

Beckett, Thomas George, Guy's Hospital,
Strover, Herbert Charles, Guy's Hospital.
Churchouse, William John Franklin, Charing-cross Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to all new Appointments that take place.

GRANT, T. DUNDAS, M.B. Edin.—Surgical Registrar and Pathologist to the Central London Throat and Ear Hospital.

HAMILTON, FRANCIS G., M.R.C.S., Extra Assistant-Surgeon to the Central London Throat and Ear Hospital.

JONES, SYDNEY, F.R.C.S.—Consulting Surgeon to the Central London Throat and Ear Hospital, *vice* T. Carr Jackson, F.R.C.S., deceased.

NAVAL, MILITARY, &c., APPOINTMENTS.

ADMIRALTY.—Staff-Surgeon Charles A. Lees, M.D., has been promoted to the rank of Fleet Surgeon in Her Majesty's Fleet, with seniority of September 1, 1878.

MARRIAGES.

BOULTON—LLOYD.—On September 5, at the Oratory, Brompton, Surgeon-Major Edward Joseph Boulton, L.K.Q.C.P.I., to Marianne Lloyd Lloyd, third daughter of the late Henry C. Lloyd, of the Middle Temple, barrister-at-law.

COLLINS—BRASHER.—On September 4, at Derby, Charles Edward Collins, M.R.C.S., L.R.C.P. Lond., of East Griustead, to Lucy Ellen, eldest daughter of the Rev. S. B. Brasher, M.A., vicar of St. Paul's, Derby.

FRANCIS—DAVIS.—On September 4, at Folkestone, George Bishop Francis, Esq., of 63, Boundary-road, St. John's-wood, to Marion Agnes, only child of J. Hall Davis, M.D., F.R.C.P., of 24, Harley-street, Cavendish-square.

GORDON—MILLER.—On September 5, at Chippenham, John Hart Gordon, Esq., of Spring-grove, Middlesex, to Alice Letitia, third daughter of George Miller, M.D., of Chippenham, Wilts.

HUTCHINGS—COLEBROOKE.—On September 5, at Southborough, Edward John Hutchings, M.R.C.S. Eng., of Southborough, to Catherine Lotherington, eldest daughter of Henry Colebrooke, M.D., of Brightlands, Southborough, Tunbridge Wells.

LAMB—SWINDELL.—On September 3, at Friern Barnet Church, Herbert Stewart, second son of the late J. Stewart Lamb, M.D., to Alice, youngest daughter of J. J. Swindell, M.R.C.S., North Finchley.

LEEDS—MAYNARD.—On September 4, at St. Andrew's Church, Paddock Wood, Edward Leeds, M.B., M.A. Oxon., of Castle-hill, Brenchley, Kent, to Sarah, third daughter of James Maynard, Esq., Swatlands House, Paddock Wood, Kent.

MASTER—COAKS.—On September 5, at Norwich, Henry Hugh Master, L.R.C.P., L.R.C.S. Edin., second surviving son of Alfred Master, Esq., of Norwich, to Alice Ella, eldest daughter of J. B. Coaks, Esq., of Fernhill, Thorpe Hamlet, Norwich.

SKIPWORTH—HADLEY.—On September 3, at Handsworth, Staffordshire, Herbert Skipworth, M.R.C.S., of Mount Sorrel, Leicester, to Florence Mary, youngest daughter of J. J. Hadley, M.R.C.S., of Handsworth.

WHARTON—CLEGG.—On September 4, at Holcombe, Joseph Wharton, L.K.Q.C.P.I., M.R.C.S., of Hopwood House, Oldham, to Alice, only daughter of the late John Clegg, of Bent Grange, Oldham.

DEATHS.

BRUNSKILL, MARGARET, eldest daughter of William Brunskill, L.S.A., at Staindrop, Darlington, on September 8.

HAWKINS, EMILY ISABELLA, wife of F. Bisset Hawkins, M.D., at Lewell Lodge, Dorchester, on September 5, aged 64.

HULL, GEORGE ASKEW. M.R.C.S. Eng., eldest son of George Hull, M.D., 89, Holland-road, Kensington, W., at Queenstown, South Africa, on August 12, aged 31.

OWENS, HENRY, M.D., at Brook Villa, Selhurst-road, South Norwood, on September 9, aged 40.

WOLLASTON, RICHARD GULSTON, M.R.C.P., L.S.A., L.R.C.P. Edin., at Lyme Regis, Dorset, on September 1, aged 64.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BRADFORD INFIRMARY AND DISPENSARY.—Dispensing Surgeon. Candidates must be registered as legally qualified medical and surgical practitioners. Applications, stating age, with recent testimonials as to moral character and professional ability, to the Secretary, on or before September 24.

BRISTOL MEDICAL SCHOOL.—Medical Tutor. For particulars apply to E. Markham Skerritt, M.D., Hon. Sec., Coburg Villa, Richmond Hill, Clifton.

LEICESTER INFIRMARY AND FEVER HOUSE.—House-Surgeon and Apothecary. Candidates must be Fellows or Members of the College of Surgeons of London, Edinburgh, or Dublin; also Licentiates of the Royal College of Physicians, London, or of the Apothecaries' Company of London, and duly registered. Origiual testimonials to the Secretary, 24, Friar-lane, Leicester, on or before September 28.

MANCHESTER ROYAL INFIRMARY, DISPENSARY, AND LUNATIC HOSPITAL.—Honorary Assistant-Physician. Candidates must be Fellows or Members of the Royal College of Physicians in London, and must have a diploma from some University requiring examination for its degrees. Applications, with diplomas, original testimonials, and a certificate of age, to the Chairman of the Board, on or before September 21.

WARE UNION.—Medical Officer and Public Vaccinator. Applications, with testimonials, to George Gisby, Clerk to the Guardians, on or before September 16.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population in computed according to the census of 1871.

RESIGNATIONS.

Cambridge Union.—Mr. James Theophilus Beck has resigned the Third District; salary £70 per annum.

Malling Union.—Mr. Furley has resigned the First District; area 10,685; population 6631; salary £100 per annum.

Stockport Union.—Mr. Peter Downs has resigned the Stockport District; area 1837; population 35,004; salary £80 per annum. Also the Workhouse; salary £80 per annum.

Witham Union.—Mr. A. G. Proctor has resigned the Witham District; area 17,251; population 6860; salary 5s. per case. Also the Workhouse; salary £45 per annum.

APPOINTMENTS.

Aysgarth Union.—Charles Henry Richardson, M.R.C.S. Edin., to the Hawes District

Carmarthen Union.—Valentine L. W. Jones, L.R.C.P., M.R.C.S., to the St. Clear's and Mydrim Districts.

Reeth Union.—Charles J. Connon, B.M. and M.C. Aber., to the Muker District.

TO CORRESPONDENTS.

WE beg to return our best thanks to the Registrars and Secretaries of the various Universities, Colleges, and Schools for their prompt replies to our Circular, and for the trouble they have taken in supplying the latest Regulations of the Institutions with which they are connected.

As this number is almost entirely devoted to matter mainly concerning Students, many most important communications and contributions unavoidably stand over.

We have here given everything of importance for the entering Student to know; for any further details he should apply for a prospectus to the authorities of the School he may select.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

A Very Old Member.—Yes; Mr. George Alfred Walker, M.R.C.S., happily still survives. He retired from the practice of the profession several years ago; and only a few days since the following lines came into our possession from a well-known writer :—

WALKER.

A Recognition owed to George Alfred ("Graveyard") Walker.

Who closed the intramural tombs?
Asks many a writer, many a talker,
"*I* shut them up!" Lord Shaftesbury fumes,
The very graves replying—WALKER!

Who gave pure air unto a host?
Who of plugged chinks was the uncaulker?
"Why *I*!" shrieks Southwood Smith's pale ghost,
The very air re-echoing—WALKER!

But when—"*Both* good deeds *I* did—there!"
Roars Chadwick(a) like some brazen hawker,
Then—like the graves and like the air—
The very London boys cry—WALKER! C. K.

(a) "His (Chadwick's) onslaught on intra-mural, and scheme of extra-mural interment, was borrowed—almost *verbatim*—from the works and labours of the gentleman so well known to the medical profession as Graveyard Walker. This was pretty well; but there are no bounds to the philanthropic despotism of such a radical reformer as Edwin Chadwick, and, in due course, he produced a report, stolen without acknowledgment as to its telling facts, from 'The Walker on Graveyards.'"—*Engineers and Officials.*

Compulsory Notice of Infectious Diseases.—A memorial has been adopted by the Stratford-on-Avon Rural Sanitary Authority to the Local Government Board, to the effect that it might be made compulsory on every medical practitioner who should be in attendance on any person suffering from a disease which he might consider dangerous to the public health, to give notice within twenty-four hours of his knowledge of the fact to the medical officer of health of the district, and in case of default to be subject to a penalty.

Sanitary Reports, India.—The expediency is suggested of omitting in future from the various yearly sanitary reports (except the Report of the Sanitary Commissioner with the Government of India) those sections which relate to "Meteorology," "European Army," "Native Army," and "Gaols." These subjects are at present specially reported on by officers immediately concerned with them, and it is thought desirable that the unnecessary multiplication of reports should, as far as possible, be avoided. At the same time, sanitary officers are not deprived of the opportunity of referring to these subjects under other heads of their reports, while the adoption of the suggestion made by the Secretary of State will enable them to direct their attention more exclusively to the work which specially belongs to them.

COMMUNICATIONS have been received from—

Dr. A. Davidson, Liverpool; Dr. O. Sturges, London; The Honorary Secretary of the Irish Graduates' Association; Mr. W. Spencer Watson, London; Dr. C. H. Leonard, Rhode Island; Mr. R. Lawson, Exeter; The Registrar of Apothecaries' Hall, London; Mr. J. T. W. Bacot, Seaton; The Secretary of the Medico-Chirurgical Society, Glasgow; Surgeon George Waters, Bombay; Surgeon-Major Raddock, Limasol; The Sanitary Commissioner, Punjaub; Mr. Henry Inchbold, Leeds; Mr. M. Becher, Ramsgate; Mr. Teevan, London; Dr. R. Caton, Liverpool; Dr. Alexander Davidson, Liverpool; Mr. T. M. Stone, London; Dr. W. Hutchison, Liverpool; Dr. Glynn Whittle, Liverpool; Mr. T. Cooke, London; Messrs. Tegg and Co., London; Mr. Edwin A. Nusum, London; Dr. J. W. Moore, Dublin; Mr. T. Griffiths, Liverpool; The Registrar-General, Edinburgh.

BOOKS AND PAMPHLETS RECEIVED—

George E. Waring, The Causation of Typhoid Fever—Surgeon George Waters, Three Years' Medical History of the Persian Gulf—Francis W. Moinet, M.D., F.R.C.P.E., Guide to Medical Examination for Life Insurance—Thomas Cooke, F.R.C.S., Tablets of Anatomy and Physiology—Dr. W. Kühne, On the Photochemistry of the Retina and on Visual Purple—Arthur Hensman, Anatomical Outlines, part ii.: The Lower Limb—St. Thomas's Hospital Reports, vol. viii.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médicale—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Nature—Centralblatt für die Medicinischen Wissenschaften—Cincinnati Lancet and Clinic—Indian Medical Gazette—Night and Day—Glasgow Medical Journal—Practitioner—Analyst—North Carolina Medical Journal—Dublin Journal of Medical Science—American Supplement to the Obstetrical Journal of Great Britain—Gazeta Medica da Bahia—Gazette Hebdomadaire.

APPOINTMENTS FOR THE WEEK.

September 14. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

16. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

17. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

18. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 1½ p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

19. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

20. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 7, 1878.

BIRTHS.

Births of Boys, 1233; Girls, 1183; Total, 2416.
Average of 10 corresponding years 1868-77, 2173·8.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	639	621	1260
Average of the ten years 1868-77	687·4	645·7	1333·1
Average corrected to increased population ...	...	...	1426
Deaths of people aged 80 and upwards ...	...	...	42

Note.—The births and deaths registered last week may be compared with the average numbers in the corresponding weeks of the ten years 1868-77 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	1	6	2	10	...	3	2	20
North ...	751729	...	1	7	...	7	...	4	1	27
Central ...	334369	...	3	1	3	3	...	3	1	8
East	639111	...	...	8	2	10	2	1	...	30
South	967692	3	5	8	3	24	...	7	1	35
Total	3254260	3	10	30	10	54	2	18	5	120

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·937 in.
Mean temperature	61·2°
Highest point of thermometer	76·4°
Lowest point of thermometer	49·7°
Mean dew-point temperature	55·5°
General direction of wind	Variable.
Whole amount of rain in the week	0·00 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, September 7, 1878, in the following large Towns :—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1878.*	Persons to an Acre. (1878.)	Births Registered during the week ending Sept. 7.	Deaths Registered during the week ending Sept. 7.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3577304	47·5	2416	1260	76·4	49·7	61·2	16·22	0·00	0·00
Brighton	103923	44·1	52	47	71·0	49·5	59·8	15·45	0·02	0·05
Portsmouth ...	129461	28·9	89	56	...	...	...	...	...	...
Norwich	84620	11·3	46	40	75·2	53·0	61·7	16·50	0·06	0·15
Plymouth	73599	52·8	43	22	72·0	50·5	60·4	15·78	0·07	0·18
Bristol	206419	46·4	142	61	75·0	47·2	60·1	15·62	0·02	0·05
Wolverhampton ...	74240	21·9	57	32	70·6	50·2	58·0	14·44	0·09	0·23
Birmingham ...	383117	45·6	291	193	...	...	...	...	...	...
Leicester	121473	38·0	91	56	...	...	...	...	...	...
Nottingham ...	165267	16·6	124	65	74·4	48·0	60·2	15·67	0·87	2·21
Liverpool	532681	102·2	399	289	69·9	53·8	62·0	16·67	0·00	0·00
Manchester ...	360514	84·0	257	169	...	...	...	...	...	...
Salford	170251	32·9	126	90	76·5	49·1	60·1	15·62	0·01	0·03
Oldham	107366	23·0	64	42	...	...	...	...	...	...
Bradford	185088	25·6	121	86	68·8	50·4	59·5	15·28	0·26	0·66
Leeds	304948	14·1	242	134	70·0	52·0	60·1	15·62	0·07	0·18
Sheffield	289537	14·7	199	107	75·5	50·0	61·6	16·45	0·01	0·03
Hull	143139	39·4	113	78	73·0	51·0	60·3	15·73	0·00	0·00
Sunderland ...	112459	40·6	93	49	77·0	55·0	63·1	17·28	0·08	0·20
Newcastle-on-Tyne	144570	26·9	95	61	...	...	...	...	...	...
Edinburgh	222371	53·1	160	72	...	...	...	...	...	...
Glasgow	566940	94·0	343	210	72·0	51·0	61·0	16·11	0·17	0·43
Dublin	314666	31·3	174	147	74·4	43·3	61·0	16·11	0·02	0·05
Total of 23 Towns in United Kingdom	8373953	38·0	5737	3366	77·0	43·3	60·6	15·90	0·11	0·28

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·97 in. The lowest reading was 29·65 in. at the beginning of the week, and the highest 30·13 in. at noon on Monday.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1878 by the addition of seven years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. Nottingham, Salford, and Oldham, however, form exceptions to this rule, as the estimates for these three towns have been revised with the aid of local information as to the rate of increase of inhabited houses. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

LECTURES ON SYPHILIS OF THE LARYNX.

DELIVERED AT THE HOSPITAL FOR DISEASES OF THE THROAT AND CHEST, LONDON.

By W. MACNEILL WHISTLER, M.D., M.R.C.P.,
Physician to the Hospital; Honorary Physician to the National Training School for Music, etc.

Lecture I.

THE EARLY MANIFESTATIONS OF SYPHILIS IN THE LARYNX.

Gentlemen,—As the study of laryngeal syphilis is recent when compared with the investigations that have been made into the manifestations of this disease in other organs, there has existed, naturally enough, until but a comparatively few years ago, a very uncertain opinion as to the lesions most commonly met with there. Especially was this the case in reference to those to which I would call your attention this evening—namely, such as are connected with the early periods of the disease. In the days before the laryngoscope was known, some of the appearances in the later stages of syphilis, as seen in post-mortem examinations, are described, including swellings, tumours, and deep ulcers. Most of the phenomena, however, could be but a matter of surmise, and so we find, for instance, such statements as the following:—"It is very plain that when the syphilitic ulceration is confined to the larynx, and notably to the ventricles, it cannot be distinguished by any special sign, and one can only recognise it to be syphilitic by means of the antecedents of the patient, and by the symptoms which may at the same time exist upon the skin, in the bones, etc." And, again, "Syphilitic laryngitis in the great majority of cases is the extension of the lesions of the pharynx and nasal fossæ which are so common in syphilis. It is important, therefore, to take into consideration this special march of syphilitic laryngitis, for experience shows that ordinarily the larynx is the seat of lesions which are analogous to those that one had previously noted in the throat. For instance, a non-ulcerating laryngitis follows upon an erythematous syphilide of the nasal fossæ and of the pharynx; while, on the other hand, one has reason to presume that there exists in the larynx syphilitic ulceration and necrosis when one sees an analogous lesion in the nasal fossæ, and that the tonsils and velum palati have been deeply ulcerated."

These were the views published by Trousseau and Belloc in 1837, in their description of what they call "syphilitic laryngeal phthisis." It is only since the introduction of the laryngoscope that any accurate or reliable information has been gained on this subject. Even since that date opinions have differed a good deal, certainly as to the frequency of laryngeal complications in syphilis, if not as to the actual phenomena, though in regard to these also there has not been complete accord. To some of these observations I will now allude very briefly; for, to go at all deeply into the literature of the subject would be foreign to the purpose of my lectures, in which I intend to bring before you the result of my own observations here rather than those of others, and during which I propose to show you cases, instead of overburdening you with views which you may read elsewhere for yourselves.

In 1858, Czermak describes the appearances in two cases. In one of them he mentions deep redness of the mucous membrane with a small ulcer on the ventricular band, or false cord, in front of one of the arytænoid cartilages. This was in the case of a young man who contracted a labial chancre through kissing a syphilitic girl. He suffered some time afterwards with pain in the larynx and hoarseness, and this brought him under Czermak's care. This author does not speak of the other constitutional symptoms in this case, nor of the lapse of time between the primary sore and the invasion of the larynx—which is an unfortunate omission when one is describing the lesions of a certain period. He proves its specific nature by its quickly yielding to constitutional treatment, although the local applications were very imperfectly made. In the next case he is more explicit. Infection took place in June; hoarseness came on in the following November; and in January, six months after infection, the following lesions of the larynx were seen:—Great swelling of the right side of the epiglottis, with loss of substance of the free edge from ulceration, together with swelling of the ventricular bands, which met in the median line, hiding in this way the anterior part of the cords.

In 1862, Türck, in his investigations, notices catarrhs of the larynx. He says that they very often do not differ in their appearance from other catarrhs, but that their specific nature may be suspected when they are very persistent, especially if there be no other cause shown for this chronicity—as, for instance, phthisis. He adds that they may be known to be syphilitic when they are associated with papules. The following cases give his description of the appearances at this period:—A seamstress, with secondary syphilis, had ulcers on the tonsils; she had also a vaginal discharge, and enlargement of the glands. For three months she had been suffering with burning pain in the larynx, and had also lost her voice. Both vocal cords had a wrinkled look, especially at their anterior part, on the upper surface and free edge; they were without lustre, and resembled very much a mucous membrane which had been scalded or superficially cauterised. The other case is that of a servant girl who had been hoarse for two months, and had completely lost her voice for six weeks. She had an ulcer between the pillars of the fauces, and a roseola on the trunk, as well as papules on the vulva, and leucorrhœa. The vocal cords were uneven, thrown into ridges, and looked as though their surfaces had been cauterised. There were several prominences on the posterior wall of the larynx. The epiglottis was moderately reddened.

Gerhardt and Roth, whose examinations are among the most important, and whose researches are reported in Virchow's *Archiv*, speak of acute catarrhs, of slight or partial œdemas, and of condylomata as the first laryngeal manifestations of constitutional disease. They found these latter lesions eight times in fifty-four cases of syphilis, forty-three of which were suffering with the early signs of the disease, and they are of the opinion that in the earlier period of syphilis condylomata are the most frequent lesions in the larynx. They describe these as dull white, or reddish-white elevations, which are generally flat, occurring on the cords and posterior wall of the larynx. Their reasons for considering these papules to be true condylomata are their remarkable resemblance to those of the mouth, pharynx, and portio vaginalis, and also that in all the cases in which they met with them they were associated with others in other parts of the body.

After this, M. Dance published a thesis in Paris in 1868, entitled "Eruptions of the Larynx in Syphilis." He is more minute in his divisions. He speaks of a laryngeal roseola occurring *always* at the period of a general roseola. In this there is increased redness of the mucous membrane, arranged in very distinct patches, calling to mind the mottled appearance of the skin. He also describes papular and tubercular eruptions occurring in the same rotation as they do on the cutaneous surface.

Thus Czermak, Türck, Gerhardt, and Roth recognise as early manifestations of syphilis in the larynx, catarrhs with no very distinctive appearances, mucous papules or condylomata, and superficial ulcers; while M. Dance considers the eruptions which he describes—roseolar, papular, and tubercular lesions—to be quite as marked here as on the surface of the body. These are the main features of every description you will find of these early lesions in all subsequent treatises, and so quotations from them would be but repetitions. There is one other, however, to which I will refer. That is a thesis published in Paris in 1872 by M. Paul Ferras, on Syphilitic Laryngitis. This gentleman's observations led him to oppose the view that definite lesions are found in the larynx corresponding to the chief divisions of the stages of syphilis into primary, secondary, and tertiary. He says that since the laryngeal affection does not correspond to that of the skin in the majority of cases, one is not justified in describing a roseola, mucous patches, or laryngeal papules, implying thereby a direct relation in the order of their appearance in the larynx and on the skin, for no lesion of the larynx, he says, could be foretold by knowing the co-existent one of the skin. He cites, in support of this, the fact that patients with advanced tertiary lesions present on laryngoscopic examination nothing but redness of the vocal cords to account for the trouble of voice from which they are suffering at the

same time. He divides syphilitic laryngitis, therefore, into two forms, either of which may occur at any period of the disease. These are the non-ulcerated and the ulcerated: the former including hyperæmia, œdema, and hypertrophy; the latter comprising the various forms of ulcers, together with their complications—perichondritis, caries, and necrosis. As regards mucous patches, a most typical lesion of secondary syphilis, he considers them quite exceptional, if they occur at all. He does not quite like to deny their existence in the larynx, but he only found one out of all the cases examined by him, amounting to nearly one hundred, taken at various stages of the disease. M. Ferras, in endeavouring to controvert the errors of what he considers a too arbitrary law of evolution of this disease in the larynx, has, in my opinion, gone too far in the other direction; and incurs the risk of being considered as arbitrary and too exclusive. There appears to be no more real reason for subdividing the lesions of the larynx into non-ulcerating and ulcerating than there would be for the same classification as regards the more general lesions.

There can be no doubt that certain phenomena of a more superficial nature do occur in the earlier periods of the disease, while deeper and more destructive ones mark a more advanced stage, and this with sufficient constancy to justify certain types being grouped together to represent certain periods. Nor can this be overthrown by the negative evidence of the presence in individual cases of comparatively trivial congestions of the larynx, associated with advanced tertiary manifestations in other parts of the body.

Congestions of the larynx may and do occur from accidental causes at any period, but when they do attack the larynx in an advanced stage of the disease, *and especially if they be neglected*, they sooner or later assume the characteristic type of that period. When I come to speak of the later stages of laryngeal syphilis I shall be able to show you cases in illustration of this. In most of them the exciting cause had been exposure of some kind. In one of them the irritant was a specific poison—diphtheria. On the other hand, the destructive ulcers of the larynx do not occur in the first months after infection, which period has also its constant lesions. These I will now describe to you, as I have found them in observations which were made upon eighty-eight cases which were treated at my clinique here for secondary syphilis. With one or two exceptions these patients were all under observation for several months, and some at intervals for two years. This gave me a better opportunity for watching the course of the disease in each patient, and made it less likely that any lesion would escape my notice. All cases in which there was any doubt of the existence of syphilis were excluded. The lesions that I found in these cases I have grouped together as follows:—

1. Catarrhal congestions simulating those arising from ordinary causes.
2. Congestions accompanied by *diffuse redness* and *swelling*.
3. Mucous patches of various types.
4. More chronic inflammations, occupying as it were the period of transition, the signs of which are—*diffuse redness, thickening*, and *ragged ulceration*, especially of the vocal cords.

Now, as regards congestions of the larynx in early syphilis simulating ordinary catarrhs, I need not say much to you. They are for the most part superficial in character. Increased redness is their chief feature. This colour varies in intensity and in tone. It is bright red when acute, more dusky when chronic, but it certainly has not a coppery hue. From being unequally distributed it gives to the membrane a mottled appearance. The epiglottis is redder than usual. The mucous membrane is no longer so transparent, and the yellowish hue of the normal epiglottis is lost, while tortuous vessels are seen running over its surface. In some cases the vocal cords are chiefly affected. Sometimes they are pinkish and dingy-looking, at others deeper red and dry. They may be merely streaked with a few red lines, or the mucous membrane is occasionally eroded. With this there is a want of proper tension, with defective approximation, and this leads to alteration of voice. All that these patients suffer from, as a rule, is hoarseness. Occasionally one meets with intense redness of the interior of the larynx, with swelling of the ventricular bands and arytænoids, accompanied by pain and cough. When such complications arise they are generally due to some cause other than the syphilitic poison, such as, for instance, either cold, or excesses in drinking or smoking, or constant use of the voice. I have seen a good many such cases; they resembled the acute catarrhs, and were relieved by somewhat the same measures. Confinement to a warm room, the inhalation of vapour medicated with benzoin and tincture of tolu, at intervals of two or three hours, will reduce any urgent symptoms more quickly than mercury would do without these aids. They should, therefore, be always added to the constitutional treatment in all such cases, for it is more than ever important that a laryngeal inflammation be reduced as quickly as possible when it occurs in a syphilitic person. This type of laryngeal catarrh occurs at any time during the period of general eruption—that is, during the first two years, as a rule. In the later months of this period it is apt to be associated with thickening and other structural lesions, which then give to it a more characteristic appearance. Naturally, those who have had syphilis, like others who have not, may have catarrhs of the larynx from other causes years after their specific eruptions have been cured. I would not refer to a fact which appears so self-evident if I had not seen patients with acute and subacute congestions of the larynx put upon mercury and iodide of potassium over and over again, merely because they had a history of syphilis. Frequently it dated back many years. They have kept this treatment up for months, all to no purpose. Then these remedies have been stopped, and under non-specific treatment they have been relieved of their trouble. Now, however, I am referring to those which occur while the poison is active, and which accompany syphilitic manifestations on the body elsewhere. Without these associated phenomena the diagnosis could not be established. Even their course does not differ, in many cases, from catarrhs due to other causes. Greater chronicity is said to be a distinguishing feature, and certainly they often last a long while, but you will see many non-syphilitic catarrhs of the larynx fully as persistent, and sometimes more so than these. They are frequently cured in a month, and almost invariably subside in three or four months at most in the more intractable cases, but, like all other specific lesions, they are liable to recur, and when left to themselves they have a tendency to increase in gravity, and to become the seat of mucous patches and ulcers. The following case taken from the list of out-patients will give you a very fair example of a mild type of this affection:—

A. G., aged twenty-five, a traveller, applied April 17, 1875. He had contracted a chancre two months previously. For three weeks prior to his coming to this hospital he had had a sore throat and eruptions. When he presented himself at my clinique he had a roseola on the trunk and arms, mucous patches of the lips and palate, also on the glans penis, on the scrotum, and about the anus. The posterior cervical and inguinal glands were enlarged. He had headache, and he was losing his hair. The only laryngoscopic appearance was increased redness of the whole mucous membrane. This was most especially marked on the ventricular bands and vocal cords. Under the administration of mercury, blue pill in one-grain-and-a-half doses three times daily, he was very much relieved in three weeks, at which time he was obliged to leave England. The eruption on the body had disappeared, and that of the pharynx was nearly all gone. No mucous patches appeared in the larynx while he remained under observation, and the congestion was entirely gone at the end of three weeks' treatment.

In another case—that of a stoker—the laryngeal symptoms were much more marked and persistent. He had a chancre six months before applying here, followed by eruptions. For several months he had had a sore throat, and his voice was very husky. On examining his throat I found his tonsils deeply congested, a good deal enlarged, and covered with mucous patches. The mucous membrane of his larynx was deep red, more intensely so on the vocal cords, which were dry and rough. He was put upon a mercurial treatment similar to the preceding case. During the course of this he had several eruptions of mucous patches in the throat, extending over the palate and fauces. These did not disappear until after three months' treatment. All this time the congestion of the larynx persisted, and his vocal cords were still very red; nor did they assume their normal appearance until after another month's treatment. The delay in his improvement was probably due to the irritation his air-passages were exposed to in the pursuit of his business, which he insisted upon attending to all the time.

(*To be continued.*)

THE CAUSES AND COURSE OF DISEASES OF THE HEART,(a)

WITH SPECIAL REFERENCE TO PREVENTION AND TREATMENT.

By J. MILNER FOTHERGILL, M.D., M.R.C.P.,
Assistant-Physician to the City of London Hospital for Diseases of the Chest, Victoria-park, and to the West London Hospital.

Lecture I.—Valvulitis.

(*Concluded from page* 267.)

Not only is absolute rest essential; but the lowering of vascular activity by therapeutic agents is very desirable. To attain this end, chloral is the drug which first suggests itself. It lowers cardiac activity, it lessens the blood-pressure in the arteries, and consequently it lessens the strain upon the cardiac valves. Not only this, but as a general sedative it would act beneficially upon the nervous system; keeping the patient quiet, controlling the inclination to get up, and relieving the restlessness engendered by constrained confinement to bed. Also bland food, chiefly of a non-nitrogenised character, should be prescribed. Parkes, of Netley, has shown us how the blood-pressure in the arteries falls on a non-nitrogenised dietary; and such a dietary will aid our other efforts to lessen the strain on the inflamed valves. By such a line of treatment we can control a process by limiting its spread; when we are powerless to oppose its later actions. But at present we seem rather to stand with folded hands, and, like an Oriental, to utter Kismet while the time is rapidly passing by when we can be of avail to our patients; and then, when the mischief is done, becoming acutely conscious of the evil wrought, and busying ourselves to provide palliative measures to aid the natural efforts towards muscular compensatory growth to supplement crippled valves. Would it not reflect more credit on our reasoning powers if we tried to utilise our information; and take the only effective measures at our disposal to limit the mischief going on in the valves in the first place?

Once the mutilation of the mitral valve is accomplished, then the prognosis of each case rests upon the resisting powers of the organism, and upon the nutritive powers especially in the muscular walls of the right ventricle. Again, the question of the rapidity with which the valve lesion is developed comes in as the leading factor in prognosis. Where great damage has been done to the mitral valve a sufficient compensatory growth is attained with great difficulty, and usually only in a partial manner; and the case goes rapidly down-hill. But where the lesion is less, a fairly efficient muscular compensatory growth is established and the new equilibrium may last for years. In the more slowly progressing sclerotic or contracting endocarditis, otherwise chronic valvulitis, the morbid changes in the mitral valve are met by a conservative thickening of the walls of the right ventricle; which in favourable cases enables the circulation to be maintained in fair activity for a considerable number of years. There exists as yet no evidence as to the effect of a second attack of endocarditis upon an already injured mitral valve. From my own experience I can say nothing more than that so far I have not seen any ill effects from a second, or even more attacks of acute rheumatism upon mitral valves once inflamed.

The consequences of a mitral lesion upon the right heart tell us in distinct language the effect of sustained strain upon the cardiac apparatus. Primary right-side disease is rare, and is usually the result of an obstructed pulmonic circulation: but when left-side disease involving the mitral valve is once established, then right-side disease is quite common. As the right side is the one liable to disease in intra-uterine life when it has to sustain the stress of the systemic circulation; so, again, it becomes liable to disease whence once more subjected to the strain of the general circulation from a lesion in the mitral valve. The right ventricle becomes enlarged, while its walls thicken; for hypertrophy of the walls without increase in the size of the ventricle probably never occurs in the right side of the heart. The new strain is felt in the tricuspid valve, which commonly becomes the seat of valvulitis secondary to mitral deformity. Then the crippled valves, with probably a dilated ostium, permit the blood to flow backwards into the great veins on each contraction of the right ventricle. Tricuspid regurgitation causes widespread mischief. The jugular veins throb, the blood coming from the brain meets with obstruction to its onward flow; the valveless portal circulation is specially engorged, the liver is enlarged, and pulsates with the impact of the regurgitant wave. The circulation in the kidneys is obstructed, and albumen appears in the urine. The congestion of the intestinal vessels leads to serous diarrhœa or peritoneal dropsy. The gastric vessels are disturbed, and from the venous congestion comes the catarrhal condition which creates the sensation of fulness so much complained of. There is increased secretion from the bronchial veins, constituting a bronchial catarrh; effusions take place from the pleural and pericardial surfaces; the thoracic space is thus impaired; and, not rarely, effusions of blood take place into the tissues of the lungs, the infarcti Laennecii; less commonly there is pulmonary hæmorrhage. Gradually the respiration is enfeebled, and finally ceases; the diseased heart often still pulsating—the cause of death, and yet not itself the first to die. The dropsy of the lower extremities, usually the most conspicuous objective sign, exercises but little real influence over the fatal result; though it has its value, as by its temporary disappearance, and by its fluctuations when re-established, we are furnished with the readiest information as to the progress of the case. The venous congestion of the various viscera leads to a growth of connective tissue in them: the liver is enlarged, and of abnormally firm consistence; the spleen cuts almost like a beef-steak; the kidneys are swollen, and harder than natural; the lungs are indurated; and the brain contains a larger amount of connective-tissue than is its wont. The morbid changes wrought by the "back working" from the mutilated mitral valve vary in different cases. From my experience of the Pathological Institute of Vienna, I should say hæmorrhage into the lung is more common in the rapidly fatal cases seen in the young; whilst slow growth of interstitial tissue belongs rather to the more chronic cases and to more advanced life.

The preventive treatment of mitral valvulitis has been already spoken of; it is now time to say something of the palliative treatment, for by this the progress of the case as to time may often be greatly modified. In the first place, here, as in every other form of cardiac disease, rest, as far as is attainable, is essential. No arduous occupation is compatible with life. Light work only, where better conditions are not attainable, may be unavoidable where the patient must toil for a livelihood; and it is less injurious where prolonged but involving little exertion, than where shorter but more arduous. At intervals, a few weeks in bed often are of the greatest value; and set the patient up, as it is termed, for a long time subsequently. Sooner or later the patient is too ill for any labour, and is compelled to desist and take to bed.

The prognosis of mitral disease varies very much with the condition of life of the patient. The affluent have much better chances of a prolonged existence than have the toilers; though sometimes these latter wear on in a very surprising manner. I know a Westmoreland peasant who had his mitral valve severely injured by an attack of rheumatic fever, for which my late father attended him twenty-five years ago. I attended him with severe hæmoptysis thirteen years ago. With occasional troubles at intervals, he nevertheless maintains a very fair general condition. He works steadily at light agricultural work yet, though over sixty-six years of age. He writes me as follows, his letter being received March 27:—"I am thankful to inform you that my general health is better these last two years than for some years previous. It is over two years since I have discharged blood from the lungs. I have frequent attacks of palpitation, followed by a feeling of suffocation, continuing from ten minutes to half an hour, passing off and leaving nothing disagreeable. I shall be sixty-six years of age on May 22, and if I had steam to propel the old machinery, I feel able to hold my own against all comers."

Treatment, too, exercises no slight influence over the progress of mitral mischief. The nutritive powers must be maintained; light, easily assimilable food, not much alcohol, little tea and coffee, and a good deal of milk, should form the dietary. Late suppers are bad, and especially when heavy, often causing nocturnal dyspnœa. The clothing should be warm but not too heavy; stout undershirts are the best things, better than heavy overcoats. As to medicines, iron steadily persisted in is indispensable, except when the

(a) A course of Clinical Lectures delivered at the West London Hospital.

condition of the *primæ viæ* prescribes its use, and indicates vegetable bitters with acids or with bismuth. Cod-liver oil is perhaps less useful in heart cases than in chronic affections of the lungs. Opiates and sedatives are fraught with risks; and are worthless, indeed harmful, in the cough of pulmonary congestion from heart-failure. Tonics are useful, and strychnia, from its effects upon the cardiac ganglia, and still more upon the respiratory centre, is often most useful; and I have seen œdema of the lower extremities fall steadily under its exhibition alone. But of all agents we know, digitalis is the most potent and effective. Its administration may be continued for years without fear of its cumulative action, if my personal experience may be trusted. It is well to give it persistently, in doses of from half a grain to a grain of the powdered leaves; or of the infusion, from half a drachm to a drachm; or of the tincture, from five to twenty drops three times daily. Where there is fair hypertrophy, the dose may be small; where dilatation is marked, larger doses must be exhibited. In all stages of mitral disease it is useful by common consent. As the tricuspid leaks, so its effects become less pronounced. When there is much venous engorgement it is well to relieve the portal circulation by brisk purgation; and this does not lead to collapse if the patient be put on digitalis beforehand for a few days. The use of the steam-bath to promote diaphoresis will aid the good effects of the purgation. A patient was in this hospital a year ago with extensive dropsy of the legs and arms, and in a few weeks was discharged, and has since attended as an out-patient. Belladonna is also useful, especially in those very rare cases where digitalis disagrees. As to tapping the legs, it seems to do most good where the dropsy is partly renal as well as cardiac. In pure cardiac dropsy, in my experience, it does much harm, and little, if any, good; rendering the bed a soppy mass unless Dr. Southey's drainage-tubes be used. The management of the downward course of mitral disease will demonstrate the practitioner's acumen and his acquaintance with professional resorts very distinctly. To meet each new difficulty as it arises, to husband the patient's powers—indeed, to fight the case all along the line assiduously and persistingly,—will bring out all our best therapeutic efforts, and test our knowledge. And often a wonderful fight can be maintained, and a sturdy resistance offered to a downward career, the end of which is certain.

While such is the usual end of mitral disease, occasionally a more fortunate issue is attained. One case, a youth, tells of a practical cure being achieved. He had mitral regurgitation, with an enlarged left ventricle. After the persistent use of iron and digitalis, the murmur has disappeared for a long time; and there are no subjective evidences of a lesion. He is an active fellow and a good swimmer. Here one is led to suppose that the damage done to the mitral flaps was just so much and no more than that, when the ventricle and its ostium were enlarged, they were insufficient to close the orifice, and so permitted of regurgitation. Now that the ventricle and its ostium are presumably restored to their normal dimensions, the mitral vela become once more competent.

The next lecture will comprise the subjects of Hypertrophy and Dilatation.

Sad Death of Dr. Deleau.—Dr. Léon Deleau, son of the celebrated aurist of that name, whose practice he continued, Chevalier de la Légion d'Honneur, has just died under very sad circumstances. One of his daughters, being in the act of dying from a prolonged and painful disease, he was leaning over to take the last farewell, when he fell instantly dead, as if struck by lightning. He was only forty-four years of age, and has left a widow.—*Gaz. Hebd.*, September 6.

Injection of Morphia in Sea-Sickness.—Dr. Velasco, in a note addressed to Prof. Gubler (*Jour. de Thérapeutique*, September 10) states that in two cases of this malady—one occurring in his own person, and the other in that of his wife, the latter presenting almost an alarming aspect—he found that hypodermic injections of very minute doses (five to seven milligrammes) of chlorhydrate of morphia gave almost instant relief which continued for many hours. On any recurrence of the symptoms the injection was repeated.

ORIGINAL COMMUNICATIONS.

THE STRUCTURE AND FUNCTIONS OF THE NERVOUS SYSTEM.

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THE ENCEPHALON.

(*Continued from page* 99.)

Each cerebral hemisphere forms a sort of hollow shell, which encloses and overlays the basal ganglia. The hemispheres are composed of both grey and white substance, the former being disposed on the surface, and consequently called the cortical layer. In the lower vertebrata the cortical layer is smooth on its external surface, but in the higher vertebrata it is thrown into folds, forming what are called convolutions, and these convolutions increase both in number and in the complexity of their arrangement according as we ascend the vertebrate scale, the greatest number and the highest degree of complexity being found in the brain of civilised man.

The convolutions of the human brain are divided into *primary or fundamental* and *secondary or accessory*. The disposition of the fundamental convolutions is fixed, and corresponds closely with the arrangement of the convolutions in the brain of the monkey; but the disposition of the accessory convolutions is variable, and they must be regarded as being superadded to the former in the course of the development of the human race. It is also interesting to notice that the arrangement of the convolutions of a human embyro at the sixth month corresponds closely to that of the brain of the adult monkey.

Fig. 5.

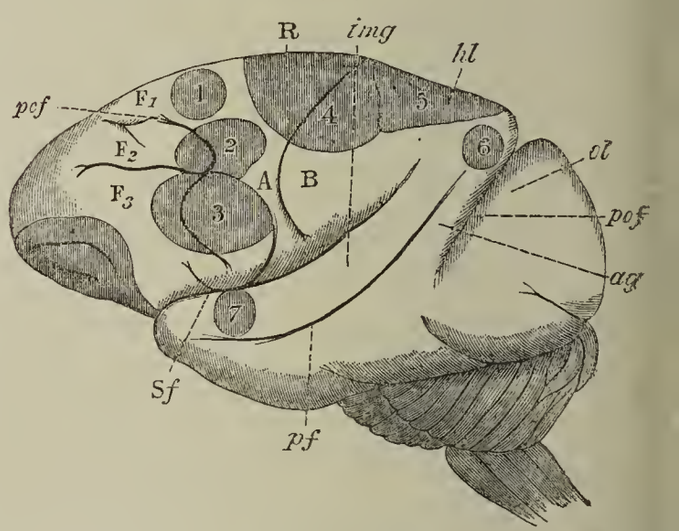

Fig. 5.—External Convex Surface of the Brain of the Adult Monkey. *Fissures:* R, fissure of Rolando; S*f*, fissure of Sylvius; *pf*, parallel fissure; *pof*, external perpendicular or parieto-occipital fissure; *pcf*, precentral fissure. *Convolutions:* A, ascending frontal convolution; B, ascending parietal convolution; F_1, F_2, F_3, first, second, and third frontal convolutions; *ag*, angular gyrus; *img*, infra-marginal gyrus; *hl*, horizontal lobule; *ol*, occipital lobe. *Motor Centres:* 1, movements for rotation of head and neck; 2, movements of muscles of the face; 3, movements of the tongue and jaws; 4, movements of anterior extremity; 5, movements of posterior extremity; 6, movements of the ocular muscles; 7, movements in relation with sense of hearing.

The fissure of Sylvius (Figs. 5 and 6, S*f*) begins at the base of the brain, and divides into two branches—a short ascending, and a long horizontal branch, which proceeds backwards. Commencing at the upper margin of the hemisphere, the central fissure, or fissure of Rolando (Figs. 5 and 6, R), runs downwards and forwards to meet the anterior portion of the horizontal ramus of the fissure of Sylvius. These fissures separate the frontal lobe from the rest of the brain. Behind the fissure of Rolando is another constant fissure—the external perpendicular or parieto-occipital fissure (Figs. 5 and 6, *pof*)—which distinctly separates the parietal from the occipital lobe in the monkey; but the separation is less distinctly marked in man, in consequence of the accessory convolutions called the connectant gyri. The

parietal and temporo-sphenoidal lobes are separated from one another by the horizontal ramus of the Sylvian fissure. The external surface of the hemisphere, therefore, is divided into four lobes—the frontal, parietal, occipital, and temporo-sphenoidal—and each of these is sub-divided by secondary fissures into convolutions.

In the frontal lobe the precentral fissure (Fig. 5, *pcf*), which runs downwards and forwards, and consequently more or less parallel to the fissure of Rolando, limits in front a very constant convolution, the ascending frontal or anterior central convolution (Figs. 5 and 6, A). Two fissures which run horizontally forwards, and consequently more or less at right angles to the direction of the precentral fissure, subdivide the remainder of the frontal lobe into three convolutions, called respectively the superior, middle, and inferior, or the first, second, and third frontal convolutions (Figs. 5 and 6, F_1, F_2, F_3). According to the investigations of Ferrier, the posterior extremity of the first convolution (Figs. 5 and 6, 1) constitutes a centre for the movements of the head and neck; the posterior extremity of the second (Figs. 5 and 6, 2) a centre for the movements of the face; and of the third (Figs. 5 and 6, 3) a centre for the movements of the lips and tongue on the opposite side of the body. The latter is also called Broca's convolution; because Broca had already localised the faculty of articulate language in this convolution.

The parietal lobe is subdivided into several convolutions. The first of these forms the posterior boundary of the fissure of Rolando, and is termed the ascending parietal or posterior central convolution (Figs. 5 and 6, B.) It is bounded posteriorly by the anterior curved extremity of the interparietal sulcus. The ascending frontal and parietal convolutions appear to be associated with one another in this function, since the centre for the movements of the arm and hand (Figs. 5 and 6, 4) of the opposite side is situated in the upper portion of these convolutions, and on the internal surface of the hemisphere their superior extremities form a small lobule called the *paracentral lobule*. The part above the posterior extremity of the interparietal sulcus, and between it and the longitudinal fissure, is termed the superior parietal lobule (Fig. 6, P_1); the anterior portion of which (Fig. 6, 5) constitutes, according to Ferrier, a centre for the movements of the inferior extremity of the opposite side. The inferior parietal lobule lies immediately below the interparietal fissure, and consists of an anterior division which arches over the posterior extremity of the Sylvian fissure, termed the *supramarginal lobule* (Fig. 6, P_2); and a posterior division which arches over the upper end of the superior temporo-sphenoidal fissure called the *angular gyrus* (Fig. 6, P_3, and Fig. 5, *ag*). Ferrier places in this lobule the centre for the movements of the eyes (Fig. 6, 6), and he regards it as the centre of vision. Destruction of this convolution is said to produce temporary blindness of the eye of the opposite side. The temporo-sphenoidal lobe is subdivided by two sulci into three convolutions (Fig. 6, T_1, T_2, T_3). The superior temporo-sphenoidal fissure runs parallel with the horizontal ramus of the Sylvian fissure; hence it is also called the parallel fissure (Figs. 5 and 6, *pf*). And the angular gyrus curves round the posterior extremity of this fissure. The convolution situated between the Sylvian and parallel fissures is termed the superior temporo-sphenoidal convolution or inframarginal gyrus (Fig. 5, *img*, Fig. 6, T_1). Excitation of the middle portion of this convolution causes movements of the opposite ear, and rotation of head and eyes to the opposite side, and Ferrier regards it as the centre of hearing (Fig. 6, 7). The occipital lobe is divided into three convolutions (Fig. 6, O_1, O_2, O_3) by two sulci, and faradic irritation of them is not followed by any secretion.

The region bounded by the dotted line in Fig. 7 represents the territory which is irrigated by the branches of the middle cerebral or Sylvian artery; and it is interesting to notice that this region corresponds to the motor area of the cortex. The region anterior to the dotted line is supplied by the anterior; while the posterior region is supplied by the posterior cerebral artery. As a rude classification of the functions of the cortex, it may be said that the region supplied by the middle is the motor zone, that by the posterior the sensory, and that by the anterior cerebral artery the psychical area. This classification is adapted merely for practical purposes, and only possesses slight theoretical significance. Under a particular aspect every portion of the cortex may be regarded as sensory, every portion as motor; and, most assuredly, every portion as being engaged in psychical action. But in disease of the cortex the most prominent symptoms in affections of the middle area are motor disturbances, as unilateral convulsions and localised paralyses of the

Fig. 6.

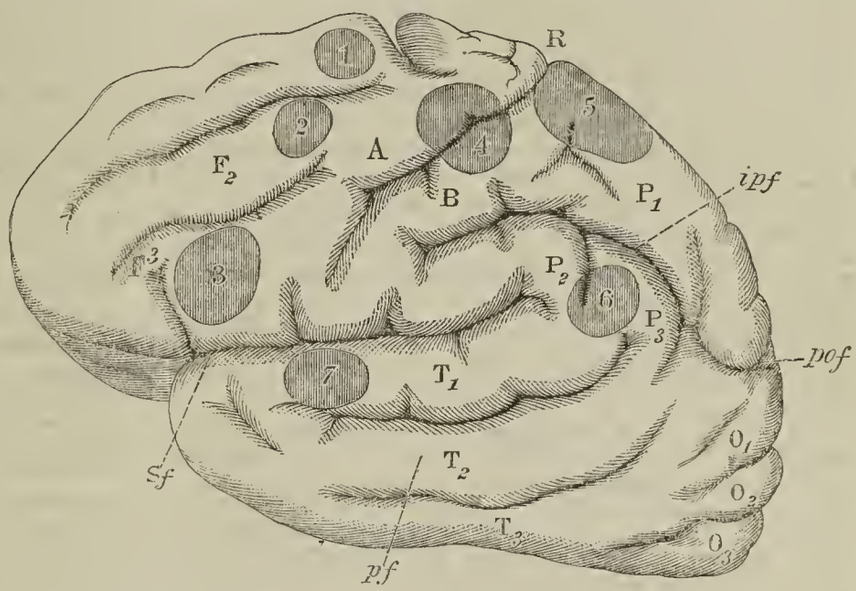

Fig. 6.—External Convex Surface of the Human Brain. *Fissures:* R, fissure of Rolando; *Sf*, fissure of Sylvius; *pf*, parallel fissure; *ipf*, interparietal fissure; *pof*, external parieto-occipital fissure. *Convolutions and Lobules:* A, ascending frontal; B, ascending parietal convolutions; F_1, F_2, F_3, first, second, and third frontal convolutions; P_1, superior parietal lobule; P_2, supra-marginal gyrus; P_3, angular gyrus; O_1, O_2, O_3, first, second, and third occipital convolutions; T_1, T_2, T_3, first, second, and third temporo-sphenoidal convolutions. *Motor Centres:* 1, Movements for rotation of head and neck; 2, movements of the muscles of the face; 3, movements of the tongue and jaws (aphasia); 4, movements of superior extremity; 5, movements of inferior extremity; 6, movements of the ocular muscles; 7, movements in relation with the sense of hearing.

Fig. 7.

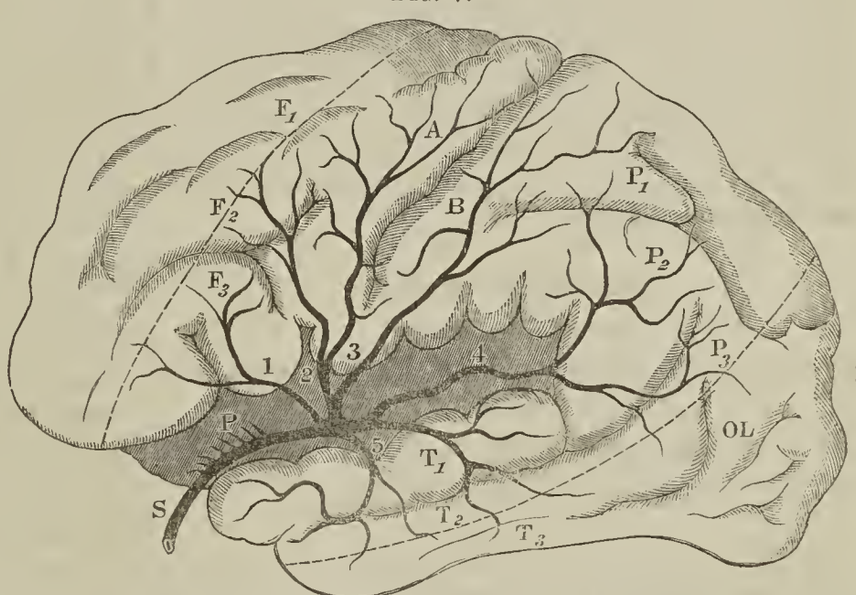

Fig. 7.—Diagram showing the Area of Distribution of the Middle Cerebral Artery. S, Sylvian or middle cerebral artery; P, perforating branches; 1, inferior frontal branch; 2, ascending frontal branch; 3, ascending parietal branch; 4 and 5, parieto-sphenoidal and sphenoidal branches. A, ascending frontal convolution; B, ascending parietal convolution; F_1, F_2, F_3, first, second, and third frontal convolutions; P_1, P_2, P_3, first, second, and third parietal convolutions; T_1, T_2, T_3, first, second, and third temporo-sphenoidal convolutions; OL, occipital lobe.

opposite side; in affections of the anterior area the psychical disturbances are the most marked; and in those of the posterior area the symptoms are best explained on the supposition that the centripetal currents are interfered with either before or soon after their entry into the cortex, although disease in this area produces profound psychical disturbances. Passing by such well-known phenomena as the results of electrical stimulation, and the localisation of the motor outlets for speech in Broca's convolutions, let us note less conspicuous phenomena.

As has been repeatedly pointed out by Dr. Hughlings-Jackson, circumscribed lesions of the cortex of the brain may produce partial muscular spasms of certain parts of the body, which may gradually increase to general epileptic convulsions, accompanied by unconsciousness. The lesion which causes these convulsions may consist of *molar* changes, such as is produced by the growth of tumours, by cysticerci, inflammatory processes, etc., or of changes which leave no very recognisable traces in the structure of the parts, and which may therefore be called *molecular* changes. Dr. Hughlings-Jackson has called the molar changes "*coarse*" disease, or *destroying* lesion; and the molecular changes "*discharging*" lesion—the latter name being exceedingly significant and expressive from the standpoint of function, although not altogether unobjectionable from the standpoint of structure or of morphology.

The lesions which cause unilateral convulsions without loss of consciousness are, if situated in the cortex, in the region of distribution of the Sylvian artery on the side opposite to the muscles affected. A superficial lesion in the cortex in the area of distribution of the anterior division of the ascending frontal branch of the Sylvian artery will cause convulsions of the opposite side of the face; and if the convulsive movements spread farther, the arm of the same side is attacked next, and the leg last of all. If the lesion is in the area of distribution of the posterior division of the artery, the arm of the opposite side is attacked first, then the face, and the leg last, as before. But if the lesion is in the area of distribution of the ascending parietal artery, the leg of the opposite side is attacked first, then the arm, and the face last. Dr. Hughlings-Jackson drew attention to the order in which the convulsions occur long before cerebral physiology was sufficiently advanced to offer any explanation of the facts, but now a glance at the relative positions of the motor centres of the muscles of the face, arm, and leg in Fig. 6 will sufficiently indicate why such an order should be observed. Syphilitic lesions (gummous pachymeningitis) are frequent causes of these unilateral convulsions; and when the lesion destroys the whole thickness of the cortex at one of the motor centres, then partial paralysis is produced instead of partial spasms.

(*To be continued.*)

NOTE ON A CASE OF

LOCALISED EMPYEMA WITH SECONDARY CROUP (TRACHEO-LARYNGITIS).

By A. ERNEST SANSOM, M.D. Lond., F.R.C.P.,
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The following case presents many points of interest. It illustrates a difficult point of diagnosis, and to my mind is especially instructive as teaching the possible causation of one of the forms of the affection known as croup and characterised by the presence of false membrane in a portion of the respiratory tract. For the notes of the case I am indebted to Dr. Burlingham, the Resident Medical Officer of the North-Eastern Hospital for Children.

James B., aged four years and nine months, was admitted under my care at the North-Eastern Hospital on February 1, 1878. He was a weakly and ill-nourished child, in a very neglected condition, and covered with vermin; he manifested a frequent cough. The history obtained was to the effect that about three months ago the child began to ail, and would often on returning from school sit down and complain of feeling unwell. About Christmas time he was attacked by vomiting and a bad cough, and became seriously ill. This condition was at first attributed to Christmas festivities, but as it continued unabated the child was brought to the hospital. The signs were—

1. *Respiratory System.*—Suffers from a frequent cough. There is dulness on left side in front, from the second or third interspace downwards, except a small portion in the fold of the axilla. Vesicular murmur suppressed on left side. Fremitus both with inspiration and expiration felt by hand over the base of left chest at back. Dulness at back not complete; extends from angle of scapula downwards, but most dense outside axilla.

2. *Arthritic System.*—Child complains of pain in both knee and hip joints. Walks with difficulty, and saves his left leg as much as possible.

3. There is pyrexia; temperature 103° Fahr. The diagnosis was broncho-pneumonia with considerable consolidation. It was thought that the tactile sensation at the left base was probably a bronchial fremitus.

Treatment.—The patient was placed on milk diet, and had the following medicine:—℞. Vin. ipecac. ℥ij., sp. ammon. aromat. ℥v., spirit. vin. rect. ℥v., mist. pot. bicarb. ʒ iij.—4tis horis. Mustard and linseed poultices externally.

February 2.—Slept well; perspires freely; takes food well.

4th.—Passed a restless night; considerable pain in limbs; comparative dulness now extends over the apex of left lung in front.

6th.—Sleeps better; cough not nearly so troublesome.

7th.—Perspiration much less; respiratory murmur in left side now distinct.

8th.—It was now evident that whilst the diagnosis of broncho-pneumonia was *pro tanto* correct, there were signs of a graver import. Dulness, presumably from broncho-pneumonia, had spread upwards towards the apex, but the audibility of the respiratory murmur had increased, so it would seem that some of the blocked air-cells had begun again to function; crepitations began to be heard over the base of the left lung. The adverse signs were, however—(1) the temperature history. For the first six days after admission there was no rise above 103° Fahr., the temperature recorded on entry. At first a fall occurred to below 100° Fahr., but there was always a high evening rise, making the chart show many peaks. The fall between the evening of February 5 and the morning of February 6 amounted to 5·5°. I pointed out that the chart began to resemble that of a case of septicæmia. (2.) The articular symptoms. There was considerable pain, but no articular swelling. (3.) The sweatings. All these circumstances suggested blood-poisoning, and inquiries were made as to probability of contagion before the child came into the hospital. At this time nothing material was elicited, however. Ordered four grains of sulphate of quinine every night. The temperature now became notably reduced. For twelve days it did not reach higher than 101° Fahr., but it frequently manifested sudden falls—to 96° Fahr. on the mornings of the 13th, 14th, 13th, and 24th. There seemed some general improvement, notably in appetite. The breathing was, however, short and jerky; crepitant râles became manifest all over the left side in front, finer at apex, larger and more liquid at base.

22nd.—Ordered five grains of salicylate of soda every four hours; quinine continued.

During the ensuing fifteen days the temperature chart showed great irregularities, the elevations reaching close to 104° Fahr., whilst the depressions were to 96° Fahr. The pulse also varied extremely—from 98 to 160, and the respirations from 32 to 60. Cold spongings were resorted to, and on March 8 cold baths. However they may have caused the depression of the minimum temperature, they failed to influence the maximum. On March 12 the quinine was increased to ten grains every night, and there occurred a notable depression of the maximum temperature to 101·2°, 100·8°, 99·8°, 98·8° in the days following respectively. Coincidently there was general improvement; respiratory murmur heard more distinctly over left lung.

March 17.—Complained of difficulty of swallowing.

March 18.—This evening the child began to give a hoarse laryngeal cough. Inhalation of steam and creasote was ordered, and the child was removed from the ward to a warm room.

March 19.—This morning evidently worse; the croupy cough much more pronounced, and great tracheal dyspnœa. Ordered five minims of antimonial wine, with ten minims of ipecacuanha wine every two hours. At 4 p.m. he was given a hypodermic injection of apomorphia, which produced

vomiting. The antimony and ipecacuanha were then omitted, and wine and brandy were ordered freely. The creasote was discontinued, but the child was kept in an atmosphere freely supplied with steam. At 10 p.m. the child seemed still worse, and was evidently dying of suffocation. Mr. Tay was sent for, and performed the operation of tracheotomy. The child seemed greatly relieved, and began to be able to swallow (which he had scarcely done for the last two days), and drank a large quantity of milk.

March 20.—Child seemed to be doing well till about 1 p.m., when the breathing again became embarrassed and the pulse rose.

March 21.—Child continued to show dyspnœa, and also great exhaustion all day, and died at 5 p.m.

Post-mortem Examination.—The pharynx, larynx, and trachea were all in a state of acute inflammation, and presented a greyish appearance. The lining membrane of the trachea was markedly granular. A considerable patch of false membrane was removed from the trachea. The trachea and larger bronchi were choked up with pus. Many of the glands of the neck were enlarged and infiltrated with caseous material. On opening the thorax and removing the left lung the visceral layer of the pleura did not come away with it, but remained, and between the two layers was a locular encysted empyæma, extending from the base of the lung in front to about the second interspace. It did not extend to the back of the chest. On opening it the pleura was found to be greatly thickened, and about two and a half ounces of pus escaped. Though extensive in area, the collection of pus was shallow. On the right side the pleura was somewhat thickened and adherent. The lungs themselves were both healthy. Other organs normal.

Remarks.—From the point of view of diagnosis, the history of this case is a confession of weakness. The existence of an empyema was not surmised during life. Not only at first, but at several stages of the malady, the probability of pleuritis was discussed. The friction-fremitus which was felt at the base posteriorly soon became indistinct; we thought it was intra-bronchial, not pleural. The limitation of the dulness, which did not involve the posterior part of the base, the râles varying from small to large, and apparently indicating bronchitis undergoing resolution, made us conclude that there was consolidation of lung-substance from broncho-pneumonia. We sometimes debated, however, whether some of these seeming râles were pleural crackles. It is held by some of the physicians of New York that many of the râles commonly ascribed to broncho-pneumonia are really of pleural origin, and due to intercurrent pleuritis. The noteworthy fact was the suppression of the vesicular murmur. Is this so uncommon in broncho-pneumonia, pure and simple? It is not so according to my experience. It was my strong conviction that the child suffered from a form of septicæmia, and it is in this relation that the case possesses its chief interest. I have said before that I caused inquiries to be made during the progress of the case as to possible contagion. No evidence was obtained, but now a nurse was commissioned to find out the parents, and bring a *verbatim* report of all she could elicit. It was to this effect:—The mother of the late J. B. says that her little son was taken ill about the middle of December, 1877; he complained of sore throat, but he got better again, and went to school. He came home at times from school very hot, but used to "go so cold" after. He went to his Christmas treat, and when he returned home was very sick. He vomited very often during the night, and afterwards for a day or two complained of pain at the chest and between the shoulders. His appetite was bad, but he seemed to get better, and began to play about, but soon fell sick again, and medical advice was sought; he was said to have bronchitis. He often complained of pain in his limbs, and was on and off poorly up to the middle of January. The child had whooping-cough and measles two years ago. No fevers had occurred in the house in which he lived. His mother says the drain-pipe was stopped up for three weeks, and the house smelt very bad. No disease in other members of the family, except gout in the father.—It seems only reasonable to conclude that the symptoms were the expression of the evolution of a protracted morbid condition lasting from December to March—three months. The disease was not tuberculosis. There were no tubercles in the viscera, though there was caseation of some of the superficial glands. A *début* with sore-throat and afterwards modified rigor and vomiting, followed by broncho-pneumonia, arthralgia, pyrexia with intermissions, purulent pleuritis, purulent laryngo-tracheitis—these seem to have been the features of the case. Pleuritis at a very early age is rare. Whenever it thus occurs, blood-poisoning may be suspected. I remember a post-mortem examination made by my colleague Dr. Sutton, in the case of an infant who had died very suddenly. The pleura showed signs of an intense inflammation, and Dr. Sutton remarked that probably the case was one of some "*foudroyante*" infection in which the usual signs had not had time for evolution. His opinion was immediately confirmed by the discovery that the kidneys showed signs of intense inflammation, such as occurs in scarlatina, and I believe that on inquiry the probability of scarlatinal contagion was shown to be very strong. Quite suddenly, four days before his death, my patient manifested signs of croup. Is the appellation, croup, correct in this instance? Taking the usually accepted definition of the disease as an inflammation of the larger air-passages with production of false membrane, then no doubt the appellation is correct. There was stridor arising from inflammation of the trachea, the inflamed surface being covered by false membrane. Nevertheless the case would, according to some observers, differ from one of true croup. It offers a notable contrast to the acute cases which make their *début* in healthy children, and in which the sole source of danger is the obstruction afforded by the presence of false membrane exuded from the inflamed mucous surface of the air-tube, the other organs of the body being healthy. I am aware that the existence of such cases is disputed; I know that they are rare, and that in certain climates they are probably never observed. Only those who have frequent opportunities of observing the diseases of children seem to be acquainted with them, but, in common with others, I have given examples of their occurrence.(a) The case now under consideration would be more legitimately termed "secondary croup," and such cases are by no means exceptional. Of twenty-three cases noted by Dr. West, eleven were idiopathic and twelve secondary, the latter supervening in one case upon pneumonia, and in the others upon measles. In five of these cases the post-mortem examination showed false membrane in the larynx; pneumonia, generally in the stage of purulent infiltration, coexisting.(b) Granted that my case would come under the category of "secondary croup," let us consider the evidence which it brings to bear on the vexed question of the diphtheritic origin of the malady. By those who uphold the pan-diphtheritic theory I suppose it will not be contended that the diphtheritic contagion was latent for more than forty-nine days—the period during which the patient was in the hospital. Such incubation would be out of all probability. There was little likelihood of diphtheritic contagion in the hospital itself. The most feasible explanation of the phenomena appears to me that the tracheo-laryngitis was a phenomenon of the evolution of the septicæmia. Attending this form of inflammation of trachea and larynx was exudation of a purulent fluid sufficiently fibrinous to coagulate so as to form false membrane. My friends who hold strongly to the doctrine of the pan-diphtheritic causation of croup appear to me rather impatient with those who refuse to accept their sweeping generalisation; and, strange to say, they seem to regard their own as the most catholic dogma. "No diphtheria, no false membrane," they say. Obviously, the onus of proof is with them. I regard as objections to such a view—1. The occurrence of croup with abundant false membrane in cases which present none of the toxæmic phenomena of diphtheria. 2. The manifestation of false membrane after direct irritation, as after scalds, wounds by the knife, and caustics. 3. The experimental evidence of production of false membrane in the respiratory tracts of animals after insufflation of irritants (Weigert, in Virchow's *Archiv*, 1877, page 461). 4. Analogical evidence that similar false membrane can be thrown off other mucous surfaces in cases where there is no toxæmia—*e.g.*, from the bowel in certain cases of diarrhœa. The diphtheritic theory, then, to my mind, accounts only for a portion of those cases which may be termed secondary croup. The conclusions to which I am led are these:—That true primary croup is an acute inflammatory

(a) "Croup and Diphtheria: a Contrast" (*Medical Times and Gazette*, January, 1877); *Proceedings of Medical Society of London*, 1875-77, page 108.
(b) "Diseases of Infancy and Childhood," sixth edition, page 391.

tracheitis or tracheo-laryngitis, attended with the exudation of false membrane, which threatens life by mechanically inducing suffocation. It occurs almost exclusively in very young children, whose respiratory organs have been lately subject to variations of temperature, and in whom the delicate immature mucous membrane more readily allows transudation of the fibrinous elements of the liquor sanguinis. As in the course of time such membrane becomes more mature, the exudation of the plastic elements becomes more difficult and inflammation from exposure more generally results in the exudation of mucus and muco-pus. Secondary croup is characterised by an inflammation of the air-passages attended by formation of false membrane, and is due not to catarrhal influences, but to toxæmia. It may be (*a*) specific —that is, due to the operation of the special contagium of diphtheria, the effect of which upon the blood is to render it prone to exude from a mucous or excoriated surface a coagulable material—the diphtheritic false membrane; (*b*) non-specific, or due to a tracheitis or tracheo-laryngitis, which may be one of the modes of evolution of general septicæmia.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

LIVERPOOL ROYAL INFIRMARY.

CASE OF POISONING BY BISULPHIDE OF CARBON —RECOVERY.

(Under the care of Dr. DAVIDSON.)
[Reported by Mr. A. H. Douglas.]

W. G., aged thirty-three, formerly a groom, was admitted August 7, 1877, at 6 p.m., apparently suffering from narcotic poisoning. He was brought in by a police-officer, who also brought a four-once bottle labelled "bisulphide of carbon," and containing a few drops of fluid having the well-known appearance and smell of commercial bisulphide of carbon. The patient afterwards stated that the substance was used in the stables for cleaning harness, and that he had intentionally swallowed the liquid, which, from his statement, appeared to be about two ounces.

On admission the patient was lying on the carrying chair with all the muscles relaxed; face pale, and covered with clammy sweat; lips blue, and moist with saliva and frothy mucus. Eyelids closed; conjunctivæ slightly sensitive to touch; pupils dilated and insensible to light. Breathing deep and laborious, almost stertorous; and the breath had a very strong odour of bisulphide of carbon. Pulse 110, regular, but very weak. On the coat of the patient was some vomited food, which had a very strong, offensive odour. Patient appeared very sleepy, and could only be made to move his hands with great difficulty; even when pinched on inside of thigh he did not speak, but when stomach-pump was being passed down the œsophagus he made a noise and struggled. Warm water was injected into the stomach, and was immediately vomited with strong odour of bisulphide of carbon. Bowels were evacuated; motions of light colour and solid consistence, with ordinary fæcal odour. 7 p.m.: Patient was placed in bed, when he had a shivering fit. Feet, arms, and legs felt cold to touch; face became paler, followed by perspiration and return of colour. This only lasted three or four minutes. Hot bottles were applied. After this, on shaking him well, he opened his eyes and said that he had taken some stuff to do away with himself, and again lapsed into sleep with heavy breathing. I again roused him, and with difficulty made him swallow six ounces of mucilage. He said he had no pain, and wanted to sleep. About 7.30 p.m. took two ounces of mucilage, and vomited it shortly afterwards with odour of bisulphide of carbon. Was ordered three ounces of mucilage every quarter of an hour, and vomited repeatedly after it, always sleeping in the intervals and breathing deeply. 8 p.m.: Had again a slight shivering fit, with pallor of face, followed by sweating. Pulse weak and small—100. 10 p.m.: Has been vomiting frequently for the last hour; vomited matter chiefly mucilage, with strong odour of bisulphide of carbon. Appears clearer in the head; can be easily roused, and says he does not want to sleep. No pain, but feels giddiness in the head. Pulse 100, stronger; temperature 101°; respirations 20. Mucilage stopped, and vomiting relieved.

August 8.—1 a.m.: Has slept for last two hours. No vomiting. Breath still smelling strongly of bisulphide of carbon. Complains of burning pain in throat and stomach. 9 a.m.: Slept most of the time since last note. No vomiting. Complains of feeling giddy, and slight headache. Conjunctivæ congested; pupils dilated, but not so much as on admission. Quite sensible and intelligent. Bowels acted at 3 a.m.; motions loose, light colour, smelling strongly of bisulphide of carbon. Tongue coated with a white fur. No soreness of throat or stomach. Pulse 100, fairly strong; temperature 99°. Breathing easy; breath still slightly smelling of bisulphide of carbon. Milk and lime-water administered in small quantities. Passed urine at 7 a.m. which had a perceptible odour of bisulphide of carbon, but appeared otherwise natural. During the remainder of the day appeared well, and only complained of giddiness and slight headache. 9th: Slept well. Slight headache and giddiness. Tongue still coated. No smell of bisulphide in breath or urine. During the next four days the headache and giddiness passed off, and patient said he felt quite well. Pulse 60, and temperature normal. Quite able to take solid food. Bowels regular. Left the hospital on 12th, quite well.

Remarks by Dr. Davidson.—So far as I know, this is the only case on record of acute poisoning by bisulphide of carbon. Workmen in indiarubber and other factories where this liquid is employed occasionally suffer from chronic poisoning from inhaling the vapour, the symptoms being headache, vertigo, excitement, and other indications of nervous derangement. Animals poisoned by it experimentally, show convulsions, then slow breathing, and death apparently from congestion of lungs and heart (Meymott and Tidy). Though I did not myself see the patient till next morning, when the more urgent symptoms had passed away, I am quite satisfied that the case was one of acute poisoning with commercial bisulphide of carbon.(a) Not only the label on the bottle, but the appearance and smell of the fluid, showed it to be bisulphide of carbon, and I have ascertained from a saddler in this town that the statement made by the patient is quite correct as to the occasional though very improper use of this substance by grooms for the purpose of cleaning harness. There is less certainty about the quantity swallowed, but it appears to have been about two ounces. The principal symptoms were a semi-comatose condition, with occasional convulsive tremors or shiverings, accompanied by pallor and blueness of the lips. Bisulphide of carbon is recognised by its offensive odour, and by the inflammability of its vapour.

MONSALL FEVER HOSPITAL, MANCHESTER.

CASE OF SEVERE COPAIBA ERUPTION.

[Reported by Mr. John Sutcliffe, Resident Clinical Clerk.]

Isaac F., aged twenty-three years, farrier, was admitted into this hospital on August 10, 1878, sent here as "a doubtful case of measles or rötheln." The whole of his body, but especially his legs, was covered with a rash consisting of slightly raised dark-red patches, which in some places was inclined to be papular. His fauces were slightly reddened, but there was no ulceration or spots on them. The tonsils were not enlarged. His temperature was 100·4° Fahr. There was no constitutional disturbance, nor did he complain of pain anywhere. He gave the following history:—He began to be ill on the morning of the 9th, his first symptoms being a pain in his back and the rash, which appeared first on his thighs and the lower part of his body, and which rapidly spread all over him. The difficulty was to form an accurate diagnosis. The character of the eruption, the site of its first appearance, and the absence of constitutional symptoms, as coryza, headache, etc., excluded measles. The character of the rash excluded rötheln, and there was no persistence of the sore throat. The slight constitutional disturbance and low temperature, with the absence of spots on the fauces and of the shotty feel of the eruption under the skin, distinguished it

(a) The *pure fresh* bisulphide of carbon is comparatively odourless, and may have different effects from the ordinary commercial preparation, which I believe is a mixture of pure bisulphide of carbon with other sulphur compounds.

from small-pox. The low temperature, absence of enlargement of the tonsils, and the dark colour of the rash, were sufficient evidence that it could not be scarlatina. The rash more resembled that of roseola, but was of a darker colour and slightly raised. Syphilitic roseola was suspected, but but there was no history of syphilis, and on examination of the penis for the presence or absence of a chancre it was found that he was suffering from gonorrhœa, for the cure of which he stated he had been taking balsam of copaiba. He had bought two ounces at a druggist's, and during the 7th and 8th had taken half of it undiluted in frequently repeated small quantities on pieces of sugar. The diagnosis was then at once made. He was ordered by Dr. Tomkins, the Resident Medical Officer, a mixture containing pot. bicarb. magn. sulph. and tr. hyoscyam., and to remain in bed.

August 11.—Rash had gone from face. Morning temperature, 98·6°; evening, 98·8°.

12th.—Rash rapidly fading; temperature normal.

13th.—Only a mottling of the skin left.

15th.—All traces of the rash had disappeared, and he was discharged.

Note.—The record of this case is valuable, amongst other reasons on account of the observation that at the onset of the rash there was a little backache, and soon afterwards slight pyrexia. It may be added that the rash sometimes simulates urticaria. Has the rash been observed in any case where the resin only has been given? In at least twenty cases where the resin has been administered the rash has not appeared. In one case a rash appeared after a few doses of the balsam, but subsided after the resin was substituted.

The German Universities.—Professor Gusserow, of Strasburg, has been "called" to take charge of the midwifery department of the Charité Hospital, Berlin; and Dr. Fasbender, who has been acting as substitute since Professor Schöller's death, is appointed Extraordinary Professor of Obstetrics at Berlin. Dr. George Wegner, Professor Langenbeck's assistant, whose researches on the effects of phosphorus on the nutrition of the bones are now well known in this country, has been made director of the Municipal Hospital at Stettin.

The following notice has been issued by the University of London, with reference to female candidates for degrees:—"A new supplemental charter having been granted to the University a few months since, on the joint application of the Senate and of Convocation, empowering the Senate to admit women to graduate in its several faculties (Arts, Science, Law, Medicine, and Music), on such conditions as the Senate, with the concurrence of the Home Secretary, should deem expedient, the Senate lost no time in passing a resolution which made all the existing regulations, relating not only to graduation, but also to the various honours and rewards granted at the several examinations open to female as well as to male candidates. This resolution having been now approved by the Home Secretary, female candidates will be admitted forthwith to the matriculation examination; and all such as have already passed the general examination for women will be considered as having matriculated, and will be admissible (after the required interval) to the first degree examination in either of the faculties. Further, with a view to the special encouragement of female candidates desiring to go through a regular academical course, the trustees of the Gilchrist Educational Trust have instituted two exhibitions, one of £30, the other of £20 per annum, tenable for two years, to the female candidates who pass highest in the honours division at the matriculation examination; and two exhibitions, one of £40, the other of £30 per annum, tenable for two years, to the female candidates who pass highest at the first B.A. examination (provided that they obtain in the first case two-thirds, and in the second three-fifths, of the total number of marks), to assist them in pursuing their studies at some collegiate institution approved by the trustees; with the further reward of a gold medal of the value of £20 (or of a book-prize of the same value) to the female candidate who passes highest at the second B.A. examination, if she obtains not less than two-thirds of the total number of marks. These rewards are quite independent of those granted by the University, and may be held in conjunction with them. Further particulars may be obtained by application to the Registrar of the University, London, W."

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Medical Times and Gazette.

SATURDAY, SEPTEMBER 21, 1878.

PHYSICIANS' FEES.

The "silly season" of the present year has been illustrated by the publication, in some of our daily contemporaries, of a correspondence, more than usually unreasonable, on the subject of "Physicians' Fees." It has long been felt, more or less acutely, that the old customary guinea fee does not at all adequately remunerate the physician for the time, labour, and skill required for the examination and treatment of a large proportion of the cases that come under his care; and it is pretty generally known that of late some few leading physicians have, as a general rule, expected to be paid two guineas instead of one as their ordinary fee. But, further, it is now, by a kind of general consensus of opinion among physicians, proposed that the double fee shall always be expected for the first consultation with a patient; and the knowledge of this modest proposal has been met from an unthinking portion of the public by an outcry that could not well have been greater had some divine, immutable law ruled that the fee for advice from physicians shall for ever be one guinea, and that they alone among men shall have no right to raise the remuneration for their services above that paid a hundred years ago. It would be a waste of time to seriously point out that the physician has a perfect and absolute right to appraise his advice at even a much higher value than two guineas if he choose to do so; but it may be well to show once more—we dealt with the subject more than once a few years ago—why it is only most reasonable, just, and fair that he should be paid more than the old, traditional guinea; though patients very often are not ashamed to take upon themselves to deduct a 5 per cent. tax even from that, and to pay him only a pound instead of a guinea.

It costs very much more both to make and to support the physician now than it did when the guinea fee was fixed as his ordinary honorarium. Education, both general and professional, is much more expensive, and the cost of living

has greatly increased; while the standard of comfort has been raised, and the purchasing power of money is lessened. Provisions are much dearer, house-rent is higher, and the rates of remuneration paid for labour and service of all kinds, non-skilled and skilled, brain work and bodily work, have been raised, except in the case of the doctors. The complainants in the late controversy case cannot deny this; they know that the physician must pay much more for nearly every necessary of life, and for every service he requires from others, than he had to pay even thirty years ago, and yet they say that he himself shall be paid at no higher rate than he was a century ago. The guinea fee is to remain unalterably fixed, and if the physician dares to ask more he is an extortioner! One of the writers on the subject is almost amusing in his wrath. He declares that in Queen Anne's time physicians were greatly over-paid; he dares them to increase their fees now, and vows that if they do so he will renounce them, and will trust himself, if ill, to the care of Dame Nature, certain that he will come off much better then than if under a physician; or that, if the worst comes to the worst, he will put his trust in the general practitioner. He will be welcome to carry out his threats, if he can; few physicians, if any, will be desirous to have patients of such a tone of mind. But can he take to Dame Nature an unimpaired "natural" constitution and a sound "natural" nervous system to help her in working her cure? And, moreover, such a man will most probably be desperately frightened and eager for a physician's advice directly he thinks himself really ill, and will be less likely than a more reasonable man to remember thankfully that the general practitioner is a much more highly educated and skilled medical man than was the general practitioner of former days, and therefore really much nearer the physician.

The question that has been raised hardly, however, calls for serious argument. No man is compelled to seek the advice of a physician, but if he considers that it is worth seeking, it is surely worth two guineas. If he does not think so, why ask it at all? It is to be remembered that the increased fee is to be for a first consultation only; for subsequent visits the fee is to be, as hitherto, one guinea, unless, indeed, such subsequent visits are in consultation with another practitioner. Let those who cry out at the two guineas consider what patients look for from a physician: and we will take a description of what they expect from a very sensible and able article on the subject in a daily paper—"The physician is expected not only to prescribe for them intelligently, but to examine them minutely; to trace their physiological pedigree; to tell them whether, in given circumstances, they are likely to die or to live; whether they should or should not get their lives insured; whether they should marry or give in marriage; whether they should reside at home or abroad; and what they should eat, drink, and avoid. Indeed, a physician is expected to be able to do and tell a great deal more than all this; and yet people think him overpaid when he asks a couple of guineas for his first plunge into their cases." After-visits do not, as a rule, make such a demand on the time of the physician, as he has learnt his patient.

The *right* of the physician to thus raise his fee is indisputable; and we insist that the increased charge is reasonable, justifiable, and moderate; and we believe that the public will in general recognise this. The wonder is that the increase has been so long delayed; but the chief difficulty of physicians has been how to make such a change known to the public. The controversy upon which we have commented has come to their aid, and done what they wanted in the quickest and most effectual way possible; and they may therefore be grateful to the writers, though some of them have been ill-tempered and irrational. We will observe, finally, that it is extremely improbable that any class of the public will suffer by the change. While young physicians may probably still be content with the guinea fee for first consultations, the considerateness and generosity of the profession are so well known and trusted, that no patient who needs the advice of more experienced and eminent men is likely ever to find any real difficulty in obtaining it, though he may not be able to afford the double fee.

METALLOSCOPY.

The announcement that anæsthesia could be temporarily removed by applying pieces of metal to the affected skin was received with considerable distrust last year, both in this country and in Germany; yet, after all, it turns out to be perfectly true. It may be remembered that we owe the discovery of this fact to a French physician named Burq, who also asserted that every patient has a particular idiosyncrasy for the action of a particular metal, and that there is a relation between the sensibility of the skin and the general condition of the patient, of such a nature that the latter can be cured by the internal administration of the same metal which cures the anæsthesia when applied to the skin. At Burq's request these statements were tested by a Commission appointed by the Société de Biologie in the winter of 1876-77. The members of the Commission were Drs. Charcot, Luys, and Dumontpallier, and their report, which was presented to the Société de Biologie on April 14, 1877, and which was founded on experiments made in Professor Charcot's wards at the Salpétrière Hospital, not only in the main confirmed Burq's assertions, but supplied new facts bearing on the subject. Still more recently, Professor Westphal, of Berlin, in a lecture given before the Berlin Medical Society on June 5, 1878 (*Berliner Klin. Wochenschrift*, No. 30, 1878), after a personal visit to Professor Charcot's wards, has declared his belief in the reality of the phenomena described, and has supplemented the experiments of the Commission by some new and interesting ones of his own. Before speaking of the established facts concerning metalloscopy, we must mention expressly that the class of cases to which the treatment—if such it can be called—by metal plates applies, are almost exclusively hysterical women with anæsthesia of one half of the body sharply limited at the middle line (hemianæsthesia), which has come on either without apparent cause, or as the result of hysterical attacks. At the same time there is diminished functional activity of all the organs of sense, the acuteness of hearing, tasting, and smelling, and the power of distinguishing between certain colours being either deadened or entirely lost on the affected side. There may also be loss of the muscular sense on the same side, so that the patient has to hunt about, so to speak, with the healthy hand for the arm of the anæsthetic side, if the latter be placed in any position of which she had no previous knowledge. Now, the Commission found that if a metal plate were brought into close contact with a part of the anæsthetic skin, in from ten to twenty minutes the latter, and a greater or less area of skin outside it, recovered its sensation. In some cases, if the metal was allowed to remain long enough, the whole anæsthetic half of the body sometimes recovered its sensibility; while in others the impaired colour-sense was restored by applying metal plates to the forehead and temples of the affected side. The anæsthesia could also be removed by placing the poles of a powerful horseshoe magnet on the skin; and even in one case by allowing the hand of the patient to remain between the poles of a very powerful electro-magnet without touching them. In all these experiments it was discovered by the Commission that a transfer of sensibility took place

from the healthy to the anæsthetic side of the body, so that what was anæsthetic before recovered its sensibility, and what was sensible before became anæsthetic. All these facts are confirmed by Professor Westphal. The Commission also observed that a prick made into anæsthetic skin bled very little, if at all, while the blood issued freely when its sensibility was restored. It also affirmed that the muscular power of the anæsthetic limb was increased on the restoration of sensibility to the skin, while, at the same time, the opposite healthy limb became correspondingly weaker. The Commission did not examine the internal action of metals in these cases, but it endeavoured to explain the effects produced by external metallic plates by the development of galvanic currents. In conjunction with Dr. Regnard, the Commissioners found that such currents were actually produced and could be detected by a very delicate galvanometer; that different metals produced currents of different intensities; and, lastly, that extremely weak galvanic currents could be substituted for the application of the metal plates, so as to restore the sensibility of anæsthetic skin. Still more interesting, however, is the observation that while the current which made the galvanometer-needle deviate 7° had no effect on the anæsthesia, a current of 35° restored the sensibility; and that while one of 60° had no effect, one of 90° was again effective. This proves that there exist for each patient strengths of current which produce definite effects, and other strengths—the so-called "neutral points"—which are inactive, no matter how long the electrodes are applied. Lastly, it was discovered that if one pole of an active current were applied to the head, and the other to the leg of the anæsthetic side, the sensibility returned not only to the skin, but also to the organs of sense, and was lost over the whole of the previously healthy side.

In speaking of Professor Westphal's experiments, we need only refer to the new points which he made out, and pass over those parts of his lecture which merely relate to confirmatory repetitions of Charcot's experiments. Thus he found that the phenomena of transfer of sensation from the healthy to the diseased side of the body was not *always* to be detected; perhaps, as he explains it, because the patient was not examined at the right time. It was also found in one case that sensibility could be restored by the application of plates either of iron or gold, whereas the rule is that only one metal influences a particular patient. In another case a bar magnet was placed parallel to the anæsthetic arm, and fastened so that both its poles were in contact with the limb; and it appeared as the result of numerous trials that sensibility first returned and last disappeared in the region of the *south* pole. Experiments were also made with plates of copper varnished or coated with sealing-wax on the side applied to the skin, and also with bone counters such as are used with marking at cards, and in all cases there was a return of sensibility, at any rate in the parts pressed on by the plates and counters and by the gauze bandages by which they were very firmly fixed in position. In fact, "the presence of sensibility appeared," says Dr. Westphal, "to depend on the amount of pressure used in securing them." Some experiments made by Prof. Westphal's assistant (Dr. Adamkiewicz) with mustard plasters are also of interest, as bearing on the theory of action of the various agents used to restore sensibility to the skin. He found that after about two hours the skin which was reddened by the plaster became completely sensitive to pricks and other stimuli, and that by applying plasters to different portions of the anæsthetic skin, areæ could be produced, within which the patient, with her eyes shut, could accurately localise a stimulus; whereas, in the intervening space she could not feel the most severe irritants at all. It is important to notice that sensibility did not return if the anæsthetic hand were soaked in hot water until it was swollen and strongly reddened, and that the irritation of the electric brush was entirely without effect in restoring it. One other point may be referred to before leaving this part of the subject, viz., that Professor Westphal has confirmed in his own patients an observation of Charcot's, that pressure on a particular part of the abdomen of the anæsthetic side is very painful; but he doubts Charcot's explanation that the pain is due to pressure on the ovary.

The question now arises, Is there any deception in these cases on the part of the patients? To this Professor Westhal replies, Certainly not. One of these patients was pricked while in a deep sleep at night on an anæsthetic part of the skin without the slightest effect, whereas she woke immediately the healthy skin was pricked. Again, a number of patients only discovered that they were anæsthetic at all when they were examined after admission to the hospital, and the object with which the metal plates were used was carefully concealed from the first patients experimented on. No attempt at deception in other ways was observed in any of the patients during their stay in the hospital; and the peculiar distribution of the anæsthesia, which, it should be noted, is sometimes interrupted by small circumscribed islands of sensitive skin, is not at all favourable to the idea of simulation. Moreover, Professor Charcot and Dr. Magnan have both observed a return of sensibility in the hemianæsthesia of organic disease under metalloscopic treatment. On the whole, therefore, Professor Westphal confirms the results of the French experimenters, while it is clear that his own experiments are opposed to the exclusive explanation of such remarkable facts by a theory of galvanic currents. He supposes that the restoration of sensibility must depend on some kind of stimulation conveyed through the skin, but refuses to theorise on the *modus agendi* of the stimuli, and whether they act directly on the ends of the sensory nerves, or by reflex dilatation of the bloodvessels, etc. He confesses his complete inability to explain the phenomenon of so-called "transfer" from the healthy to the anæsthetic side. It seems, indeed, useless to theorise on a subject about which our knowledge is still so elementary, and the only form of speculation which seems open to us is whether metalloscopy is ever likely to be of permanent therapeutic value. If the sensibility is withdrawn from one side of the body to be transferred to the other, this looks rather like "robbing Peter to pay Paul." However, the loss of sensibility of the healthy side appears to persist a shorter time than the gain of the anæsthetic side, and, as we have already stated, the "transfer" may not be detected at all. On the other hand, while in most cases the recovery of sensibility by the anæsthetic half of the body is only temporary, and disappears again in a few hours or days, there are cases in which a cure has lasted, at any rate, for several months, while in one case all the other hysterical symptoms were signally improved. This is about all that can be said at present as to the value of Burq's discovery.

THE WEEK.

TOPICS OF THE DAY.

Amongst the various comments which the recent disastrous outbreak of yellow fever in the Southern States of America has provoked, the following is reported from Memphis:—"The localities in which all the new cases have appeared are on and near Bayon Gayoso, which with its branches penetrates the entire city, emptying into the Wolf River near its confluence with the Mississippi, in the northern part of the town. This bayon has hitherto been regarded as a grand natural drain or sewer—a great mistake, because

it contains no running water, and is almost entirely dry during the summer. All the street-gutters empty into it, and the action of the sun in summer on the masses of filth accumulated during the year generates the foulest gases, which it is reasonable to suppose have much to do with causing sickness of every description. It is evident that this bayon is the line of action of the present epidemic." The *Philadelphia Public Ledger* also adds:—"The outbreak of the fever at Grenada, where it has raged with great violence, has been traced to a sewer under a stable, in which dead animals were suffered to lie for several weeks under the broiling sun of July; and when the first case—a lady in the neighbourhood of the infected spot—sickened and died, whatever there was of mystery about its origin was hidden under that stable in the sewer. With all the criticism that has been given to General Butler's military career, there was one enemy he routed, and that was the fever-engendering filth of New Orleans, the season of occupation and control of that city by the Northern troops bringing a break into its previous fever record. Frost kills the fever when it has taken hold, but whitewash and purifiers do not give it a chance to take hold." From these extracts it would appear that the sooner the study of sanitary science is introduced into the South, the better it will be for the public health.

It is not with unmixed feelings of satisfaction that we read that several of the great railway companies have adopted the teaching of the Ambulance Department of the Order of St. John for their *employés*, and that one or two of them have already purchased stretchers and wheeled litters for use in the event of accident. On the one hand, it is satisfactory to know that such appliances may be at hand if required; but, on the other, it would be much more reassuring to the public to learn that the various companies hadadopted continuous brakes on their several lines, and so reduced to a minimum the chance of requiring the stretchers, etc.

In accordance with a supplemental charter which has been granted to the University of London, on the joint application of the Senate and of Convocation, empowering the Senate to admit women to graduate in its several faculties of arts, science, law, medicine, and music, on such conditions as the Senate with the concurrence of the Home Secretary shall deem expedient, the Senate has passed a resolution which makes all the existing regulations open to female as well as to male candidates. The resolution in question has been duly approved by the Home Secretary, and female candidates will be forthwith admitted to the matriculation examination; and all such as have already passed the general examination for women will be considered as having matriculated, and will be admissible after the required interval to the first degree examination in either of the faculties.

An Act of Parliament recently passed empowers the Corporation of London to acquire, by purchase, gift, or otherwise, the freehold or interest in any common lands not within the district of the Metropolis Management Act, but within twenty-five miles of the City, and, among other matters, they are authorised to appropriate ground for cricket and other sports, for the exercise of Volunteers, etc., having due regard to the enjoyment of the lands as open spaces for the recreation of the public and the rights of common.

A very sad accident is reported from Prague, which has resulted in the death of Professor Fischer of that city. The Professor was only twenty-five years of age, but had already achieved a reputation on account of his great abilities and industry, and his devotion to the science of chemistry. From the particulars that have transpired it would appear that the deceased gentleman was in the laboratory of the Gymnasium, and sent a servant to the storekeeper for some sal-ammoniac and cyanide of potassium. When these were brought he mixed them, and tasted the mixture, observing to the servant that science had advanced so far as even to be able to render harmless so dangerous an agent as cyanide of potassium. He had scarcely, however, tasted the mixture when he was seized with violent pains. He at once ordered the servant to fetch a physician; but before medical assistance arrived he had expired. He was known to entertain the persuasion that cyanide of potassium could be rendered harmless, and the problem of how to accomplish this was a frequent subject of his studies. A memorandum on the same theme was found amongst his papers.

About two years ago the Corporation of Dover, at the instance of their Medical Officer of Health, formulated a scheme for the improvement of the town under the Artisans' and Labourers' Dwellings Act, but up to the present time no further steps have been taken in the matter. The Local Government Board have, therefore, called upon the authorities to give some reason for this want of action, and the Council have now directed the Medical Officer to furnish a further report on the district originally condemned.

The feeling in Manchester on the subject of obtaining a supply of water from Thirlmere lake may almost be said to be unanimous. The result recently published of a poll of the owners of property and the ratepayers of the town on the question whether this water scheme should be again brought before Parliament, shows that 43,362 votes given by 35,431 voters were recorded in favour of it, and 3580 votes given by 2592 voters were adverse to it, the majority of votes in favour of the scheme being 39,832.

The Town Council of Honiton have for some time disregarded the admonitions of the Local Government Board with regard to the improvement of the water-supply of the town, and they are now involved in a worse difficulty in consequence of an extensive outbreak of typhoid fever, stated to be entirely due to the impurity of the water. The Local Government Board have now called upon the Town Council to state what steps they intend to take to check the spread of the fever; and they have also been reminded that a failure to take these steps will involve heavy penalties. At a recent meeting held to consider these difficulties it was announced that the Medical Officer of Health had resigned in consequence of his not having been paid his last year's salary, and that the Council had therefore no competent authority to advise them. In this emergency it was eventually decided to appeal to the late Medical Officer for advice, and to forward his report to the Local Government Board.

Hospital Sunday in Portsmouth was this year fixed on the 25th ult., but we regret to be obliged to record that the anniversary was not so generally observed as upon former occasions. The unhappy controversy which rages in the town, on the subject of the Chaplain to the institution and his teaching, is supposed to be responsible for this; and we can only repeat the remarks we have before now been compelled to make when writing of Portsmouth, that it is a shocking thing to find the interests of the sick poor prejudiced through unseemly disputations on religious matters. It is, however, gratifying to find that in most of the churches and chapels in which collections were permitted to be made the amounts realised exceeded those of last year.

The amount collected on Saturday, the 7th inst., by the promoters of the Hospital Saturday movement in the metropolis is said to be the largest obtained since the collection was instituted. Up to the beginning of the present week the amount realised was £3600, but it is anticipated that it will be at least six weeks before the whole of the

accounts are made up. One of the new features of this year's collection has been the support accorded by the Board and Sunday Schools. The penny-sheet system is also reported to have worked very well, and during nineteen weeks that the sheets have been distributed the subscriptions have been regular and good. If it can be shown that the total amount realised has really been contributed by the "working man," the promoters are to be congratulated upon having developed an entirely new source of revenue for the metropolitan medical charities; but if any considerable portion of the sum collected has come from the middle and upper classes, the movement can only be regarded as an opposition to the older and more legitimate establishment of Hospital Sunday.

The quinquennial festival of the Royal Albert Asylum for Idiots and Imbeciles of the Northern Counties was recently held at Lancaster. The proceeding commenced with a public meeting held in the Brook wing of the institution, presided over by Lord Winmarleigh, chairman of the Central Committee. The report, which showed the very satisfactory manner in which the Asylum was conducted, but which urgently appealed for increased funds as a means of extending its usefulness, was unanimously adopted; and after referring to the resignation, through serious and protracted illness, of Dr. E. D. de Vitre, to whose enterprise, generosity, and practical services the Asylum is much indebted, it added —"In acknowledgment of Dr. de Vitre's important services, and of the gift of £2373 for the erection of eight cottages, the dining-hall has been named the De Vitre Hall." We shall upon some future occasion take an opportunity of noticing the report of the Medical Superintendent of the Asylum for the past year.

The Medical Officer of Health for Aberystwith has, by order of the Local Government Board, made a special report as to the cause of the excessive mortality in the adjacent townships. One cause he states to be the lead-mining operations. He considers the peculiar occupation of the men in the mines, and the unhealthy state of their homes generally, have caused the high death-rate from phthisis.

THE GLOUCESTERSHIRE COMBINED SANITARY DISTRICT.

The fifth annual report of Dr. Francis T. Bond, Medical Officer of Health for the Gloucestershire Combined Sanitary District, for the year 1877, was presented at a meeting of delegates held at Gloucester in May last. The labours of Dr. Bond cannot be lightly estimated when it is considered that the Combined District contains no less than eight rural and five urban authorities; nevertheless, a careful study of the report shows that nothing is neglected, and a due amount of supervision is given to all. Referring to those points connected with the general health of the district during the past year, of general interest to all sanitary authorities, Dr. Bond observes that measles, whooping-cough, and scarlatina have been very prevalent, especially in the Chipping Sodbury, Thornbury, and Chepstow sub-districts. In the latter the epidemic of scarlatina has been confined almost exclusively to the Gloucestershire side of the Wye, and chiefly along the Severn side. In the other two districts the cases have been somewhat scattered, except at Berkeley, where the outbreak was very general. The scarlatina epidemic wave, which steadily increased from 1874 to 1876, appears to be now on the decline; the wave of small-pox is quite extinct; whilst those of measles and whooping-cough are on the rise. In the present state of the law, and in the face of the popular ignorance and indifference which prevail in regard to these two latter diseases, Dr. Bond remarks that it appears almost hopeless to attempt to arrest their spread. He seldom hears of their existence in a locality until the disease has been sown broadcast on all sides, and it is very rarely that the local circumstances are such as to make it practicable or expedient to close the public elementary schools, by which these diseases are so largely spread.

INDIAN MEDICAL SERVICE.

The list of the candidates for her Majesty's Indian Medical Service who were successful at the competitive examination held at Burlington House on August 12 last, should have appeared in the following order (now officially corrected), and not as previously advertised:—

	Marks.		Marks.
1. G. F. A. Harris	2,312	8. W. B. Carson	1,965
2. J. K. Sweeny	2,261	9. H. B. Briggs	1,954
3. D. T. Barry	2,252	10. C. G. W. Lowdell	1,940
4. J. Anderson	2,245	11. A. S. Faulkner	1,760
5. C. J. Bamber	2,218	12. C. Mallins	1,640
6. E. H. Dumbleton	2,120	13. E. M. Damla	1,560
7. M. O'Dwyer	1,997	14. R. M. Allen	1,530
		15. H. S. C. Carruthers	1,472

CLEOPATRA'S NEEDLE.

We are glad to be able to congratulate Mr. Erasmus Wilson and Mr. John Dixon on the great fact that Cleopatra's Needle has been safely settled in its place on the Thames Embankment. It will form a great ornament to that noble thoroughfare, and its erection there is a grand illustration of English pluck and enterprise, of private generosity, and of engineering skill. Both the men to whom we are indebted for having rescued the obelisk from its tomb in the sands of Egypt, and erected it in the English metropolis, have a right to be proud of having made such an addition to London's wealth in monuments of the far distant past.

"RUBBISH SHOT HERE!"

We must confess, however, to feeling rather curious to know who, or what, guided the selection of the objects placed in the core of the pedestal and supports of the obelisk, and now covered in by its base. Even if it was desirable or necessary to fill the cavity, it is one of the last places in which one would expect a collection of things reminding one of the often-seen notice, "Rubbish shot here." The following has, however, been given forth as an "authentic list" of objects enclosed in the pedestal:—Standard foot and pound, presented by the Standard Department of the Board of Trade; bronze model of the obelisk, half-inch scale to the foot, cast and presented by Mr. Joseph Whitley, of Leeds; copies of *Engineering*, printed on vellum, with plans of the various arrangements and details employed in erecting and transporting the obelisk, together with its complete history, presented by the proprietors of the publication; jars of Doulton ware, presented by Doulton and Co.; a piece of the obelisk stone; complete set of British coinage, including an Empress of India rupee; parchment copy of Dr. Birch's translation of the obelisk's hieroglyphics; standard gauge to the one-thousandth part of an inch, as sample of accurate workmanship, presented by J. Holtzapffel; portrait of her Majesty the Queen; Bibles in various languages, presented by the British and Foreign Bible Society; Bradshaw's railway guide; Mappin's shilling razor; case of cigars; pipes; box of hairpins and sundry articles of female adornment; Alexandra feeding-bottle and children's toys, presented by a lady; a Tangye's hydraulic jack as used in raising the obelisk, presented by Tangye Bros.; wire ropes and specimens of submarine cables, presented by Mr. R. S. Newall; map of London; copies of the daily and illustrated papers; photographs of a dozen pretty English women, presented by Captain Henry Carter; a two-foot rule; a London Directory; "Whitaker's Almanac," the last copy of the impression for the year, presented by the publishers.

Some, no doubt, of these articles have been very fittingly selected—as the standard foot and pound; the model of the monolith, and the translation of its hieroglyphics; the set of the British coinage; the copies of *Engineering*; and a few others. But how came the "Mappin's shilling razor" there, and the "Alexandra feeding-bottle," and children's toys, the pipes and cigars, the "box of hairpins, and sundry articles of female adornment," or the "photographs of a dozen pretty English women," selected and presented by Captain Henry Carter? Is it hoped that they may illustrate to future ages—to Macaulay's New Zealander, for example—English civilisation in the last quarter of the nineteenth century? Or is the whole collection but a "fortuitous concurrence" of objects?

SALICYLIC ACID IN YELLOW FEVER.

The *Berliner Klin. Wochenschrift* of September 2 publishes part of a letter written some time ago to Professor Heyden of Dresden, by Dr. Hartwig Bünz of Savannah, and which is of special interest at a time when yellow fever is raging as it now is in the Southern States of North America. Dr. Bünz was called in August, 1876, to an epidemic of yellow fever in Savannah, State of Georgia, and after trying the stock remedies of the country—emetics, purgatives, starving, etc.—without effect, and finding that the fever was of an intermittent type, he resolved to make an experiment with salicylic acid. He gave adults a dose of one drachm and a half, either in solution, in capsules, or rubbed up in the sugar, and if the stomach rejected it he gave a double dose per rectum. The results were excellent. The temperature, which ordinarily ranged between 104° and 106° Fahr., fell to 100° or 100·5°, and in many cases to 99°, and the pulse from 120, or higher, almost to normal; and of 179 patients thus treated, of both sexes and all ages, *only four* died. Dr. Bünz made the observation that the patients treated with salicylic acid complained far less of pains in the spine and limbs than those treated with quinine, and he himself, when afterwards laid up with the fever, and taking a large dose of salicylic acid very early in the attack, cannot remember that he suffered from these pains. He regards the acid as the most powerful antipyretic against yellow fever, both of the intermittent and remittent type, but has no experience of it in the continuous form, over which, as is well known, quinine exerts very little, if any, influence.

ROYAL COLLEGE OF SURGEONS.

From the annual report of this institution, it appears that during the past collegiate year, ending in July, there had been fourteen meetings of the Council, or governing body of the College, which consists of twenty-four members elected by the Fellows. The Court of Examiners consists of ten members elected by the Council from the Fellows of the College. The Court superintends the carrying out generally of the regulations of the Council relating to the preliminary and professional education of students, and conducts the pass examinations in surgery and surgical anatomy of candidates for the diplomas of Fellow and Member of the College. During the year above mentioned the Court has held three meetings for the examinations for the Fellowship, when of the 95 candidates who offered themselves for the primary, 46 passed and 49 were referred for six months; at the pass examination, 35 presented themselves, 27 passed, and 8 were rejected. There were twenty-seven meetings for the pass examinations for the membership. At the primary examination on anatomy and physiology, of the 747 candidates, 478 passed and 269 were rejected; at the pass examination on surgical anatomy and the principles and practice of surgery and medicine, 531 candidates presented themselves, 321 of whom passed, 89 were approved in surgery and required to qualify in medicine, 72 were approved in surgery and afterwards qualified in medicine, 121 were referred for six months—the total number of diplomas granted amounting to 393. The Board of Examiners in Midwifery consists of six members, but there have not been any appointments made during the last three years, and the examinations are suspended until further notice. The Board of Examiners in Dental Surgery consists of six members elected by the Council for five years—viz., three members of the Court of Examiners of the College, and three other persons skilled in dental surgery. During the year 39 candidates have been examined, 27 of whom passed to the satisfaction of the Board, which consists of Messrs. F. Le Gros Clark, F.R.S. (chairman), William S. Savory, F.R.S., John Birkett, F.R.C.S., Samuel J. A. Salter, F.R.S., Thomas A. Rogers, M.R.C.S., and Henry J. Barrett, M.R.C.S.

THE HEALTH OF NEWCASTLE-ON-TYNE.

The report of Mr. Henry E. Armstrong, Medical Officer of Health for the Borough of Newcastle-on-Tyne, as to the sanitary condition of the district for the year 1877, in one respect, at least, exhibits a satisfactory state of things. The deaths during the period have been at the rate of only 22·3 per 1000, the lowest rate of mortality ever recorded for Newcastle. The rate of mortality from the seven chief zymotic diseases is given as 2·4, being the same as during the year 1876, and showing a considerable reduction below the corresponding rates of recent preceding years. The number of cases reported as having been admitted to the Fever Hospital is small as compared with the admissions of former years—thirty-nine patients only were received, of which number twenty-seven have been removed there by the Medical Officer of Health, at the cost and with the sanction of the Sanitary Authority. In most instances the consent of the patients and friends to the removal of the former to hospital has been readily, or with a little persuasion, obtained. In one instance, where the surroundings of the case were of a highly insanitary character, the patient's positive refusal to leave the house necessitated her removal to hospital on a magistrate's order, which was effected. Mr. Armstrong points out that in a former report he called attention to the public importance of an early removal of cases of fever to hospital. At the same time it was shown that from want of legal power to maintain in hospital patients suffering from infectious fever, who, though not paupers, could not pay for themselves, the Sanitary Authority was unable to isolate many cases which might otherwise be removed to the great advantage of themselves and the community. It was also shown that this difficulty would be met by participation of the Fever Hospital in the proceeds of the Hospital Sunday collection. Application has been made to effect this, if possible; but as yet no reply has been received.

PUBLIC HEALTH MATTERS IN DUBLIN.

Some weeks ago we mentioned that the Public Health Committee of the Corporation of Dublin, acting as the Urban Sanitary Authority, had practically announced their intention of ceasing to carry out sanitary measures, in consequence of the quashing by the Court of Queen's Bench in Ireland of the borough rate levied last December. We are glad to say that wiser counsels have since prevailed, and the Public Health Committee have applied to the Local Government Board for Ireland to help them out of their difficulties in a constitutional manner. At an adjourned meeting of the Corporation, on Monday, the 16th inst., the Town Clerk read a letter from the Secretary of the Local Government Board, stating that Mr. O'Brien, one of the Inspectors under the Board, proposed to fix Thursday, 3rd prox., as the day

for the holding of an inquiry into the application of the Sanitary Authority for an alteration in the incidence of the charge in respect of expenditure for sanitary purposes in Dublin. On the motion of Mr. Gray, it was resolved to apply for a postponement until October 15. Mr. Gray stated that Mr. O'Brien was most anxious to assist them in every way. This inquiry is intended to be held in accordance with Section 226 of the new "Public Health (Ireland) Act," 1878, which, after providing that all expenses incurred or payable by an urban sanitary authority under that Act shall be defrayed, in the case of the council of a borough, out of the borough fund or borough rate, provides further that "if application be made to the Local Government Board, whereby it shall be alleged that it would be inequitable or inconvenient in the district of any urban sanitary authority that the said expenses should be borne as last aforesaid (*i.e.*, by the borough fund or borough rate), the said Board may, after inquiry, by order under seal alter the incidence of such charge in respect of the whole or such part of the expenditure referred to as to them shall appear to be fair and equitable." We hope that the proposed inquiry will not be a mere formal proceeding, but that the existing sanitary or insanitary condition of Dublin will be thoroughly investigated, as was long since proposed by the Dublin Sanitary Association.

DEATH OF MR. JOHN HILTON, F.R.S.

The profession will greatly regret to hear that Mr. Hilton died, after a short illness, on the 14th inst., at his residence, Hedingham House, Clapham, in his seventy-fourth year of age. Mr. Hilton has long held high rank among English surgeons, and was at the time of his death one of her Majesty's Surgeons-Extraordinary, and Consulting Surgeon to Guy's Hospital, and, we believe, the senior member of the Council of the Royal College of Surgeons. In 1867 he was President of the College and Hunterian Orator, and in 1859 he was appointed Professor of Anatomy and Surgery, in which capacity he gave his well-known and highly valued lectures on "Pain and the Influence of Physiological and Mechanical Rest in the Treatment of Surgical Diseases." We shall take an early opportunity of giving a fuller account of his life and work.

THE RECENT CALAMITIES.

It has been our painful duty lately to step beyond our own immediate province for the purpose of expressing our sympathy, in common with the general public, for the sufferers by some of the greatest catastrophes of our time. Close upon the Sittingbourne accident followed the fearful disaster in the Thames; and we had scarcely had time to realise the magnitude of that calamity, when there began to arrive from South Wales details of a colliery accident even more appalling in some of its aspects than either of its predecessors. By the Abercarne tragedy a whole labouring community has been bereaved at once of the bread-winners of its households. No fewer than 270 men are known to have perished, leaving their wives and children utterly unprovided for. As in many recent colliery accidents, heroism did all it could to mitigate the disaster; but in this case even the hero's efforts were baffled by the spirit of destruction. We have little new to add, at present, in regard to the *Princess Alice* calamity, except that our apprehensions in regard to the number drowned have proved only too true, no fewer than 630 bodies having been recovered. But even now the full tale is not told.

LIGATURE OF THE COMMON CAROTID AT BIRMINGHAM.

On Wednesday, 11th inst., at the Birmingham General Hospital, Mr. Jolly tied (antiseptically) the right common carotid for a soft, compressible, pulsating tumour of the orbit—coming on suddenly, disorganising the eyeball, having well-marked transmitted pulsation communicated to the frontal and temporal vessels, with great congestion of the parts around, but entire immunity from all brain symptoms or disturbance of the cerebral circulation. After the vessel was secured, all bruit in the tumour ceased for some time, but has recurred, though not nearly so loud, and the pulsation is scarcely perceptible. The patient has not suffered any local or constitutional disturbance, and is recovering rapidly.

LIMASOL, CYPRUS.

We have received the following interesting report on one of the important positions occupied by our troops in Cyprus, from Surgeon-Major Raddock, of the Bengal Army, in charge of the 31st Punjaub Native Infantry:—

Limasol is a clean town, with about 4000 inhabitants, and with a little trouble its sanitary condition may be greatly improved, though it does not strike one as being very bad even now. The streets are narrow, and paved with round stones. The houses are of sun-dried bricks chiefly, and on the same (Eastern) style as at Larnaca; there are more, however, of the better sort here—large, cool, and comfortable-looking places, which the people are inclined to rent for a consideration, *i.e.*, for about double the value.

One of these houses may be got for a European hospital easily, and would well answer the purpose. I selected one to accommodate thirty patients, and they would have been very comfortable, but the rent asked was more than could be paid—£9 a month; £4 was offered, but not accepted.

The water-supply is good and sufficient throughout the town and at the encamping grounds, of which a selection may be made from three. The nearest is a short distance from the back of the town to the west; it is a large open plain, with drinking well-water near, but is without trees. The advantage of this camp is that it is near the town, from which supplies are to be got, and it is open to the south-west wind, which blows from 10 a.m. to 4 p.m., and makes the day endurable.

The 31st P.N.I. was encamped here till to-day; it has now gone to the second encamping ground, where there are trees; these, however, are the small caroob trees (and you see no other about here), which afford very little shelter from the sun, and have the disadvantage of hindering the free supply of the south-west wind, which, as I said before, makes the day endurable, and doubtless saves one from heat-apoplexy.

There is a third encamping ground, or what could be made one, on the south side of the town along the sea-coast—a fine open plain, with well-water near, but no trees. I should say this is the healthiest spot of the three I have mentioned. But European troops should have huts built for them; go where they will here, unless properly hutted they will get continued fever. I have nine cases to-day, and expect more daily, and these in men that have in a manner been accustomed to great heat. They will not stand tent-life long, though; it will tell on them in another month probably.

The early mornings here are close; the thermometer stands at 88° to 90° in a tent at 10 a.m. There is no wind, and the sun strikes on the temples and at the back of the head as hot as any Indian sun does. The evenings are close too, usually. The high south-west wind from ten in the morning to four in the afternoon is a God-send, and revives one for the day. The nights are cold and damp with a heavy dew, which gives dysentery. I have four cases of acute dysentery now under treatment.

I have been four miles out of Limasol, and have not seen any marshes anywhere, and as far as I can understand the nature of the country, I do not think there are any in our vicinity. I have since been informed that there is a large salt marsh convertible into a harbour about four miles south of the town. We do not have ague here, but a continued fever—from the heat alone, I believe. There are ranges of hills along the north and west, distant about eight miles.

We have not had beef yet, but mutton, fowls, and eggs are abundant; there are goats too, but there is a difficulty

in getting milk, and there is no butter. Nice brown bread is made here. There is plenty of grain and vegetables of many sorts—potatoes, onions, tomatoes, vegetable marrow, cucumbers—and first-rate fruit. I think the supply in eatables would equal the demand if a European regiment were stationed here. There are a few enterprising European tradesmen at Limasol, who are getting wines and stores from Alexandria, and in a short time the place could be well provisioned.

With regard to drinking-water, there seems to be an ample supply at Limasol, and there is a good sea-beach at one (No. 3) of the encamping grounds for bathing purposes.

Summer-time here is decidedly unhealthy, though it may be less so than at other places in the island. The heat is great, and at times continues during the day; and the difference in temperature between the day and the night is very great: in the day the thermometer is generally 90° in the shade, and at night 74°. This I have observed myself. I have only a common thermometer, and may not be very accurate, but, taken as an average, I think it is a fair record.

Mosquitos, bugs, and fleas abound. Mosquito curtains are needed in the town, but not in camp. I have not seen any snakes yet.

There are no hotels at the place, and no amusements of any sort. The roads are bad, and there are no places of interest to visit in the vicinity. Travellers to Baffo and Larnaca have to use mules. The people (chiefly Greeks and Turks) are civil and intelligent. The soil is a light rich loam, said to be very productive, but is uncultivated, and overrun with a thorny shrub. The only trees to be seen around are the caroob or locust bean, which are small and do not afford much shade; but the bean is largely used as food for cattle, and sugar is extracted from it. The poorer classes suffer a good deal from fever, and look anæmic or not sufficiently well nourished.

Limasol, August 12.

Note.—Daily admission from continued fever from August 13 to August 20, 1878 (strength of regiment: fighting men, 720; camp followers, 168):—

	Fighting men.	Camp followers.		Fighting men.	Camp followers.
Aug. 13	—	—	Aug. 17	4	8
„ 14	5	14	„ 18	12	3
„ 15	3	3	„ 19	13	3
„ 16	—	1	„ 20	15	2

P.S.—During these eight days one case of ague was admitted. C. E. Raddock, Surgeon-Major 31st P.N.I.

August 20.

THE THERAPEUTIC VALUE OF THE USE OF ETHER WITH COD-LIVER OIL.

From the pages of our contemporary, the *New York Medical Journal*, we take the following extracts from a report made by the Committee on Restoratives of the New York Therapeutical Society in the use of ether with cod-liver oil. The subject is one of much interest and importance; and the value of the report will be enhanced by our adding that Dr. Flint was the chairman of the Committee:—

"In 1868, Dr. Balthazar Foster read a paper before the Medical Section of the British Medical Association, on the use of etherised cod-liver oil in phthisis. Referring to the experiments of Claude Bernard, by which it was shown that ether is capable of augmenting the secretion of the pancreas to a remarkable degree, he had reached the conclusion that this discovery opened the way to a great advance in the treatment of phthisis. The defective assimilation of fats being the leading feature in the dyspepsia of phthisis, and this depending upon want of action of the pancreas, it was a clear inference that any agent which would increase the pancreatic secretion would be a valuable adjunct in the treatment of these cases. Moreover, Bernard found that ether promoted absorption independently of the emulsifying action of the pancreatic juice, and thus a double aid was to be expected from its use. Accordingly, Foster administered ether with cod-liver oil to a large number of patients, and preserved careful notes of the results. These results more than justified his expectations, and apparently ought to have led to at least a very general trial of the treatment. But ten years have passed since his paper was published, and only an occasional reference has appeared in the journals, European or American, to this use of ether. Evidently the matter has not been brought sufficiently before the profession, or the success attained by Dr. Foster has not been attained by others. It therefore seemed desirable that more experience upon this point should be accumulated, and accordingly it was selected as one of the subjects for observation by this Committee.

"The shortness of the time over which these observations extend does not allow of any conclusion as to the result upon the progress of the disease of this method of administering the oil as compared with others, even in the limited number of cases of which we have reports; but, so far as the reports go, they have a bearing upon the question of the utility of ether to produce tolerance of the oil, in cases in which the plain oil, or the various emulsions or soaps in common use, cannot be borne. But even in this there is a source of fallacy, which was clearly pointed out by Dr. Squibb at the last meeting of the Committee. It is that the intolerance of the oil depends, in many cases, on a slight degree of rancidity, which, in the first place, excites disgust by the offensive taste and smell, producing nausea, if not actual vomiting, and, in the second place, acts as an irritant to the intestinal canal, provoking diarrhœa.

"Now, ether effectually prevents rancidification, and it becomes a question whether, at least in some cases, the good effects of the ether may not be ascribable to this property. That this is not so in every case, however, is shown by the fact that the purest oil, without a trace of rancid taste or odour, is known to have been employed in some of the trials." The report then gives the details of thirty-one cases, and sums up thus:—"In twenty-six of these cases the combination was well borne; in five of them it was not well borne. In the twenty-six cases in which the oil with the ether was well borne, it is noted in twenty-four cases that either pure oil or an emulsion of oil had been tried, and had disagreed. In one case plain oil was found to agree better than the mixture with ether, and in another case the etherised oil did not answer so well as an emulsion with hypophosphites. The ether was given with the oil in twenty-two cases; after the oil—fifteen to thirty minutes—in nine cases. Of these nine cases, three had tried unsuccessfully to take the ether *with* the oil, but had exhibited perfect tolerance when the ether was given *after* the oil. The results in this limited number of cases seem to sustain the conclusion of Dr. Foster in a remarkable manner. But it is very important that we should have a large number of cases extended over a longer period of time, and bearing upon the question of the better assimilation of the oil, and therefore of its greater ultimate usefulness, as well as upon its greater present tolerance. And it is especially important that unsuccessful cases should be reported as invariably and as carefully as those which support the claims of the medicine."

An Eulogium on Doctors.—In his report to the Académie Française on the Monthyon Prize, Professor Dumas, the distinguished chemist, thus expresses himself concerning medical practitioners, who daily furnish proofs of their humanity, courage, and abnegation:—"If virtue consists in absolute devotion to duty, do we not find the most certain signs of this in the repeated traits of courage presented to our admiration by medical practitioners, interpreting the oath of Hippocrates in the most noble sense, exposing their own lives in a struggle without glory, in a combat without illusions, surrounded by patients to approach whom may be mortal? Is the danger uncertain? How numerous, on the contrary, are the examples which attest that in certain affections which are but too common it is imminent. Do you ever find a single practitioner hesitate in the accomplishment of his mission? Never! Whether they are aged and enlightened by the experience of a long past, whether they are starting on their career animated still by all the confidence of youth, whether they are living alone, which might excuse selfishness, or married and fathers of families, which would authorise prudence, they are never found to falter. Long, however, would be the list if it had to furnish the names of all these victims of professional duty, of all these practitioners 'dying in front of the enemy,' as they say at the Ministry of War."—*Union Méd.*, September 5.

FROM ABROAD.

The Paris Hospital Mortality Returns.

In his report for the second quarter (April-June) of 1878 (*Union Méd.*, August 17 and 22), Dr. Ernest Besnier states that the atmospheric conditions of that quarter in Paris were as follows:—The mean temperature was notably higher (by more than 1° C.) than the mean temperature of the same quarter calculated for a great number of prior years—the daily variations having been considerable, as is usual at that time of the year. The humidity was very considerable, the height of rain that fell (237 mm.) having greatly exceeded the mean of the quarter—150 mm. The direction of the wind, which was very variable, was most frequently west.

The *general mortality* of Paris always diminishes during this quarter; and the considerable increase in the number of persons which has taken place in all parts of the town this year has not changed this invariable rule—any excess of mortality that is observable, compared with the same period of former years, keeping within the limit due to the normal increase of population, showing the relative benignity of the medical constitution in spite of the exceptional circumstances caused by the Exhibition. The general mortality in the hospitals and hospices for the second quarter of 1878 amounted to 3237 as compared with 2959, the mean mortality of the quarter for six preceding years.

1. *Affections of the Respiratory Organs.*—The admissions for *phthisis* were 1180, with 698 deaths, or 59·15 per cent. Of *pneumonia* there were 534 cases, with a mortality of 166, or 31 per cent.; of *bronchitis* 1173 cases, with 58 deaths, or 4·94 per cent.; and of *pleurisy* 382 cases, with 48 deaths, or 12·56 per cent. As is usually the case, these diseases remain about as numerous in the spring quarter as in winter; but, in spite of an excess of mortality from pneumonia which took place in spring, and not in winter, the lethality of these affections notably diminished, and will diminish still more during the succeeding quarter.

In a communication from the Cochin Hospital, Dr. Bucquoy states that these affections continued so frequent as only to be explained by the influence of some special medical constitution. Of 210 new cases which he admitted, 17 were pneumonias and 22 pleurisies. The pneumonias were benign in character, and, as a rule, those which had received the requisite attention from the beginning recovered. And yet this statement would seem to be contradicted by the statistics; for of the 17 cases 5 died, *i.e.*, the enormous proportion of 1 in 3·4. This fact he cites to show of what little use are statistics when applied to the whole mass of cases of a disease bearing the same name. The pneumonia of young subjects is almost always cured, while in the aged it is usually fatal. Patients are constantly brought in who have been suffering from pneumonia for several days without any treatment, the stage of grey hepatisation having been already reached. They die a day or two after their admission. Then there are alcoholic pneumonias and those which are developed at the termination of cachectic diseases. Now, if all these cases were added together, without taking into account the categories of which they consist, the most erroneous ideas of the prognosis of pneumonia would be entertained. By reason of the circumstances adverted to, pneumonia gives rise to an enormous mortality in hospitals, while in young and vigorous subjects, if the most ordinary precautions are taken, it is usually cured. Some time since, Dr. Bucquoy was able to communicate a statistic of 49 cures in 50 cases occurring in subjects of less than fifty years of age who happened to be in his wards that year; whereas now he loses 5 out of 17, these deaths occurring in "alcoholics," in aged persons, or in patients brought in dying. In reply to his note, Dr. Besnier states that he has always been very particular in pointing out in his reports the *exaggeration* of the mortality of pneumonia when derived from hospital statistics, it being always in fact raised more than a third of the real mortality of the disease. It is, however, impossible in the present state of science, and with the means which we have at our disposal, to furnish a statistical account by categories of forms, varieties, etc., of each disease. Still, it is important to return the amount of mortality from these various forms of pneumonia, as showing what a redoubtable agent of nosocomial mortality they form.

2. *Diphtheria and Croup.*—As Dr. Besnier was enabled to announce in his preceding report, without fear of his prediction being falsified by facts, diphtheria, though still remaining extraordinarily frequent and grave during this second quarter, has undergone the seasonary attenuation which is invariably observed. From 703 deaths, which was the amount of the mortality from diphtheria in the entire Paris population for the first quarter of 1878, it declined to 559 during this second quarter. This seasonary decline will continue also during the third quarter, the curve only rising again during the fourth. Compared with the epidemic of 1877, that of 1878 has undergone a slight declension, which, however, appears regular, and therefore gives reason to hope that it will prove more decided in the following year. But this is what cannot be affirmed or prognosticated; the assertion being purely conjectural. The observation of a moderate number of years has sufficed for tracing a seasonary curve of the zymotic affections of this region; but for the determination of the track pursued in the course of years by certain diseases which perhaps obey true laws of gravitation, nothing can as yet be done more than lay the basis for a methodical study of such obscure questions, and supply some of the early material.

The hospital statistics of croup (it is difficult to conjecture why Dr. Besnier always terms the affection "diphtheria" when speaking of the Paris mortality at large, and "croup" when speaking of that of the hospitals) exhibit the same seasonary numerical decrease. Thus, from 246 in the first quarter the deaths sank to 229 in the second; the mortality also sinking from 76·42 in the first quarter to 66·37 in the second. The number of cases admitted during the quarter was 229, and of these 152 proved fatal, *i.e.*, 66·37 per cent. During the same quarter of the eight preceding years there were 1020 cases admitted, with 750 deaths, or 74·50 per cent.

3. *Variola.*—Notwithstanding the considerable immigration which had been going on for several months, Paris during the quarter still retained the comparative exemption from small-pox that has been so often noted in these reports. It does indeed seem remarkable, amidst the immense prevalence of the disease in London, that in the whole urban population of Paris there were only 6 deaths registered during January-March, 1878, and only 12 during April-June. In the hospitals there were admitted only 18 cases with 3 deaths during this second quarter!

4. *Typhoid Fever.*—During this second quarter typhoid fever has descended to the lowest point of its annual curve. This is the invariable law, without any exception; and with the same certainty may be announced the approaching ascension of the curve, slow and oscillating at first, and then sudden towards the end of summer and beginning of autumn. During the second quarter 141 deaths took place from typhoid fever. There were admitted into the hospitals during the quarter 169 cases, 41 of which proved fatal.

Composition and Quality of the Metropolitan Waters in August, 1878.

—The following are the returns (by Dr. Meymott Tidy) of the Society of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, etc.	Nitrogen: As Nitrates, etc.	Ammonia.		Hardness. (Clarke's Scale.	
				Saline.	Organic.	Before Boiling.	After Boiling.
Thames Water Companies.	Grs.	Grs.	Grs.	Grs.	Grs.	Degs.	Degs.
Grand Junction ...	17·60	0·046	0·105	0·000	0·008	12·6	3·0
West Middlesex...	17·60	0·050	0·105	0·000	0·008	12·6	2·8
Southwark and Vauxhall ...	17·30	0·053	0·096	0·000	0·008	12·6	3·0
Chelsea	16·70	0·035	0·090	0·000	0·007	12·6	2·8
Lambeth	19·10	0·050	0·129	0·000	0·008	13·2	3·0
Other Companies.							
Kent	29·10	0·003	0·435	0·000	0·002	20·5	6·0
New River ...	17·46	0·017	0·135	0·000	0·005	13·7	3·3
East London ...	18·60	0·039	0·090	0·000	0·007	13·2	3·0

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases but the following, when it was slightly turbid—namely, the Grand Junction.

REVIEWS.

The House of Life: Human Physiology, with its Applications to the Preservation of Health. By Mrs. F. Fenwick Miller, Member of the London School Board; Lecturer on Physiology and Hygiene to the Alexandra Palace School of Science, etc., for Ladies, to the Working Women's College, etc. London: Chatto and Windus. 1878. Pp. 185.

In addition to the importance of its subject-matter, another circumstance has made us devote more than usual care to the examination of this volume, viz., its authorship. The fact that the treatise is the work of a lady has been present to our mind throughout the perusal of its pages, so that our gallantry must be answerable for any unwarrantable leniency we may show in the responsible exercise of the critical function. The authoress is well known in several public capacities, especially as a member of the London School Board, and as a lecturer on physiological and hygienic subjects to female audiences; and it is as an elementary treatise for the use of such science-classes, or for popular reading, and not, as might be supposed, as a text-book for female aspirants to medical qualifications, that the volume before us has been prepared.

Within recent years there has been a most prolific multiplication of elementary treatises on scientific subjects, among which physiology has come in for so much attention, that the appearance of one more popular manual justifies a longer notice than the special merits of the volume demand. While it may be conceded that there are some satisfactory features in these repeated attempts to popularise science, it is greatly to be feared that in many cases the teaching has been worse than worthless, from its superficial, bookish, and often altogether erroneous character. In this respect, from the very nature of the subject, whether as a body of scientific truths, or as a means of mental discipline, physiology has been the most abused and distorted in the whole circle. Manuals without number have been poured from the press, exactly suited to the convenience and ignorance of every class of readers, and infallibly adapted to the exigencies of every shade of examination test, while the real significance and practical appreciation of physiological principles, as well as their peculiarly educative power when properly studied, have been in most cases altogether ignored. After cramming up, like so many disconnected geographical names or historical dates, a few technical terms, such as the names of the constituents of the secretions and excretions, with some comparative measurements of the anatomical elements in different animals, the pupil is supposed to be quite a prodigy of physiological knowledge, although for any training his mind has received, or any clear comprehension of the main facts of the science with its bearings on everyday life, he might as well have learned nothing at all. He has merely committed a few names and figures to memory, instead of exercising and enriching his mental powers by the effort to understand the physiological processes of the animal economy. And it is greatly to be feared that this mistaken apprehension of what the study of physiology should be is not, especially in London, confined only to popular students of the science. We have the high authority of Professor Huxley, after a long experience as an examiner of some of the best London medical students, for asserting that in far too many cases these students, and therefore their teachers, had quite erroneous ideas as to what physiology really meant, reproducing the technical jargon of names and figures and histological processes, but missing entirely in many cases the real comprehension of physiological function.

We are therefore glad to find that the volume before us, whatever may be its blemishes, is far from encouraging that parrot-knowledge of disjointed and fractional details which popularly passes for elementary physiology. A welcome proof of this is the almost entire absence of the usual array of tabular arrangements and measurements so common and so much out of place in treatises intended to explain the chief functions of the animal economy. This, then, is one of the distinctive features of the book as compared with many elementary treatises on the same subject: that it really is what it pretends to be—an honest attempt to expound in sufficient detail for popular students the great processes that go on in the living human body. But besides this it has another great object in view—viz., the incorporation with the physiological propositions of their practical applications to daily life and to the preservation of personal health. Thus, after the subjects of respiration and circulation have been discussed, we find a separate chapter entitled "Breathe Fresh Air," in which the facts previously learned are shown to have most important and direct applications on the preservation of the vigour and health of the body; and similar applications are demonstrated in regard to the other functions. We are inclined to think the authoress has done well in thus attempting to enforce the main principles of hygiene upon the sound basis of physiology, and she would certainly have produced a more satisfactory treatise by confining herself entirely to this part of her task, taking the great facts of physiology as proved, without attempting the exposition of the processes whereby they are brought about. But before we take exception to her performances in the latter respect, we must mention two good features of the volume—viz., first, the frequently repeated advice to examine, in some domestic or easily procurable animal, the organs whose functions are about to be discussed; and, secondly, the repeated warnings of the authoress to her readers against the danger often attaching to a little semi-professional knowledge. Although she now and then ventures to deduce from the physiological facts some simple practical hints in reference to disordered states of the system, she always advises the procuring of advice from a suitable quarter in any condition approaching real illness.

While we thus far approve of the plan and spirit of the volume, we are all the more sorry to be compelled to find fault with many important details in its execution. As in all attempts made by any but professional physiologists to explain the functions of the body in a popular manner, there are many loose and misleading statements, and not a little entirely erroneous teaching. As a proof of the justness of our criticism, we quote the following description of the first function discussed, viz., Respiration:—"The centre of the diaphragm is tendinous, and has not the power of contraction; *but all round its sides just where the lungs are fastened on to it*, it is made of muscle, and this contracts . . . . . *and in doing this it necessarily drags down the lungs, which are fastened to it*, and puts their elastic tissue on the stretch; *the air-tubes are thus pulled open*, and the air rushes into them to occupy the space so produced" (page 13). We think it would be difficult to put together in so small a space a more complete misstatement of fact and physiology than we find in the above quotation; and the errors are repeated through the whole chapter, showing that the mechanism of the function is entirely misunderstood. There is not a word as to the physical tendency to the preservation of equilibrium of pressure between the air inside and that outside the lungs, and the bronchial tubes are repeatedly credited with great expansion and compression instead of the air-cells. With so much error in the exposition of the first function discussed, we were prepared to find a number of less important mistakes throughout the volume; but we have no desire to lengthen our fault-finding by their quotation. We cannot, however, omit calling attention to what we are told in the preface is "a special feature" of the work, viz., a pronouncing index at the end of the volume. A "special feature" it certainly is, as the following excerpts will show, the pronunciation recommended being given within parentheses:—"Aorta (a-or'-ter)," "cochlea (kok'-lear)," "trachea (trah'-kee-er)." Shades of Johnson and Ainsworth, moderate your legitimate fury!

It will be seen that we think the authoress, like many others, has made a great mistake in attempting to describe physiological processes. There is no necessity, and therefore the less excuse, for all such attempts, seeing that we possess in Professor Huxley's "Lessons in Elementary Physiology" a perfect model of an elementary scientific text-book. The good chapters and sections of the volume before us—those enforcing the elements of hygiene as based on physiological facts—could have been discussed equally well in a separate treatise issued as a companion to such a text-book as the one we have mentioned. At all events, though it is unquestionably true that the elementary principles of both the sciences are more likely to be appreciated and remembered when their connexion and practical importance are carefully demonstrated, yet this laudable method of attempting to enforce hygienic instruction is seriously

impaired by its incorporation, in Mrs. Miller's volume, with so much that is misleading and erroneous in the scientific groundwork.

Die öffentliche Gesundheitspflege in den ausserdeutschen Staaten in ihren wesentlichen Leistungen geschildert. Von Dr. Carl Götel. Leipzig: Verlag von F. C. W. Vogel. 1878.

An Account of the Main Features of Sanitary Legislation and Progress in the Extra-German States. By Dr. Carl Götel, of Colmar. Leipzig: Published by F. C. W. Vogel. 1878.

The work before us is an essay which received the prize from the German Society for Public Hygiene last year. Of the 314 pages of which it consists, 140 are devoted to the study of hygiene in England, 107 to the same subject in France, and the remainder to the hygienic progress of the less advanced or smaller European and other countries.

The author's aim is less a critical than an historical aim. He endeavours to trace the gradual rise of what we may term sanitary enlightenment in each country, as evidenced by its sanitary legislation, and by the efforts of its larger towns to improve their drainage, water-supply, etc.; and he shows us the sanitary level which each has reached at the present time. He scarcely stops to discuss what might have been, or to pass judgment; he mainly confines himself to telling us what has been and what is. Notwithstanding this, the few comments which he allows himself to make from time to time are always to the point.

As we have already remarked, England has the largest space devoted to it, for "its practical results in the domain of hygiene are the highest of any country." First, our "sanitary legislation and organisation" are described, from the foundation of the General Board of Health in 1848, up to the passing of the Public Health Act of 1875, the subject being handled in a way which proves the intimate acquaintance of the writer with it. Next, the hygiene of towns and villages is dealt with, and the various experiments, unsuccessful and successful, are described, which have been made with the disposal of sewage, the prevention of pollution of streams and rivers, the improvement of dwelling-houses, etc. A short chapter is devoted to the hygiene of food and drinks in England; and lastly, the hygiene of trades and manufactures, the public provisions for the relief and prevention of sickness—hospitals, lunatic asylums, compulsory vaccination, and the repression of contagious diseases—are discussed, and a few words are added with regard to the registration of births and deaths. One of the interesting points which Dr. Götel brings out in his essay on English hygiene is the centralising influence which sanitary legislation has exerted in this country. The love of "self-government" inherent in most Englishmen has been a great obstacle to sanitary progress. Now this independent spirit has had to undergo restrictions for the common good, which were formerly not demanded of it, and so "step by step has arisen the foundation and development of a right for the State to overlook, stimulate, and, to a certain extent, force into action the local authorities." This subject, however, is rather one for the political economist or the general historian than for the physician, hence we must content ourselves here with merely alluding to it.

A section headed "The Medical Profession and Medical Officers of Health" excites our curiosity, but Dr. Götel does little to gratify it, except by referring us to the pages of the immortal "Pickwick" for types of practitioners who dispense their own medicines, in the persons of Mr. Benjamin Allen and Mr. Bob Sawyer. As to the medical officers of health, he knows on what terms they are elected, when the State exercises a control over them, and when they are at the mercy of the local authorities. What, however, he scarcely knows is the insecurity of the present position of a medical officer of health, so we will illustrate it, in case he reads this review, by a brief story, the truth of which we can vouch for. A certain board of guardians, in a district which shall be nameless, a few years ago elected an officer at a salary of £300 a year. He did his duty, and routed out many abominations; at the next election they reduced his salary to £200 for one year, allowing him at the same time to practise medicine outside the district. He still continued to act with vigour; in consequence they brought him down to £100 a year at the next election-day. The fourth year they exceeded all former years in—shall we say?—stinginess, and offered him £50 per annum. We understand that he would have accepted £75, but they refused it, and he very properly resigned. If £75 had been given, the board would have gained £12 10s., as the Government would have paid half the salary; as it is, the board has to pay the whole.

In speaking of the hygiene of towns, Dr. Götel expresses his belief that, for small establishments, the dry earth system of Mr. Moule deserves our best attention. For large towns he agrees with the best modern authorities that a sewer system, combined with irrigation of cultivated land, is the most practicable. He regards it as to "England's everlasting credit to have been the first to have proved to the rest of the world the practical possibility of this system, and its great value for the preservation of the health of towns by examples which are every year becoming more numerous."

The efforts which have been made in this country and in America to prevent the pollution of rivers with undiluted sewage, and with which the author is well acquainted, are, we are happy to say in passing, now finding an echo in Germany. Last year the German Government not only refused its consent to projects for pouring the sewage of Cologne and Stettin into the adjacent rivers, but declared that it should for the future absolutely put its veto on every similar proposal.

Dr. Götel considers—and we quite agree with him—that the English burial system is one of the greatest blots on our hygienic conditions. He particularly refers to the absence of any legal enactment for the medical inspection of corpses (*Leichenschau*), or for fixing the interval between death and interment. Those who know something of village funerals, and of how a corpse is sometimes kept about until it might be said of it, as of Lazarus, "he stinketh," will feel how much there is to be done here. The hygiene of death, as we may call it, has not only to contend with the ordinary enemies of progress, but "with ecclesiastical considerations, and with sentiment bred of ignorance of facts." The subject of village churchyards, putting aside the question of parish mortuaries, is one which demands attention from the State. But what can we expect, when the apathy, not to say ignorance, of the most interested parties—the clergy—is such that, to be near their churches, they wilfully build their parsonages next door to the churchyard!

Another subject where Dr. Götel thinks there is much room for censure is the management of hospitals in England, and he alludes to those, alas! too well-known defects, the pauperising influence of gratuitous medical relief, the struggles for public favour, and the rivalry of so-called charitable institutions, their pharisaical trumpetings of good deeds, and hypocritical concealments of bad, the subordinate position which the medical officers often have to endure, and the absence of general State control over the foundation and administration of new hospitals. Yes, Dr. Götel, a hospital for "diseases of the great toe" would be greedily welcomed by the British public, and might possibly get a charter from the State, while benevolent old ladies would stake their hopes of heaven on their liberality in subscribing to its funds.

We have left ourselves but little space for reference to Dr. Götel's account of sanitation in France and elsewhere, though there are many points of interest in it. Hygiene in France, he shows, has in its favour the centralising system which governs the country, and can to a certain extent model every department in the same fashion. *Against* it it has—1. The want of free election of the members of the Conseils d'Hygiène by the people of the districts. At present the prefect elects them. 2. The want of initiative capacity on the part of the members, who depend on the central authorities for the necessary stimulus. 3. The prefect's independence of their decisions, so that he can accept them or not, as he wills. 4. The insufficient pecuniary provision for paying officials to do secretary's and other necessary work. Notwithstanding this, the state of hygiene in France deserves the study of the other European nations, and its hygienic literature is especially abundant and extensive.

The reports also from America are, Dr. Götel thinks, extremely encouraging, though he doubts the permanent results obtained in the hospitals for inebriates in the United States.

In Austria, hygiene "is still in its infancy"; in Russia, "we can scarcely speak of its development at all."

In the Netherlands the Liernur system of pneumatic

drainage—of which, by-the-bye, a good account is given by the reverend and enthusiastic Dr. Esdaile, in *Good Words* for June, 1874, and at page 773 of the volume for 1876—scarcely appears to have answered its inventor's expectations; and Dr. Götel is evidently unfavourably impressed with it.

In conclusion, we can recommend this work to those of our readers who know German; and for others who do not, we should be glad to see it appear in the more accessible form of an English translation.

FOREIGN AND COLONIAL CORRESPONDENCE.

FRANCE.

Paris, August.

International Congress on Hygiene—System of Sewers in Paris—Pollution of the Seine by Sewage—First Project of Sewage Irrigation—Present State of the Work—Reports of Commissions—Projects for Further Extension—Increased Value of Sewage.

The International Congress on Hygiene which was held between the 1st and 10th of August has proved a great success. A very large number of delegates were present from all parts of the world. Many discussions of very great interest have taken place, and there have been several excursions for the purpose of demonstrating practically the working of some of the systems which have been detailed in the sittings of the Congress. One of these was in connexion with the subject which formed the second of the series of questions laid down for special consideration, viz., the pollution of rivers and the method for avoiding it. It is to this question, so far as it concerns the disposal of sewage, that I will devote my first letter.

The sewage question is one which has attracted a large amount of attention of late years in Paris, and French engineers and hygienists have been far more active in this matter than is generally supposed in England. The fact is that their activity has been hitherto confined to those sides of the question which are not obvious to the outsider, to the exclusion of such as make themselves evident to the most casual observer; in other words, they have studied the questions relating to the carrying and the disposal of sewage rather than those relating to the trapping and ventilation of drains. In those parts of the subject, however, at which they have worked, they have done so with an energy that is worthy of all praise, and their system of sewers is magnificent, as the members of the Congress had an opportunity for seeing during the visit to subterranean Paris which had been arranged for them. The network of conduits is now nearly complete throughout the town, and the sanitary engineers are devoting nearly the whole of their attention to the question of the disposal of the sewage thus collected together. The "great collector," as it is called, in which all the lesser conduits are brought to a focus, carries the sewage down to Clichy, a few miles below Paris, where, until lately, it poured the whole of its contents into the Seine. As may readily be imagined, the state of the river for some miles below this point was most filthy: the water became nearly black; its surface was covered with scum, amongst which floated the bodies of dead animals, rotting vegetables, fatty matter, and organic *débris* of every kind; a blackish slimy deposit formed at the bottom of the river, which was in a state of constant fermentation, so that large bubbles of gas rose from the whole surface of the water. In the part of the river thus affected no fish could live, nor were any of the usual water plants to be found. The amount of free oxygen dissolved in the water was reduced to almost zero, and in fact this part of the river was converted into one vast sewer. It was not, however, till about fifteen years ago that much attention was paid to the subject, with the view of ameliorating the existing evils. In the year 1864, M. Mille, one of the principal French engineers, formed a project for distributing the sewage of Paris over the plain of Gennevilliers with the view of simultaneously epurating and utilising the liquid. This plain is situated a few miles below Paris, just below the outlet of the "great collector" at Clichy, and is thus well placed for the experiment advocated by M. Mille. It is in the form of a peninsula, being situated in a sharp curve of the Seine, which surrounds it on three sides, and it contains about 2500 acres, for the most part consisting of arid, unfruitful soil, none of which was worth much, and some part of which had not been cultivated for more than thirty years. As I before said, M. Mille first advocated the utilisation of this plain so far back as 1864, but it was not till 1869 that the first attempts were made to carry the scheme into execution. In June of that year two steam-engines began to pump sewage from the "great collector" at Clichy, on to about fifteen acres of land at Gennevilliers.

Unhappily, shortly after the concern was well started, the Franco-German War broke out. The land, with its conduits, and the engines were in a position greatly exposed to fire during the siege of Paris, and everything was destroyed. No sooner, however, had the country settled down again than the attempt was renewed, and this time with greater success. At the end of 1873, 220 acres were under cultivation; this had increased to 327 acres in 1875; and there are at present no less than 925 acres of land irrigated by sewage-water. The experiment has thus been tried on a sufficiently large scale and over a sufficient length of time to permit conclusions to be drawn as to its practicability on a scale of sufficient magnitude to dispose of the whole of the liquid sewage of Paris. To settle this question before further developing the present existing system, several Commissions have been from time to time appointed. These have looked into the whole subject from the various points of view which it presents. In their reports these Commissioners have dealt with the following questions:—(1) The best mode of purifying sewage; (2) the effects of irrigation upon land such as that in the peninsula of Gennevilliers; (3) the alteration in the value of land subjected to irrigation; (4) the effect upon the health of those living in the neighbourhood of the irrigation works. As regards the first question, all the best authorities on the subject, of whatever country, agree in stating that for a large town, irrigation is the only practicable method of disposing of sewage with safety. The various other methods hitherto tried, whether by subsidence, artificial filtration, or by chemical means, have all proved unsuccessful when applied to large towns, either on account of the great expense attending them, or because they have failed to procure the desired epuration of the sewage material. Inquiry thus made it evident that the experiment at Gennevilliers is a step in the right direction, and that complete success could only be hoped for by following up the course of action already begun. This being decided upon, the next question to be settled referred to the quantity of sewage-matter that the land was capable of absorbing and epurating. It was found by experiment that each acre of land at Gennevilliers could absorb 26,800 cubic metres of sewage-water per annum. This was the maximum; but, as a matter of fact, the average quantity which has been furnished to each acre during the six years that the irrigation has been carried out has been only 18,000 cubic metres per annum; and this would appear to be the greatest quantity which, with due regard to agricultural requirements, should be supplied. The total sewage of Paris amounts to about 100,000,000 of cubic metres per annum; and hence, to dispose of the whole of this quantity by irrigation at the above rate, between 5000 and 6000 acres of land will be required. In this way the whole of the sewage would be *epurated*, but it would not be by any means completely *utilised*; for in the 100,000,000 cubic metres of sewage there is sufficient nitrogenous matter to manure thoroughly not less than 150,000 acres of land. It is thus evident that a large quantity of valuable material will be lost if the irrigation is confined to the area necessary for complete epuration. This cannot be helped at present, for it is with great difficulty that the promoters of the scheme have been enabled to dispose of the sewage already used for irrigation. The plan they have gone upon differs from that followed in most of the English towns where sewage-farming has been undertaken: in these the town has bought a considerable estate, and has undertaken its own farming; at Gennevilliers, on the contrary, the system pursued has been to induce independent cultivators to take the sewage for their land, the town of Paris acting simply as the vendor of the manure, and not in any more strictly agricultural character. It is perhaps scarcely correct to say that it has been the vendor of manure; for so great was the prejudice against the scheme on the part of the cultivators that it has hitherto been necessary to allow them to have the water for nothing, and the town has been glad to dispose of it at that rate. The value of the irrigated land has, however, so greatly increased—in

many cases three-, four-, and even five-fold—that the cultivators in the immediate neighbourhood are beginning to appreciate the utility of sewage-irrigation; and hence the obstacles to further progress are likely to be less than they have hitherto been. Quite recently, moreover, the cultivators whose lands are irrigated have of their own accord offered to pay something for the water with which they are supplied, thinking that by so doing they will obtain greater control than at present over its distribution. Whilst the town was giving its manure for nothing, it considered itself entitled to suit itself as to the quantity to be distributed; and the primary object in view being epuration rather than utilisation, it has been in the habit of pouring nearly as much water over the land as it was capable of purifying, this being frequently greatly in excess of what the cultivators wished for agricultural purposes. Having thus treated of the steps which have been already taken with a view to the cleansing of the Seine at Paris, I will pass in my next letter to the further measures which it is intended to take to complete the undertaking, and I will say a few words upon the agricultural, financial, and sanitary aspect of the question.

AMERICA.

PHILADELPHIA.

THE ABUSE OF MEDICAL CHARITIES IN NEW YORK, BOSTON, AND PHILADELPHIA—YELLOW FEVER IN THE BROOKLYN NAVY YARD AND IN SOUTHERN PORTS—THE INSANITARY CONDITIONS OF THE TENEMENT-DWELLINGS OF NEW YORK—OPHTHALMIC SURGERY IN PHILADELPHIA—HIGH-LEVEL RAILWAYS.

THE growing abuse of medical charities has earnestly engaged the attention of the profession recently; and the New York County Medical Society has already taken up the matter seriously, while the Philadelphia County Medical Society is also actively endeavouring to devise some efficient plan to check this great evil. At a late meeting of the first-named body it was stated that in Philadelphia in 1876—counting, it is presumed, repeated visits—one out of every five inhabitants was treated gratuitously at the dispensaries or hospitals; in Boston, during the same period, one out of every four; and in New York also one out of every four. It was shown recently that only twelve out of 152 applicants for free treatment, whose cases were inquired into, were proper objects of charity. Excluding the public institutions on Blackwell's Island, New York, there were, during 1876, it is said, forty-two hospitals and dispensaries in that city, or almost two charitable medical institutions for each ward. The revenues of those institutions aggregated $720,561, and the number of patients treated was 251,544. Proof of the ability of the greater number of persons who apply for free treatment at the institutions to pay at least small fees, was shown to exist in the fact that of the entire number of persons who were vaccinated at the Eastern Dispensary of New York in the months of May and June, in 1876 and 1877, only 38 per cent. returned to the institution at the end of eight days to show how the virus had acted. Each of the persons composing the remainder, or 62 per cent., forfeited the 50 cents paid at the time of the vaccination. It was argued, therefore, that persons who can afford to lose 50 cents each through negligence could pay physicians a small fee for service. A preamble and resolutions were brought forward for discussion by the Society, declaring that, as the benefits of dispensary and hospital service are not restricted to paupers, as they should be, members of the medical profession are deprived of business properly belonging to them, and hence some of them are suffering for lack of the necessaries of life. They next call upon the Legislature to enact laws to prevent persons receiving free medical attendance at institutions who are able to pay for such aid. In conclusion, they declare that the practice of gratuitous professional service in charitable institutions leads to professional poverty, is counted unbusinesslike, and is held odious before the eyes of the fraternity; and that, after July 4, 1878, it shall be considered a sufficient cause for disfellowship. It remains to be seen what view the hospital physicians, many of whom are members of this Society, will take when the resolutions of the latter come up for final action, or, being acted upon, shall be enforced. In Philadelphia a committee of about a dozen of the most responsible members of the County Medical Society has been appointed to arrange some plans for the consideration of the Society to check this great abuse.

A few cases of yellow fever occurring on board the U.S. steamer *Vermont* at the Brooklyn Navy Yard have awakened renewed interest in that disease, especially as the simultaneous occurrence of cases at New Orleans has made the latter port a fitting subject of quarantine surveillance. One or two of those latterly affected at the first-named station were at once removed down New York Bay, beyond the limits of direct communication with the centres of trade and population, so that epidemic diffusion of the affection is not deemed possible, although those first attacked are still at the Naval Hospital. As the cases on the *Vermont* all originated on the port side, on which the bark *Juanita Clor* discharged her ballast about a month since, the theory is advanced that therein partially lies the secret of the origin of the disease in this instance. The ballast, consisting of small stones and sand, had a peculiar smell, as if it had been impregnated with some deleterious matter, and was not covered or disinfected in any way. The sand was afterwards covered with earth from England for about six inches, and oats and timothy sown upon it. The *Juanita Clor* had brought the ballast from Havana, but had had no cases of sickness on board, nor have any of the men been taken sick who were employed in discharging the ballast. The channel around the dock where that vessel lay has for years received the sewage from several avenues of Brooklyn, and been a common dumping-ground for all kinds of offal from the Navy Yard. Close by is the offal dock, where, in years gone by, an immense mass of night-soil was dumped from contractors' lighters. The United States naval authorities have been recently dredging this channel, and the stirring up of such an immense nest of putrid filth is supposed to be the real cause of the development of the disease at this time and at this locality. It is believed that under ordinary circumstances malarial fever would be the product, but that the combination of filth from the river-bed, exposed to heat and moisture, with the latent germs of yellow fever in the ballast, has changed the type. The Sanitary Inspector of Brooklyn enters his protest to the federal Government—the property of which is here separated distinctly from the local jurisdiction of the Health Department of that city—against the material used in filling these marshes, and against the filth from the Naval Hospital, which, instead of being carried into the public sewers, is deposited in the flats adjoining one of the avenues of Brooklyn. Here, for instance, it is stated, is contained the waste from the six yellow fever patients in the hospital. The Health Board protests also against the agitation or displacement of this river filth by dredging until the advent of cold weather. Their anxiety on this subject will be appreciated when the fact is stated that the Navy Yard is now situated almost in the very heart of Brooklyn. The Commodore of the station has suspended all further dredging, caused the ballast to be removed and dumped in the bay, disinfected the receiving ships, and instituted measures for more perfect sewerage.

This is the season of the year at which the evil of the tenement system of living, so prevalent in New York and almost entirely unknown in Philadelphia, are annually discussed. A fertile theme it is to the medical philanthropist, as he sees in those crowded dwellings of the poor the elements of disease so plainly discernible. It seems strange, indeed, with the temperature for a week or ten days at the elevated figures of 90° to 100°, that any should escape. A reporter of one of the New York dailies, visiting these tenements in company with the medical officers of the Health Bureau, states that even in the better class of houses inspected, where there are only fifteen or twenty families in a house, and where certain provisions for health are really made, the marvel is great that so many remain free from disease. In the older and worse constructed buildings, where all the water has to be taken from a hydrant in the court-yard or on the first floor,—where there are from forty to sixty or ninety kitchens in the same house, in all of which cheap and necessarily inferior food is being almost continually cooked,—where there is no provision for ventilation excepting doors opening into dirty and close hallways, or windows opening on courtyards from six to fifteen feet in width,—where garbage boxes stand for hours in the hall, and for days on the sidewalk,—where all these disease-producing agencies are active, it seems almost incredible that a single inmate should live through such terrible weather as lately experienced in that city. A very large number of deaths do occur in these buildings, of

children particularly, but not by any means as many as might be anticipated from the nature of the surroundings. Undoubtedly many lives are saved by the efforts of charitable associations and individuals, by the temporary removal of sick young children from these crowded dens to seashore homes, excursions on the river, etc. In a floating barge, for instance, on the North River, the other day, there were 1086 poor people, of whom 411 were mothers, each with an infant in arms, and 264 children too young to leave at home. Most of them were suffering from cholera infantum and other infantile summer complaints, and many of them were scarcely expected to outlive the excursion. It kept the doctors on board busy preventing the mothers of these pinched and suffering little ones from giving them unripe fruit, such as green apples, water-melons, etc. In the afternoon the excursion returned, without a death on board, and plainly evincing how important a part hygienic treatment, such as change of air, dict, and scene, occupies in these cases.

It may be a matter of some interest to those of your readers who devote their special attention to ophthalmology, to know what operations are most commonly performed at the present time in this city. The surgeons of Will's Eye Hospital, of Philadelphia, have issued a report of that institution, which contains much valuable information on this point. In the operation for extraction of cataract, in cases appropriate for it, the modified operation of Von Graefe is the one chosen almost exclusively. Liebreich's operation has been tried, but discontinued, on account of the frequency of occurrence of anterior synechiæ. The same may be said of Wecker's method of extraction, on account of the difficulty in the extraction of the lens, and the danger of leaving soft cortical behind. Graefe's modified extraction has therefore become the official operation of the hospital. In young persons, with soft lenses, the anterior needle operation is the one usually resorted to. The use of the spoon or loop to deliver the lens, once so common a sight in former years, is no longer resorted to as a matter of routine, but only in exceptional circumstances, as when pressure fails to extrude the lens, loss of vitreous, or backward dislocation of the lens renders the use of a tractor necessary. The operation most commonly employed for strabismus is that known as Von Graefe's, consisting of a very careful division of the tendon close to its insertion, with the smallest possible amount of laceration of the sub-conjunctival tissue and the tendinous processes of the capsule of Tenon; the refraction of the eye being carefully examined before operating. In disease of the lachrymal apparatus depending on stricture of the nasal duct, Bowman's and Stilling's operations are resorted to, the latter being employed in the more obstinate and unyielding cases; in both operations the canaliculus being slit up as a preliminary. In Bowman's operation, graduated probes are passed through the duct from time to time as the cure progresses; while in Stilling's operation a conical probe (Weber's) is passed down into the stricture to ascertain its site, followed by a wedge-shaped knife, with which the contraction is divided in several directions, until the knife can be turned freely in the duct. In several cases of entropion, the result of trachoma, Von Ammon's operation was very successful, consisting in the splitting of the tarsal cartilage from the conjunctival surface, and removing an elliptical piece from the outer surface of the lid near the tarsal border. The operation of canthoplasty is done more frequently from year to year, as its benefit becomes more apparent, in cases of trachoma, severe cases of phlyctenular keratitis, and blenorrhœal affections. The operation of enucleation of the eyeball, performed thirty-eight times during the year, is the one introduced by Critchett, devised by Bonnet in 1841. Iridotomy (so-called by Wecker of Paris, its inventor) is preferred to iridectomy, as it obviates any dragging upon the iris and ciliary body. Only one case of inflammation of the frontal sinus has been seen in this hospital for many years. Streatfeild's and Passavant's operations for removal of posterior synechiæ have also been performed, the anterior chamber being opened. The former uses a spatula hook to break the adhesions; while the latter, with a pair of smooth iridectomy forceps, seizes the iris adjoining the adhesion, and gently pulls it until the little band is broken.

The people of New York city have at last had the gratification of having rapid transit accomplished as a matter of fact by the construction of elevated steam roads through the centre of some of their most important business avenues and into the very heart of the city. This has, however, been at the expense of the personal comfort of many of those living along the streets thus affected, and especially of the sick, to whom the excessive noise and jarring of the trains on the iron rail has been an annoyance and detriment. A week or two ago a committee of physicians of New York, representing a large number of the most respected members of the profession, presented to the Grand Jury a protest against the elevated railroad, setting forth that the noise caused by traffic on the road is especially injurious to the brain, and promotes nervous diseases. The signatures to the protest comprised among others those of the President of the Academy of Medicine and of the County Medical Society, and several professors of the Bellevue and University Medical Colleges, and physicians of all the hospitals. They declare that perverted mental and moral action, cerebral exhaustion, insomnia, hysteria, chorea, mania, paralysis, meningitis, and decay of nutrition must be largely promoted among those who live along the line of the railway, while in some the alternative will be deafness, or dementia, or death. It has been already definitely observed that patients suffering from inflammatory and other diseases, whose well-being requires rest in all its forms, have had convalescence arrested and relapses provoked. Tradesmen upon Sixth-avenue complain that as evening comes on they are overpowered by an unusual sense of weariness, caused partly by the irritant effect of the jar and din in which they must live, and partly by the necessity of talking all day in an overloud voice. This strain upon the function of voice and respiration directly tends to produce laryngeal catarrh, bronchitis, emphysema, and pulmonary hæmorrhage, the antecedent and often the cause of pulmonary consumption. The municipal authority is relied upon to protect the nostrils of the citizen from a disease-bearing stench. Have not their ears, they say, right to equal justice? Edison, the inventor of the phonograph, is now at work, at the request of the company, to determine in what way their annoyance may be checked, by mechanical attention to the methods of construction of the tracks, ties, beams, etc.

GENERAL CORRESPONDENCE.

FURTHER EVIDENCE ON THE VALUE OF WINE AS FOOD.

LETTER FROM DR. R. DRUITT.

[To the Editor of the Medical Times and Gazette.]

SIR,—In your number for July 13 you were good enough to publish a communication from me on the nutritive value of wine, including the personal experience of my friend Surgeon-General Gordon, M.D., C.B., during the siege of Paris. I now send you a further instalment of evidence to the same effect. Of the writers, Sir John Rose Cormack is already well known to your readers. Mons. F. is a civil servant of the highest position in Paris, and Mdme. F. is his wife. All three testify to the power of wine against the terrible realities of famine. These, and other facts which I hope hereafter to lay before your readers, show the results of the *general* experience of a whole population, as well as the *special* observations of single observers. Both show how wrong we should be to neglect the use of wine in diseases of debility and exhaustion, in which, as in case of starvation, the engines of life stop for lack of fuel. Your readers will notice the distinction drawn by Mdme. F. between the effects of tea and of wine. I am, &c., R. DRUITT.

[*Copy of Letter from Sir John Rose Cormack, M.D., etc.*]

My dear Dr. Druitt,—I am in receipt of your letter asking me to state my experience in relation to the influence of the wine which was so freely used in Paris during the four months and a half of the German siege.

The information which you have already received accords with my experience—viz., that the abundance of good claret supplied to the hospitals, ambulances, and general population largely compensated for the deficiency of meat and all alimentary substances.

About the middle of December the supplies of food were dwindling painfully. In the last month of the siege (January, 1871) the rations doled out to the community were scanty,

and generally of bad quality. Those, however, who had money could buy excellent wine in abundance at a moderate price. To the sick in hospitals, the soldiers, and the poor, a gratuitous allowance of wine was granted on a liberal scale.

I am certain that the good Bordeaux which I largely drank during the period referred to was of high nutritive value to me. During the four latter weeks of the siege, the daily meat-ration (which had been 100 grammes six times a week) was reduced to 50 grammes. What we received for our tickets was always exact in weight, but was very variable in alimentary value, being often chiefly bones: the flesh and bones were derived from lean horses, starved in place of being fed for the shambles. This pitiable dole of animal food was supplemented by 300 grammes of a black article fashioned into loaves, and called bread. From January 1 it became worse and worse, and was at last uneatable, being a repulsive compound of hay and the miscellaneous sweepings of the granaries. During these four weeks we had occasional doles of chocolate, coffee, rice, and cheese. *It was, however, the wine which nourished and supported me during that crisis.* I took three litres of Bordeaux daily; and during Trochu's last sortie, when I was out on and near the battle-field for twenty-four hours, my sole sustenance consisted of seven litres of St. Julien. I was not excited; I was well sustained in the accomplishment of my work, which was severe and anxious; in my head I felt cool and clear. This is the more remarkable, as in ordinary circumstances I rarely take wine or spirits.

My wounded patients had from half a litre to two litres of claret daily, and each member of the ambulance staff at least one litre daily when in Paris, and a large increase when outside the fortifications undergoing fatigue. As a recuperative aliment in convalescence from fevers and other protracted and exhausting diseases, I often prescribe good Bordeaux; and I do so from my personal and ambulance experience of its high nutritive value.

I am, &c., JOHN ROSE CORMACK.

P.S.—At first we were not limited in the purchase of bread; and from September 18, when the investment of Paris was accomplished, till the middle of December, the article was good. When first rationed in bread we were allowed 600 grammes, afterwards only 300. J. R. C.

7, Rue d'Aguesseau, Paris.

From Mons. F——, Ancien Chef de Bureau au Ministère des Affaires Etrangères, Chevalier de la Légion d'Honneur.

[Translation.]

Having been in Paris during the whole of the siege, I know, of certain knowledge, that the ordinary red wine was a most powerful support to the mass of the population; and I doubt if they would have been able to support the numberless privations to which they were exposed had they been deprived of this drink, which took the place of the solid aliment of which they were then deprived.

From Mdme. F——.

Without the *vin ordinaire*, which we drank during the whole time of the siege, and in which we sopped bread as long as we could get it (some of the bread was black and mixed with sawdust), I do not think we could have resisted so long as we did the extreme want of nutritious food; for no doubt we were greatly supported by the wine, though generally I do not drink it.

As to tea, I quite abandoned it, and only took black coffee and bread and wine. Tea was too weakening, and we had fortunately plenty of *vin ordinaire* in the cellar. I think the advocates of total abstinence from wine would have met with a poor reception in Paris during the siege.

With *vin ordinaire* my principal food was rice and treacle in small quantities. As treacle was mixed with all sorts of dietary, one soon got to dislike it.

Paris, September 4, 1878.

A CORRECTION.

[To the Editor of the Medical Times and Gazette.]

SIR,—With reference to your article on Indian Medical Boards in the issue of September 7, will you allow me to remark that they have only been discontinued at present in the case of patients who have passed Boards composed of British medical officers. Of course a splendid new grievance has arisen, and one Indian paper has denounced this partial abolishment as a slur on the medical officers of the Indian Service. Probably Indian "public opinion" will soon insist upon every civilian and officer being allowed to go home on sick leave at the public expense whenever it suits him. Not, indeed, that such a concession would allay *all* irritation: for there are people in the world capable of arguing that the sick should receive increased pay and allowances from the public, in whose cause they have suffered, as we all know that sickness is expensive, and that physicians' fees have been raised in England.

I am, &c.,

ONE WHO PITIES THE POOR INDIAN.

CARBOLIC ACID IN ERYSIPELAS.

LETTER FROM DR. R. NEALE.

[To the Editor of the Medical Times and Gazette.]

SIR,—In the interesting article upon the use of carbolic acid subcutaneously for erysipelas, in your number for September 7, page 278, you say that Professor Hueter first suggested this method in 1874. A reference to the "Medical Digest," section 433, shows that to Dr. Aufrecht, of Magdeburg, the credit of the suggestion was given in your paper for March, 1874, page 355. I am, &c.,

RICHARD NEALE, M.D. Lond.

60, Boundary-road, St. John's-wood, N.W., Sept. 16.

MEDICAL NEWS.

APOTHECARIES' HALL, LONDON.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, September 12:—

Campbell, John Melvin, Rotherfield-street, Islington.
Elliott, Horace, Westminster Hospital.

The following gentleman also on the same day passed his Primary Professional Examination:—

Woodhouse, Tom Percy, St. Thomas's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to all new Appointments that take place.

MADDER, THOMAS MORE, M.D., M.R.I.A.—Obstetric Physician to the Mater Misericordiæ Hospital, Dublin.

WILLIAMS, W. ROGER, M.R.C.S.—Assistant-Demonstrator of Anatomy to the Middlesex Hospital Medical College.

NAVAL, MILITARY, &c., APPOINTMENTS.

WAR OFFICE.—MEDICAL DEPARTMENT.—Surgeon-Major Hampden Healy Maclean retires on half-pay; Surgeon-Major John Carlaw, M.D., retires upon temporary half-pay; Surgeon-Major Henry William Devlin retires upon half-pay; Surgeon William Godfrey Martelli is placed upon temporary half-pay. To be Surgeons under the Royal Warrant of May 1, 1878:—Arthur Jermyn Landon, gent., John Stevenson, M.B., William Lemon Lane, M.B., William Parsons Feltham, gent., John Lichenstein Ritchie, gent., William Leah, Patrick Joseph Dempsey, M.D., Kenneth Serjeant Wallis, gent., John William Henry Flanagan, gent., Owen Edward Pennefather Lloyd, gent., James Gaussen MacNeece, gent., Morgan David O'Connell, gent., Hartley Innes Noad, gent., Alexander Stewart Ward Young, gent., Arthur Harding, gent., John Joseph Falvey, gent., John Frederick Dowman, gent., Horatio Robert Odo Cross, gent., Charles Seymour, M.B.

BIRTHS.

ALDERSON.—On September 17, at Southerton House, Hammersmith, the wife of F. H. Alderson, M.R.C.S., of a daughter.

BARRY.—On September 11, at Lenham, the wife of Edward J. Barry, M.D., of a son.

CABLE.—On September 7, at Royal Hill, Greenwich, the wife of G. H. Cable, M.R.C.S. Eng., of a daughter.

CAMPBELL.—On September 8, at Wellington-square, Hastings, the wife of William Campbell, L.R.C.S. Edin., of a daughter.

FENTON.—On September 14, at Grey Friars Green, Coventry, the wife of Mark A. Fenton, M.D., of a daughter.

JAMISON.—On September 8, at St. Helen's, Lancashire, the wife of Arthur Jamison, M.D., of a son.

MCCLURE.—On September 6, at Verandah House, Worle, Somerset, the wife of Thomas McClure, M.D., of a son.

ROBERTS.—On September 13, at Uxbridge, the wife of Charles Roberts, M.R.C.S., prematurely, of a son.

SHAPTER.—On September 17, at The Barnfield, Exeter, the wife of Lewis Shapter, M.D., of a son.

SMITH.—On September 18, at 82, Wimpole-street, W., the wife of Henry Smith, F.R.C.S. Eng., of a daughter.

MARRIAGES.

CONNOR—SMITH.—On September 14, at St. Mary's, Battersea, James Henthorn Todd Connor, fourth son of William Connor, M.A., M.B., F.R.C.S.I., of St. John's Hill, New Wandsworth, to Esther Geraldine, elder daughter of William Compton Smith, Esq., of Lincoln's-inn-fields.

ELLERTON—SANGROUBER.—On September 6, at St. Peter's, Isle of Thanet, Frederick Charles Grant Ellerton, L.R.C.P. Edin., to Charlotte, third daughter of the late Pierre Sangrouber, Esq., of Lausanne.

EUSTACE—STACE.—On September 12, at Portsmouth, Surgeon-Major Edward Eustace, L.R.C.P. Edin., to Georgina Elizabeth Lucy, only surviving daughter of the late Lieut.-Col. Walter S. Stace, R.E.

GILMOUR—GERRISH.—On September 4, at Hurstbourne Tarrant, Andover, John Henry Gilmour, M.R.C.S. Eng., to Harriette Jane, the youngest daughter of Thomas Gerrish, Esq.

SHEPHEARD—WILKINS.—On September 10, at St. Mary's, Ealing, Walter, third son of Charles Shepheard, Esq., Beaumont House, Ealing, to Marianne, third daughter of Henry Wilkins, M.R.C.S. Eng., Ealing Green.

WARDELL—CLAVELL.—On September 10, at Brighton, John Richard Wardell, M.D., F.R.C.P., of Calverley-park, Tunbridge Wells, to Jane Louisa, widow of the late Captain Clavell, of the Royal Navy.

DEATHS.

BUCHANAN, JESSIE WILMSHUST, wife of Walter Buchanan, M.R.C.S. Eng., of 2, Gibraltar-place, Chatham, at Connaught House, Brighton, on September 14, aged 30.

CLARK, FREDERICK CHEESEMAN, M.R.C.S., L.S.A., at Birkhead's Lodge, Wray-park, Reigate, on September 12, in his 29th year.

GUNN, JOHN JAMIESON, M.B., C.M., M.R.C.P. Edin., only surviving son of Ronald Campbell Gunn, Esq., F.R.S., of Newstead, Tasmania, at 38, Melville-street, Edinburgh, on September 12, in his 33rd year.

HAIGH, HENRY WILLIAM, M.R.C.S., F.R.C.P. Edin., second son of the late John Haigh, of 15, The Crescent, Scarborough, at Scarborough, on September 7, aged 44.

HILTON, JOHN, F.R.S., F.R.C.S. Eng., of Hedingham House, Clapham, and 10, New Broad-street, at Clapham, on September 14, in his 74th year.

LORIMER, ALEXANDER, M.D., H.E.I.C.S., late Deputy Inspector-General of Hospitals, Madras, at 5, Bromley-road, Lee, Kent, on September 14, aged 67.

MARSH, ALICE, wife of W. J. Marsh, M.R.C.S. Eng., House-Surgeon, Royal Cornwall Infirmary, at Truro, on September 12, aged 31.

PEARSE, EDWIN LANGFORD, M.R.C.S., son of George Pearse, M.D., of Godfrey House, Cheltenham, at Negapatum, on August 15, aged 31.

SMITH, GEORGE ROCHE, M.D., late Surgeon to the 7th Hussars and 2nd Queen's Royals, at 25, Brondesbury-road, N.W., on September 7, aged 75.

SYME, JAMES, L.R.C.S. and L.R.C.P. Edin., at Coningsby Place, Alloa, N.B., on September 8, in his 93rd year.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BRADFORD INFIRMARY AND DISPENSARY.—Dispensing Surgeon. Candidates must be registered as legally qualified medical and surgical practitioners. Applications, stating age, with recent testimonials as to moral character and professional ability, to the Secretary, on or before September 24.

BRISTOL MEDICAL SCHOOL.—Medical Tutor. For particulars apply to E. Markham Skerritt, M.D., Hon. Sec., Coburg Villa, Richmond Hill, Clifton.

DERBYSHIRE GENERAL INFIRMARY.—House-Surgeon. Candidates must be members of the Royal College of Surgeons of London, Dublin, Edinburgh, or Glasgow, and unmarried. Applications, stating age, accompanied by diplomas and testimonials, to the Secretary, not later than October 12.

LEICESTER INFIRMARY AND FEVER HOUSE.—House-Surgeon and Apothecary. Candidates must be Fellows or Members of the College of Surgeons of London, Edinburgh, or Dublin; also Licentiates of the Royal College of Physicians, London, or of the Apothecaries' Company of London, and duly registered. Original testimonials to the Secretary, 24, Friar-lane, Leicester, on or before September 28.

MANCHESTER ROYAL INFIRMARY, DISPENSARY, AND LUNATIC HOSPITAL.—Honorary Assistant-Physician. Candidates must be Fellows or Members of the Royal College of Physicians in London, and must have a diploma from some University requiring examination for its degrees. Applications, with diplomas, original testimonials, and a certificate of age, to the Chairman of the Board, on or before September 21.

QUEEN'S COLLEGE, CORK.—Professor of Midwifery. Candidates are requested to forward their testimonials to the Under-Secretary, Dublin Castle, on or before September 28.

UNION AND PAROCHIAL MEDICAL SERVICE.

APPOINTMENTS.

St. Leonard Shoreditch Parish.—Wm. G. W. Thompson, M.D., L.R.C.P., L.R.C.S. Edin., L.S.A. Lond., as Assistant Medical Officer at the Workhouse and Infirmary.

Northallerton Union.—James M. Cumine, L.R.C.S. Ire., L.K.&Q.C.P. Ire., to the Osmotherley District.

DEATHS OF DR. BRAUN AND DR. GRÄVELL.—Dr. Julius Braun, whose well-known work on Balneology has been translated into English by Dr. Hermann Weber, died on August 29; and Dr. Grävell, the founder of the German *Jahrbuch* called "Grävell's Notizen," which is now edited by Dr. Paul Guttmann, under the title *Jahrbuch für praktische Aertze* ("The Practitioner's Year-Book"), also died on August 25.

DR. ALEXANDER HARVEY, Professor of Materia Medica in the University of Aberdeen, has, on account of failing health, resigned his chair, which he has held since 1860.

EMIGRATION.—The ship *Rodney*, Captain Louttit, with 505 emigrants on board, left Plymouth Sound on the 14th inst. for Adelaide, under the auspices of the Colonial Government, and under the medical charge of Dr. Thomas Cawley, F.R.C.S.

ROYAL COLLEGE OF SURGEONS IN IRELAND: THE NEW DENTAL DIPLOMA.—At a meeting of the Council of the College, held on Thursday, the 5th inst., the following gentlemen were elected as the Board of Dental Examiners:—The President, Vice-President, or a Member of Council in rotation. Surgical Examiners—B. Wills Richardson, F.R.C.S.I.; Edward A. Stoker, F.R.C.S.I.; Edward S. O'Grady, F.R.C.S.I. Dental Examiners—Richard Theodore Stack, F.R.C.S.I.; William B. Pearsall, F.R.C.S.I.; Henry Gregg Sherlock, L.R.C.S.I. The examinations for the new dental diploma commenced on Saturday, the 7th inst., and were continued on the Monday and Tuesday following. The fee for the diploma is ten guineas, and the candidates are required to produce evidence of good moral character, and that they have not advertised themselves as dentists for at least three years before presenting themselves. We understand that about fifty-five candidates presented themselves, most of whom came from England and Scotland. The Royal College of Surgeons of Ireland is early in the market with a new dental diploma, and may look to be well rewarded—financially at any rate.

AN AUSTRIAN SANITARY TRAIN.—The *Wiener Med. Zeit.* (August 20) describes the first sanitary train furnished for transporting the wounded from Bosnia. It consists of nineteen carriages, one of which, a second-class carriage, is devoted to the use of a regimental surgeon and his two assistant-surgeons. It is divided into two parts, of one of which is formed a dispensatory and a work-room, and the other is used as a sleeping-room. A third-class carriage is employed for the accommodation of the sanitary *personnel*, twenty in number, and is supplied with mattresses. The kitchen-carriages are furnished with water-casks and stores, and with an ice refrigerator to keep the meat fresh. Fifteen carriages each contain six beds for the sick and wounded.

THE FRENCH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—This body has held a most successful session at Paris, and the sections for the medical sciences seem to have been most actively supported, no less than eighty-four communications relating to every branch of the art of healing having been made, several of them giving rise to considerable discussion. The six *séances* announced in the programme had to be supplemented by two additional ones. Nothing of this kind takes place at the meetings of the British Association, but then the French have no body analogous to our British Medical Association, the French Medical Association confining its attention to the social rights of the profession, and the provision for decayed members. The next meeting is to be held at Montpellier, in 1879, with Senator Krauz, the Director of the Paris Exposition, as its President.

ICTERIC URINE.—When jaundice is not well marked, a great assistance is derivable from examination of the urine. The following three tests are employed by Prof. Hardy before his clinical class with marked success:—1. *Chloroform:* When this is poured upon normal urine, it sinks by reason of its great density to the bottom of the test-glass, exhibiting there a crystalline transparency. If we pour it on the icteric urine, and, having shaken the test-tube plugged by the thumb, leave it quiet for a moment, the chloroform deposit contrasts strongly by its dull colour with the yellow of the superficial layers—the yellow colour being deeper in proportion to the quantity of bile in the urine. It is an excellent test of icteric urine. 2. *Iodine:* When the iodine is poured upon the icteric urine the mixture must not be shaken. At the upper part of the tube three very distinct colours are observable—the first layer formed by the tincture is violet; below this is a kind of diaphragm of a sea-green colour; and the third layer, consisting of the urine, and occupying the lowest part, is yellow. 3. *Nitric Acid:* When this agent has been poured in, the mixture after shaking assumes a bottle-green colour, passing into an olive. This is an entirely special and very characteristic appearance.—*Rév. de Thérap.*, August 15.

The Scotch Dental Education Committee and the directors of the Edinburgh Dental Dispensary have conjointly leased the premises 18, Brown-square, Chambers-street, Edinburgh, for occupation as a dental hospital and school of dentistry. It is expected that the dispensary or operative department of the school will be in working order in November, so as to enable the institution to begin the dental session simultaneously with the medical schools.

The South London School of Pharmacy.—This institution was opened for the tenth session on Tuesday, September 17, when a full attendance of new and old students took place. The annual report was read by Mr. Baxter, the secretary, and an address to the students was delivered by Mr. Joseph Ince. The chair was occupied by the Rev. S. Bache Harris, vicar of the parish, who was supported by a number of local magnates and gentlemen interested in the school.

Vaccination in Madras.—There were 483,192 vaccine operations performed in this Presidency during the year 1876-77, thus showing a large increase over those of the preceding year, which is partly owing to the greater exertions of the vaccinating staff to meet the ravages of small-pox in the famine camps and works of famine relief. In the Coimbatore district, says the *Homeward Mail*, a good plan is followed, whereby the vaccinator's work is diminished and the superintendent is spared the task of extensive inquiry. The moonsiff of each village is bound to keep a register of all vaccinations performed, and when the superintendent, after due notice, arrives to inspect the work, the moonsiff attends with his register, and all the subjects operated on are collected and pointed out to the superintendent.

Ice in Diphtheria.—Dr. Bleynie, a Professor at the Limoges Ecole de Médecine, expresses in the *Révue Médicale* (September 2) his surprise that so many deaths should still take place from diphtheria, when a simple remedy has during the last twenty years proved almost invariably efficacious in his hands, and in those of several other practitioners. This is the administration of ice, the patient keeping a small piece of it in his mouth, which is replaced as soon as melted. When asleep, some is still to be inserted into the mouth, which may be done without waking the child. The relief is immediate, but the false membrane takes from two to seven days to disappear. If ice cannot be got, very cold water may be substituted, giving it twenty or thirty times in the hour. While inserting the communication from so veritable a source, the editor of the *Révue* seems a little puzzled at so efficacious a remedy having made so little way in so long a period.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Knutsford.—Lord Egerton has consented to lease the whole of the Moor to the Rural Sanitary Authority for disposing of the sewage, having approved of the plans submitted to him by the engineer of the Knutsford, Dunham, and Hale drainage scheme.

Locusts as Human Food.—In Tunis, last year, when a drought, followed by a visitation of locusts, caused the utter failure of the olive and grain crops on the coast, and produced something like a famine, the principal diet of the Arabs, says Vice-Consul Dupuis in his trade report on Susa, consisted often of bread made with barley-meal, mixed with oil-cake, preserved locusts, and prickly pears. Locusts were collected during the night from the trees on which they settled and bore down with their weight, and were carried to the villages, where they were boiled in brine, and after being dried in the sun, were sold openly in the markets, and eaten as shrimps are in England.

Good Templar.—The Liverpool licensing magistrates appear to have come to a determination to refuse all applications for new licences, with the view of seeing what effect that will have upon the statistics of drunkenness. Two weeks ago they refused thirty-six applications for spirit and wine and beer licences, and but in a very few instances did the magistrates give their reasons for so doing.

An ex-Consul.—The Chinese population of San Francisco, according to the last return, numbers 32,000 persons of both sexes. Official returns from Natal for 1877 show in that year a population amounting to 325,512, consisting of 159,929 males and 167,583 females. There were 22,654 whites, 290,035 natives, and 12,823 coolies.

A Tutor.—The result of the recent Arts examinations at Burlington House will be made known to the candidates in a few days.

Something to be Thankful for.—The result of Dr. Frankland's analyses of the water supplied to the metropolis during August, shows that the Thames and Lea waters, delivered by the companies supplying inner London, had been efficiently filtered, and were of superior quality to those delivered during the two previous months. The usual excellent quality was maintained by the deep-well waters supplied by the other companies.

Coffee v. Beer.—The Coffee Tavern Company is rapidly and successfully extending its praiseworthy efforts in the metropolis; the ninth establishment of the Company was opened last week in High-street, Stoke Newington. The house is well supplied with the usual accommodation, and it is intended to appropriate the upper part of it to club and other meetings of the working-class.

Services Appreciated.—At the adjourned annual sessions of the county magistrates, held at Preston last week, it was resolved to grant a retiring allowance of £750 a year to Dr. Holland, Superintendent of the Whittingham Asylum. The doctor's age and infirmity had incapacitated him for office.

Opium in Japan.—The draft of a new law for regulating and controlling the opium trade in Japan has been published, by which opium may be bought from, and sold by, licensed druggists alone.

Spes.—There were fifty-seven applications received by the Guardians of the Holborn Union for the appointment of medical superintendent of the new infirmary for the union at Highgate.

Sanitation, Windsor.—The Town Council of Windsor, acting as the Sanitary Authority, have entered into a contract with Mr. Hillé for the treatment of the sewage by the process known as "Hillé's system," and very shortly the new works will be in operation. It is now upwards of ten years since the Town Council was served with the first notice under the Thames Conservancy Act to discontinue the drainage of the town into the river Thames. Having only about ten years previously constructed a system of drainage at a considerable cost, this new responsibility fell rather onerously upon the town.

Socialism and Women-Doctors, Russia.—A decree has lately been promulgated, prohibiting the women-doctors holding certificates from the Military School of Surgery in St. Petersburg from practice throughout the province of Novgorod. The edict is condemned by the *Golos* as likely to check and discourage women, not only as regards medicine, but in all departments of useful education. It is stated that the women-doctors, whilst studying at St. Petersburg, were naturally brought into contact with the young male students at the same school, and that they were thus infected with the Socialist doctrines prevailing amongst the latter class.

A Fellow, Southampton.—We are informed that the Calendar of the College of Surgeons will be published shortly, and may then be obtained at that institution on personal or written application. The postage will be about 5d.

A Royal Medical Dabbler.—Henry VIII.'s state of health in the decline of his life made him a great dabbler in physic; and the King not only offered medical advice on all occasions which presented themselves, but made up the medicines himself and administered them. There is a volume extant containing a large collection of recipes for plaisters, spasmadrops (dipped plaisters), ointments, waters, lotions, and decoctions, devised and made by the King himself and his physicians—applicable, perhaps, amongst other diseases, to that which had been imported some twenty-five years before from Naples.

Fire-Burial.—Cremation becomes optional in Gotha on October 1 next, and a building has been erected for the purpose.

Medical Service of an Army in the Field.—According to the report published in a foreign military journal of the discussion of subjects connected with the medical service of an army in the field, at the recent International Congress in Paris, and which was attended, among others, by chief staff surgeons and other leading medical officers in the German, Austrian, and Russian forces, resolutions to the following effect were adopted:—"Special sanitary or ambulance trains fitted with kitchens, rooms for doctors, etc., are of no practical value; but, on the other hand, it is urgently necessary that all railway companies should construct their goods waggons in such a manner that in time of war they can be readily converted into ambulances." "As the chief medical officer of an army in the field is responsible alike to the military authorities and to the country for everything which concerns the interests of the sick and wounded, it is absolutely necessary that all the *personnel* of the medical department, both upon the field of battle and in the hospitals, and also all officials and others connected with auxiliary societies for aiding the sick and wounded, should be under his command." "Auxiliary societies can only be employed with advantage, and therefore should only be allowed to work, in the hospitals themselves. Their principal duty should consist in collecting supplies of all kinds for the use of the military surgeons; and officials or doctors who come under the recruiting laws of their respective countries should not be allowed to join such societies. In any case, all members of these latter must be placed under military law in time of war, and must be obliged to serve until the end of the operations."

Dr. Thompson.—The autograph of Dr. Livingstone is described in Mr. Naylor's last catalogue as "*rare*," and is offered for one guinea!

"*The Red Lion Club*," founded by the late Professor Edward Forbes, is still in existence, and at the recent meeting in Dublin of the British Association, had a "feeding bout" at the Shelbourne Hotel, of which the *Irish Times* published a very amusing account. The following was an agenda for the evening:—Mr. President Spottiswoode, "On the Measurement of the One-Millionth Part of an Inch," with specimens; Mr. Romanes, "On Performing Dogs"; Canon MacIlwain, "On Mr. Romanes"; Sir John Lubbock, "On his Ants, and their Little Games"; Mr. Wigham, "On the Lights and Shadows of England, with special reference to a Flirtation with an Irish Siren"; Mr. T. A. Dillon, "On Wind-Bags, and their Effect on Sunken Ships"; Captain Burnaby, "On the Virtues of Cockle's Pills"; Professor Hull, "On the Geological Strata of Dublin Streets—after Rain"; Mr. Stanley, "On the Beauties of Dublin Bay, as seen from a distance—Paris"; Professor Flower, "On Longheadedness"; Sir Wyville Thomson, "On the Bottom of the Deep Blue Sea—Oh my!"; Captain Feilden, "On Greenland's Icy Mountains"; and Mr. Burrell, "On Tea-totalism."

COMMUNICATIONS have been received from—

Dr. A. Ernest Sansom, London; Mr. John Chatto, London; Mr. T. M. Stone, London; Dr. Robert Druitt, London; Dr. James Ross, Manchester; Dr. Thomas Barlow, London; Dr. J. M. Bruce, London; Dr. W. Macneill Whistler, London; Dr. E. Sparks, Exmouth; Dr. Balthazar Foster, Birmingham; The Registrar of Apothecaries' Hall, London; Dr. A. L. Galabin, Penrith; The Secretary of the India Office; The Registrar of the University of London; Dr. R. Neale, London; Mr. J. T. W. Bacot, Seaton; Mr. C. F. Maunder, London; Mr. J. E. Ingpen, London; Mr. Thomas Stone, Devon; Mr. M. Becher, Ramsgate; Mr. Robert Jolly, Birmingham; Mr. German Reed, London; Mr. Wm. B. Macleod, Edinburgh; The Registrar-General, Edinburgh; Dr. J. W. Moore, Dublin; Mr. W. Baxter, London.

BOOKS AND PAMPHLETS RECEIVED—

Thomas Letts, Useful Knowledge Society's Seat of War Map, No. 1; Index Map to U. K. S. Series of 230 Maps—George H. Savage, M.D., On the Treatment of Insanity, more especially by Drugs—W. J. Walsham, M.B., F.R.C.S., A Handbook of Surgical Pathology for the use of Students in the Museum of St. Bartholomew's Hospital—Henry C. Angell, M.D., The Sight and How to Preserve it—Truths about Whisky—C. Spinzig, M.D., Variola, its Causes, Nature, and Prophylaxis.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médicale—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Nature—Centralblatt für die Medicinischen Wissenschaften—Cincinnati Lancet and Clinic—Transactions of the Odontological Society of Great Britain—Giornale Internazionale delle Scienze Mediche—Chemist and Druggist—Boston Journal of Chemistry—Canada Lancet—Clinical Work—Student's Journal and Hospital Gazette—Chicago Medical Journal and Examiner—New York Medical Journal—Canadian Journal of Medical Science—Gazette Hebdomadaire.

APPOINTMENTS FOR THE WEEK.

September 21. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

23. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

24. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

25. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 1½ p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

26. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

27. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

Quekett Microscopical Club, 8 p.m. Dr. John Matthews, "On the History and Structure of Corals."

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 14, 1878.

BIRTHS.

Births of Boys, 1202; Girls, 1171; Total, 2373.
Average of 10 corresponding years 1868-77, 2185·5.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	645	614	1259
Average of the ten years 1868-77	651·3	624·3	1275·6
Average corrected to increased population ...	...	...	1365
Deaths of people aged 80 and upwards ...	...	...	39

Note.—The births and deaths registered last week may be compared with the average numbers in the corresponding weeks of the ten years 1868-77 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	2	2	2	3	1	2	...	15
North ...	751729	1	...	8	3	6	2	8	2	27
Central ...	334369	...	...	1	1	2	...	2	...	4
East	639111	...	3	6	2	9	1	3	...	13
South	967692	6	1	10	5	17	1	10	...	30
Total	3254260	7	6	27	13	37	5	25	2	89

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·937 in.
Mean temperature	59·1°
Highest point of thermometer	77·7°
Lowest point of thermometer	45·0°
Mean dew-point temperature	52·7°
General direction of wind	Variable.
Whole amount of rain in the week	0·02 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, September 14, 1878, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1878.*	Persons to an Acre. (1878.)	Births Registered during the week ending Sept. 14.	Deaths Registered during the week ending Sept. 14.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3577304	47·5	2373	1259	77·7	45·0	59·1	15·06	0·02	0·05
Brighton	103923	44·1	71	32	71·0	45·0	58·1	14·50	0·00	0·00
Portsmouth ...	129461	28·9	88	51	...	...	...	...	...	...
Norwich	84620	11·3	49	46	71·2	48·0	59·2	15·11	0·35	0·89
Plymouth	73599	52·8	39	28	70·0	46·5	58·7	14·83	0·69	1·75
Bristol	206419	46·4	127	69	74·0	40·8	57·6	14·23	0·17	0·43
Wolverhampton ...	74240	21·9	43	26	69·0	43·5	55·1	12·84	0·91	2·31
Birmingham ...	383117	45·6	299	177	...	...	...	...	...	...
Leicester	121473	38·0	82	48	...	...	...	...	...	...
Nottingham ...	165267	16·6	106	50	72·9	38·2	56·0	13·33	0·07	0·18
Liverpool	532681	102·2	365	255	64·1	49·5	57·2	13·95	0·19	0·48
Manchester ...	360514	84·0	235	166	...	...	...	...	...	...
Salford	170251	32·9	139	71	75·5	38·4	54·9	12·72	0·12	0·30
Oldham	107366	23·0	81	45	...	...	...	...	...	...
Bradford	185088	25·6	135	71	70·6	45·0	57·4	14·11	0·04	0·10
Leeds	304948	14·1	239	127	72·0	45·0	57·5	14·17	0·03	0·08
Sheffield	289537	14·7	193	117	72·0	45·0	57·5	14·17	0·03	0·08
Hull	143139	39·4	107	66	71·0	43·0	57·4	14·11	0·35	0·89
Sunderland ...	112459	40·6	89	62	79·0	49·0	60·2	15·67	0·08	0·20
Newcastle-on-Tyne	144570	26·9	92	63	...	...	...	...	...	...
Edinburgh	222371	53·1	139	77	...	...	...	...	...	...
Glasgow	566940	94·0	332	189	70·3	50·5	59·2	15·11	0·35	0·89
Dublin	314666	31·3	211	153	72·5	42·3	59·7	15·39	0·23	0·58
Total of 23 Towns in United Kingdom	8373353	38·0	5634	3248	79·0	38·2	57·8	14·34	0·23	0·58

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·94 in. The highest reading was 30·12 in. on Wednesday morning, and the lowest 29·83 in. on Saturday afternoon.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1878 by the addition of seven years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. Nottingham, Salford, and Oldham, however, form exceptions to this rule, as the estimates for these three towns have been revised with the aid of local information as to the rate of increase of inhabited houses. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

THE CAUSES AND COURSE OF DISEASES OF THE HEART,(a)

WITH SPECIAL REFERENCE TO PREVENTION AND TREATMENT.

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Lecture II.

HYPERTROPHY AND DILATATION.

Having briefly reviewed the causes and course of the valvular diseases of the heart in the last lecture, the next subject to engage our attention is that modification of the cardiac walls known as hypertrophy and dilatation. Usually these are found together, and less frequently one or other in pure form. The circumstances under which they occur are instructive in enabling one to comprehend the form of change which results. It is generally stated in text-books that hypertrophy exists to overcome obstruction, thus attributing a sort of intelligence to the heart-walls—just as the savage, who does not comprehend the causes of a storm, attributes it to an angry god. There exists no greater obstacle to the right comprehension of this trophic change than this impression of an intelligence underlying it.

An obstruction to the onward flow of the blood is certainly one of the commonest causes of cardiac hypertrophy, but, as we shall soon see, by no means the only cause of this change. Further, too, we shall see an obstruction to the blood-flow is not uncommonly followed by dilatation, and not hypertrophy; or the two may exist in every possible proportion of combination. I trust to be able to demonstrate that these modifications of the heart-walls are not two separate processes, but rather two parts of one process. Niemeyer, whose articles on the diseases of the heart are amongst the best in his admirable book, says, "hypertrophy of the heart almost always accompanies abnormal enlargement of its cavity (*dilatation*)." In fact, he comes exceedingly close to the real facts of the case—viz., that hypertrophy is a trophic change which limits dilatation, or, in other words, resists internal pressure.

When the ventricle cannot expel all its contained blood, a certain amount is already in the heart when the current of blood rushes in from the full veins behind. Of course this blood-flow continues until the pressure within the heart's cavity is equal to that in the veins behind; then the auricular contraction adds to the pressure within the ventricle, and then the ventricle closes on its fluid contents and expels them—more or less perfectly. If this fluid distending force be greater than the normal, then dilatation follows. But whether that dilatation shall go on unchecked, or obvious dilatation with hypertrophy ensue, or the dilating process be arrested by hypertrophy of the heart-walls before the dilatation is plainly observable, depends upon several conditions which will be reviewed forthwith.

It will be seen that there are several factors which influence the result. The main are—

1. The distending force.
2. The time required for the muscular compensation.
3. The nutritive powers of the individual.

According to these different factors and their combinations is the result effected. Upon the last depends in many cases the result of hypertrophy without perceptible dilatation; or dilatation without perceptible hypertrophy. In some organisms the dilating process is arrested by hypertrophy before any dilatation is demonstrable; in other cases the dilating process goes on without any hypertrophy of the cardiac walls. Upon the nutritive processes of the body largely depends the form of the new equilibrium attained. For it must be borne in mind that all the modifications in the heart-walls just now under consideration are of the nature of a new equilibrium, the original one having been disturbed. If hypertrophy set in early and is pronounced, then the individual is but slightly crippled, and for a time perhaps not crippled at all; whereas, when the change is of the nature of simple dilatation the resultant condition is one of great bodily impairment. A person with a simply dilated heart is an invalid, scarcely capable of exertion; a person with a purely hypertrophied heart may be unconscious of any change within him.

The obstructions to the onward flow of blood which call out hypertrophy are of various kinds. The most obvious is stenosis of the aortic orifice, which is almost invariably accompanied by pure hypertrophy. Then an annular ring of atheroma is another cause of obstruction. A third is general plethora, and in all very muscular large people the heart is large too, so that it may be said to be hypertrophied. Another cause of hypertrophy of the left ventricle is, as Rokitansky pointed out, thoracic deformity from rachitis, where the aorta is distorted, and so an obstruction offered to the onward flow of blood at the ventricular systole. This is not a common cause of hypertrophy, but when it exists the prognosis as to life is very unfavourable. But the most common cause of hypertrophy of the left ventricle is that persisting condition of high arterial tension which exists in chronic renal changes in those who are gouty or who are the subjects of chronic Bright's disease. Here there is an obstruction to the flow of blood through the tiny arterioles, a damming of blood in the arterial system, increased obstruction to the forward flow of the blood on the ventricular systole, and then hypertrophy of the heart-walls. This modification of the peripheral arterioles is the common cause of hypertrophy of the left heart uncomplicated by valvular disease. In all these conditions, then, we have obstruction to the onward flow of blood and hypertrophy of the muscular walls.

In the right heart the common cause of enlargement with hypertrophy is obstruction to the flow of blood in the lesser pulmonic circulation from stenosis of the mitral orifice, or regurgitation from mitral insufficiency, or both. A less frequent cause is obstruction to the blood-flow from chronic lung-disease, as cirrhosis of the lung, or bronchial dilatation with emphysema.

In all the above instances there is a distinctly intelligible obstruction to the blood-flow, and resultant hypertrophy of the walls of the heart—a new equilibrium struck by compensatory change in the muscular walls, which increase in thickness and in power.

But there are some other conditions under which cardiac hypertrophy arises, where there is no such obstruction to be overcome; and consequently the hypothesis that hypertrophy is to overcome obstruction breaks down. Thus Niemeyer writes: "When we come to study pericarditis we shall learn that there is a form of hypertrophy of the heart which is purely the result of dilatation. The immediate effect of the infiltration of the cardiac wall, which takes place in this disease, is dilatation. Very soon, however, this is followed by hypertrophy, although no fresh obstacle to the outflow from the heart has arisen meantime." This is a very important and definite expression of opinion, for the writer evidently wishes to convey the impression that the hypertrophy here is related to the dilating process, and not to any obstacle to the blood-flow. In fact, he comes exceedingly near my statement—that hypertrophy is the trophic change which limits dilatation; indeed, he all but says so definitely.

Then there are some other conditions where we find cardiac hypertrophy which are instructive—viz., conditions where the ventricle is distended with abnormal force. The most common and best marked condition of this kind is that of aortic regurgitation, where we get the enormous hearts found in our museums (*i.e.*, most of them), some of the very largest being due to chronic renal changes. It is in aortic regurgitation that we get, then, the cor bovinum; and yet here the obstruction to the onward flow of the blood is not nearly so pronounced as in aortic stenosis. For, as we saw in the last lecture, the free edges of the valves are here chiefly affected, and there is dilatation of the arterial conus. In fact, there is nothing like the amount of obstruction offered to the onward flow of the blood on the ventricular systole that exists in stenosis; and yet there is a much more pronounced increase in the bulk of the heart-walls. In aortic stenosis there is usually pure hypertrophy; in aortic regurgitation there is always dilatation. The *why* of this is very instructive. In the one case there is merely an obstruction offered to the onward flow of blood; in the other there is a distinct increase in the distending force which fills the ventricle during its diastole. In aortic regurgitation the left ventricle is filled not only by the normal current coming in through the mitral ostium, but also by another current,

(a) A course of Clinical Lectures delivered at the West London Hospital.

a new force, viz., the blood driven backwards through the imperfect aortic valves by the powerful aortic recoil. The distending force to which the heart-walls are thus subjected is very different from the normal force, and the heart-walls grow thicker, and the ventricular cavity is enlarged accordingly. Bamberger observed that although the obstacle to the circulation is very great in aortic contraction, there is no increase of that internal pressure during diastole by which alone the dilatation of the ventricle is caused. On the other hand, in insufficiency of the aortic valves there is always a considerable dilatation of the left ventricle, which predominates over the co-existing hypertrophy (Niemeyer). It is the distending force in aortic regurgitation, not any obstacle to the blood-flow, which calls out the massive hypertrophy found therewith. In other words, the hypertrophy is rather to resist the distending force than to overcome obstruction. If it were not for this increased growth of muscular fibre the left ventricle would soon be over-distended and paralysed in diastole, by the new distending force to which it is subjected when the aortic valves have become incompetent. If we realise this thoroughly we can comprehend how certain writers come to speak of "over-compensation" in the hypertrophy of aortic regurgitation. They observe that this huge and massive ventricle is ruining the arteries by the tremendous distension to which they are exposed on each systole of this enlarged ventricle; when an unwonted mass of blood is suddenly thrown into them by an abnormally powerful ventricle.

Looking at hypertrophy as an almost intelligent force to overcome obstruction, certainly the early hypertrophy of aortic regurgitation is over-compensatory—over-compensatory without mistake. But, looking at this massive hyperplasia of muscular fibre as the trophic process which limits the dilatation resulting from abnormally severe internal pressure during the diastole of the heart, this so-called "over-compensation" becomes intelligible enough. The massive hypertrophy of aortic regurgitation limits the dilating process resultant upon the ventricle being filled by a distending blood-current of unwonted power. Conservative in this important respect, in turn it ruins the bloodvessels. We must not seek unalloyed good in pathological processes; and the massive hypertrophy which counteracts the new incoming current, driven backwards by the elastic aorta, in its turn is destructive. Without it the heart would soon be paralysed from over-distension; with it the arteries are over-distended. When that hypertrophied heart-wall begins to undergo structural change, a fatty necrosis, the dilating process again goes on; and the patient is apt to die suddenly from over-distension of his weakened heart in diastole. Such, then, are the facts of the relations of left ventricular hypertrophy to aortic regurgitation. If anything were wanting to demonstrate that hypertrophy of the heart is related to an increased pressure on its internal surface during diastole, it is furnished by the associations of mitral regurgitation.

In mitral regurgitation the pulmonary veins are filled with blood under a high pressure, the blood being driven into the pulmonic circulation by an enlarged and hypertrophied right heart. In addition to this there is the blood driven backwards by the ventricle on its contraction, consequently the pressure in the pulmonary veins and left auricle is much more than is normal. The result of this venous engorgement is that the ventricle is filled under high pressure during the diastole, and then changes in the left ventricle are induced. Niemeyer says, "the left ventricle is usually both hypertrophied and dilated, so that, in spite of the regurgitation of a considerable amount of blood, it still remains capable of filling the aorta." We are all familiar with the fact here mentioned of the enlargement of the left ventricle in aortic regurgitation. Here, surely, there is no obstacle to overcome, for the aorta remains unaltered; and, indeed, not only is there the normal orifice for the escape of the blood on the ventricular systole, but there is an additional outlet for escape in the form of a leaky mitral valve. These facts may possibly leave some other interpretation than the one I put upon them; but to my mind there is no escape from the conclusion that the hypertrophy of the left ventricle in mitral regurgitation is related to the pressure of the distending force during the diastole. There is a more than normal distending power, and the left ventricle becomes dilated and hypertrophied—the hypertrophy limiting the dilatation. Additional proof of this is furnished by the fact that in mitral stenosis the left ventricle is unaltered in size, or even in some cases becomes somewhat smaller than normal. Here the pulmonic veins are filled under abnormally high pressure, are gorged as in regurgitation, the auricle is enlarged and hypertrophied as in regurgitation, but the ventricle is not enlarged. Why? Because it is not filled under undue pressure; the inrush of blood is checked by the narrowed mitral orifice. There is no undue distension of the left ventricle in mitral stenosis, and consequently no enlargement of its chamber, and no thickening of its walls. The respective changes in the left ventricle wrought by mitral stenosis as compared to mitral regurgitation, give us a world of information as to the causal relationships of hypertrophy and dilatation of the heart.

Such being the leading relations of hypertrophy of the heart, it next behoves us to seek and look for a condition common to all these relations; because, if found, this condition is probably the matter causally related to hypertrophy of the heart. I think there is no difficulty in recognising in every case a certain overfilling of the ventricular chamber. The inference that this is the cause of cardiac hypertrophy is easily drawn. We have just seen that when the ventricular chamber is filled with an unwontedly powerful distending force, without any obstruction to the onward flow of blood, enlargement of the muscular walls follows. Let us next see how an obstruction to the onward flow of blood from the ventricle leads to hypertrophy of the ventricular walls. When there is an obstruction offered to the onward flow of the blood on the ventricular systole, the chamber is incompletely emptied. Consequently there is a certain amount of blood in the ventricular chamber on diastole before any blood has rushed in from the full pulmonary veins. The blood will enter the ventricle until the pressure is equal in the ventricle and the veins behind. If there is so much blood in the ventricular chamber before this incoming current starts, it is evident that the flow from the veins will not be so complete as if the chamber were empty. One of two things must happen: either the ventricular cavity becomes enlarged to hold what is already there *plus* the incoming current, in which case the left ventricle becomes dilated; or on the other hand, the flow from the pulmonic veins being embarrassed by the blood already in the ventricle, the veins are still more or less full, and the internal pressure on them and on the ventricle more than is normal, *i.e.*, the ventricle has within it at its diastole an unusually great internal pressure. Thus there is undue distension—the first step in the process of dilatation. But whether this process of dilatation shall be met by a trophic compensatory change in the muscular walls at once before the dilatation shall be obvious; or whether the dilatation shall become demonstrable before hypertrophy arrests it; or whether it shall proceed on its downward course unchecked by hypertrophy—depends upon several factors to be examined shortly. Before entering into these subjects it will be well to consider the trophic change known as hypertrophy, to examine into it, and to review the various factors of it which of old were regarded as a species of tissue-intelligence.

We all know that there is a law by which hollow muscular chambers thicken and become powerful when an obstruction is set up to the onward flow of their contents on their contraction. Thus we see the muscular fibre of the bowel thicken when a stricture offers an obstruction to the onward passage of the contained fæces. The bladder thickens and becomes more powerful when the outward flow of urine is obstructed by a urethral stricture or an enlarged prostatic gland. But we can admit no tissue-intelligence as an explanation; there must be laws by which this trophic change is brought about. What these laws are we are in a position already to form some definite ideas about.

1. There is increased internal pressure, and the muscular fibres of the cardiac wall are unduly extended. This elongation of them probably attracts more blood (more nutritive material) to them, by that law which determines the nutrition of parts that are functionally active. Thus we see a man improve his muscle by the use of dumb-bells or Indian clubs; the smith's brawny arm and the well-developed leg of the dancer are familiar instances of tissue-hyperplasia induced by great functional activity. But for this change good general nutrition is essential: if the general nutrition be low, atrophy is the consequence. If the nutritive powers be unequal to the demands of the tissues thus functionally active, an opposite process is instituted—atrophy, not hyper-

trophy. In the heart we shall see that if the muscular fibres be stretched by undue distending force, hypertrophy ensues if the nutrition be good; but if the general nutrition be impaired, dilatation is the consequence.

2. There is a nervous factor to be considered. If the blood be experimentally driven into the cardiac chambers with abnormal force, contractions, increased in rapidity and in vigour, follow. An increase in the distending force excites more rapid and powerful contractions. Probably this is brought about through the instrumentality of the sensory nerve of the heart. This is one side of the hypothetic arch. The other is the fact that when a motor nerve is irritated, not only is the muscle with which it is connected thrown into action, but its bloodvessels are dilated; and this vascular dilatation is induced by such irritation, even when the muscle is paralysed by curari (Ludwig's *Arbeiten*, 1876, 45 L., and Gaskell). Abnormal distension accelerates the cardiac contractions, even when the vagi are severed, showing that the sensory nerve carries the impression of distension to the cardiac ganglia, which discharge more energetically. We can then formulate the following hypothesis in place of the extinct one of tissue-intelligence. The ventricular chamber being unduly distended, two consequences follow—(1) the stretched muscular fibre attracts to itself more nutrient material; (2) the cardiac ganglia discharge more actively, and while sending out more powerful currents to the muscle to contract, dilate the vessels of the coronary circulation, and thus permit of a larger supply of blood to the muscular fibres of the heart. There is nothing very far-fetched in this hypothesis. It is in accordance with our advancing physiological knowledge of tissue-nutrition. Thus we see that in cases where the heart-chambers are unduly distended, a new equilibrium is struck by hyperplasia of the muscular structures involved. In hypertrophy of the heart the muscular fibres are certainly thickened, but it is not yet settled about their elongation. More precise observations on fibres from hearts simply hypertrophied, and comparison of them with fibres from hearts where hypertrophy is blended with distinct dilatation, may help us as to the exact histological change induced.

But there is still another point to be considered, and it is this. Dilatation is often found under circumstances where hypertrophy is the rule; for instance, in the heightened arterial tension of chronic renal disease in women there is not rarely dilatation, while in men hypertrophy of the purest character is the rule. It is clear, then, that these local trophic changes are influenced, and powerfully too, by the state of the general nutrition of the organism. For the development of the compensatory trophic change denominated hypertrophy, there must exist a good supply of healthy nutrient blood to the heart, as well as local modifications in trophic processes. But it is necessary that we should be clear about these local changes, as far as the present state of our knowledge will permit, before we proceed to the consideration of the elements of time and of the general nutrition—the latter being rather a complex matter—in their bearing on each case presented to our notice. We will find that local changes are influenced by the general condition, and that hypertrophy or dilatation are found under apparently precisely similar local conditions, according to the general nutrition of the individual. Time, too, is a powerful factor. When the increased distension of the chamber in diastole comes on at all suddenly, perfect muscular compensation is unattainable, and more or less dilatation is the inevitable consequence. A certain lapse of time is necessary for the growth and development of these new muscular fibrillæ, by which the new equilibrium will be maintained; and during this time the hollow muscular chambers yield to the distending force. This is not peculiar to the heart, but holds good of other hollow muscular chambers. Thus, for instance, the bladder grows thicker and its muscular fibres develope when an old-standing obstruction exists; but we all know that the opposite condition of over-distension to the point of temporary paralysis, calling for surgical means of affording relief, is not uncommon; especially where an obstruction is quickly developed, as in congestion of a strictured part of the urethra and temporary obliteration of the canal. The bowel, too, becomes distended by its contents when some twist blocks the further passage of the fæces; while we know that it becomes thickened when the obstruction is of old standing and of gradual growth. So it is with the heart; if there is not a sufficiency of time, perfect muscular compensation is unattainable, and more or less dilatation is the necessary and unavoidable result. But as time goes on, the extending muscular fibrillæ are developed and increased in bulk and power till a new equilibrium is reached, and the dilating process arrested. On the other hand, when the obstruction is slowly produced, as in aortic stenosis, the muscular growth is sufficiently rapid to meet the obstruction before any dilatation is perceptible, and we get pure, or practically pure, hypertrophy; and this new muscular growth permits of an equal quantity of blood being driven through the narrowed aortic ostium in the same time as occurs normally, and thus perfect compensation and a new equilibrium are attained. And this new equilibrium may be successfully maintained for years.

The other factor—the general condition of the individual—may now be profitably considered. As has been said before, the heightened arterial tension of chronic Bright's disease is not always accompanied by pure hypertrophy: it commonly is so in man, but in woman more or less dilatation is almost always found. Why muscular growth should be less perfect in women than in men, it is difficult to say anything that is valid; but about the fact there is no doubt. Dilatation of the heart is the rule with women—is more common in women than in men. Under the same circumstances, apparently, and as far as can be seen, dilatation will be found in women where pure hypertrophy is found in men. Possibly the nutritive processes of women are not so good as those of men. Sex, then, we find to be a determining factor in the production of the result of hypertrophy or dilatation. Then, occupation or social position is another factor, both by the effects of nutrition and the demand upon the heart. Where a man has to toil, and thus to throw more mechanical work upon his heart, there is less chance of the new equilibrium being very perfect than if he could rest; and this is still less likely to be perfect where the means of procuring a sufficiency of food are wanting. On the other hand, where the patient can lead a life free from exertion, the tax upon the nutritive powers of the heart is less; and if in addition ample supplies of food are attainable, then the prospect of perfect compensation by muscular growth is infinitely better. The prospects of a well-to-do and a poverty-stricken man are widely different when from any cause a new equilibrium has to be supplied betwixt the powers of the heart and the work it has to do. The improvement in a "heart case" wrought by mere rest in bed is familiar to every medical student. Many persons can get along surprisingly, and hold out at work, by having a few weeks' rest in bed every year. During the working period the nutrition of the heart is just up to the demand upon it, or not quite that, so that in time the patient feels losing ground, and resorts to the hospital. When quiet in bed and well fed, the nutrition gets ahead of the demand upon the heart, and the patient improves. Under these favourable circumstances the heart gains power and a reserve of strength which lasts for a considerable time after toil is resumed. I have a patient, a girl, with extensive aortic regurgitation, and in her the effects of a few days in bed are very striking. She has a strong tendency to overwork herself, and every now and then she feels so ill that she has to remain in bed, and a few days in bed put her all right again for work. Consequently, we see that occupation and the means of a patient exercise a potent influence over the nutritive processes of the heart when a new equilibrium is necessitated. Not only that, but they exercise still greater influence on the maintenance of that new equilibrium when attained, and have a prognostic value not usually sufficiently estimated. This consideration of the differences of individuals as regards their nutritive processes, and the readiness with which the tissues of one will develope under increased demand upon them, while others seem unequal to any increased trophic action, brings us to the question of the effects of treatment. If the medical man in attendance belongs to that class—and I regret to say it is rather a large one—who hold that little can be done in heart disease, and leaves his patient alone to such reparative processes as the organism can institute and maintain single-handed and unassisted, the result may be very unsatisfactory and very imperfect, and far beneath what might be achieved if the attitude of the medical attendant were less passive. If, on the other hand, the medical adviser has given much thought to nutritive processes, especially as applied to the heart, he will fight the case all along

the line. He will commence by lessening the demand upon the heart, and reduce it to the lowest practicable minimum; he will adapt the dietary to the patient's wants and assimilative capacities. He will render the blood as nutritive as it can be made, so as to provide a rich supply of material to the tissues of the heart, and enable the muscular fibres to develope in proportion to the demand upon them. He will add iron, and increase the red corpuscles in number and in oxidising power, so that all worn-out tissue may be removed, and new and fairly strong material be laid down in its place. He will increase the energy of the ventricular contractions by the exhibition of digitalis, strychnia, or belladonna. He will find the administration of these agents to make the pulse firmer, and the ventricular contraction to be more complete and perfect; indeed, in some cases, a positive reduction in the size of the ventricular chamber is attained. This is proved conclusively by the effect produced at the mitral valve in some cases where the murmur and the regurgitation will alike disappear. Thus, Dr. Broadbent has a patient at St. Mary's Hospital with extensive aortic regurgitation, whose mitral valve had begun to leak when he was confined to bed by an illness. After a few weeks in bed and under treatment, the mitral murmur could not be found; the ventricle and the ostium had approached their primitive size sufficiently nearly for the mitral valves to once more close the ostium efficiently. After awhile the murmur returned, as the youth is of energetic habits, the ventricle yielding before the demand upon it. In the girl I have just alluded to, with aortic regurgitation, the ventricle was tremendously dilated when I sent her under Dr. Broadbent to be in bed in hospital. The effects of rest and of digitalis were most marked. The ventricle was reduced in bulk in a very demonstrable manner in a few weeks. The steady administration of digitalis, combined with the other measures, will often produce most gratifying results; and only those who have tried the plan can tell how far it lies in our power to influence the trophic processes going on in the heart, and to limit dilatation by aggregating the factors which determine the development of muscular hyperplasia. It is not too much to say that, in some favourable cases, we can actually convert a dilated heart into one presenting the characteristics of pure hypertrophy. One such case often comes up on my mental horizon: it is that of an old woman in Westmoreland with chronic Bright's disease. When, in 1866, the left ventricle was yielding and becoming dilated, she was put upon digitalis and iron, which she has continued ever since. If she omits them for a week, palpitation of the heart compels her to resume the medicine. It is satisfactory to think how, instead of getting worse when she was very ill, she improved, her heart-sounds became stronger, and her pulse steadier and less compressible; and that she has gone on for years, sometimes quite nicely, at other times not so well, but rarely below the point at which she was when the treatment was commenced. In this case there has never been any evidence of what is called "the accumulative action of digitalis"—a matter, in my opinion, which has been made a great deal too much of.

(*To be continued.*)

LECTURES ON SYPHILIS OF THE LARYNX.

DELIVERED AT THE HOSPITAL FOR DISEASES OF THE THROAT AND CHEST, LONDON.

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Lecture I.

THE EARLY MANIFESTATIONS OF SYPHILIS IN THE LARYNX.

(*Continued from page* 344.)

I come now to another type of laryngeal congestion which occurs at precisely the same period as the one I have just been describing—that of general eruption. In this the redness is equally diffused over the affected surface, like an erysipelatous blush or an erythema. No small vessels are seen running over the surface. Together with this, there is swelling; or maybe puffiness would better express the condition, as though there were a slight amount of œdema associated with it. This is most striking on the epiglottis. Its edges are rounded and cord-like, instead of being thin and sharply defined. From this it has a peculiar fleshy look when contrasted with the delicate tint of the normal epiglottis. Sometimes this redness extends over the whole mucous surface of the larynx. When, on the other hand, it is limited to certain parts—and this is more apt to be the case—the line of separation is well defined. The colour in the earliest stages is rosy and somewhat opalescent-looking, gradually shading into a deeper red. The intensity of the colour may vary in different parts. In some cases it is somewhat patchy or spotted, like the condition spoken of already as a laryngeal roseola. In two cases of this kind which were seen by me here, the laryngeal affection was, however, associated with a squamous syphilide, and not with a roseolous eruption. This diffuse redness with swelling I found twenty-six times out of the eighty-eight cases of secondary syphilis I have alluded to. In twelve of them it was associated with mucous patches of the larynx, and next to these undoubted signs of syphilis it is the most characteristic. In this, my experience coincides with that of M. Ferras. I do not mean to say that in acute catarrhs of the larynx you will not get diffuse redness and swelling. Far from it. You will find bright redness diffused over the whole surface, with sometimes great swelling, in a good many such cases; but when you do, you will find it accompanied by pain, irritable cough, and sometimes dyspnœa, depending upon the amount of inflammation. In these catarrhs there are no urgent symptoms of distress. If the vocal cords are implicated there will be alteration of voice, varying from mere huskiness, or loss of vocal power, to a hoarseness which culminates in aphonia. If the vocal cords are not affected—and sometimes they are pearly white—there may be no symptoms to indicate that the larynx is affected. These patients occasionally complain of soreness and some pain in swallowing, but when you reflect that there is almost invariably pharyngeal disease as well, it would be difficult to distinguish between the pain in deglutition caused by this, and any which may arise from a swollen epiglottis. The essential points, then, which distinguish these syphilitic catarrhs from others associated with diffuse redness and swelling, are these—

1. The redness is often more limited in its distribution, and it is not so bright. It is often rosy in the earlier stages, becoming darker in cases of longer standing. It is not vivid unless accidentally inflamed.

2. They are accompanied by general puffiness instead of great swelling.

3. There are no very acute subjective symptoms.

But none of these signs or symptoms will justify you in *absolutely* pronouncing the case syphilitic, if they are the only ones you have to go by. Fortunately, you will have the history of the case and the other constitutional manifestations to guide you to a correct diagnosis, if you will look for them. This shows how essential it is that the physician should be thoroughly acquainted with the general manifestations of syphilis before he is competent in many cases to pronounce definitely upon the laryngeal affection, and to undertake its treatment; for the signs in these cases are worth more than the history. Patients may try to deceive you, or they may innocently mislead you. A syphilitic patient may tell you that he never had a chancre or any signs of contamination, and, on the other hand, one who is quite free from the disease is convinced that "his system is poisoned," because he has had a gonorrhœa or a soft sore some months before. Both of these patients are suffering from a sore throat. Mercury will cure the one, and only aggravate the symptoms of the other, and at any rate produce no good effect upon it. What are you to do? Examine well the larynx, and the appearances that I have been describing to you will help you materially to distinguish between the two. Then examine your patient thoroughly, and you will find in the case of the syphilitic patient either enlarged inguinal or cervical glands associated with a roseola, a papular or squamous eruption, or mucous patches in the mouth and throat. Perhaps he will tell you also that before his throat was affected he had been having headaches and night-sweats, and had been feeling very weak. This he may tell you or not, for these symptoms of debility incident to the early stages of syphilitic poisoning, though frequent, are not constant, and plenty of strength and apparent good health are not incompatible with the disease. But in all of these cases of syphilitic affection of the larynx the general lesions I have just spoken of will not be wanting: it will

be exceptional if you do not find some of them at the first examination; you will be sure to do so if your patient remains under your care for a few weeks. Those which are most constant are the mucous patches of the pharynx and mouth. In connexion with this I will cite to you the following case:—

M. A. F., aged twenty-nine, a labourer's wife, applied here on October 21, 1874. She was very hoarse, and she complained that her throat was very painful in swallowing. She had been suffering for a month. She thought she might have caught cold, but was not aware of having been subjected to any exposure which might have led to it. Her voice had been gradually failing, and she had experienced no relief from any of the remedies she had used. On examining her pharynx, I found dusky redness of the fauces and mucous patches on the tonsils. The laryngoscopic appearances observed were these: the vocal cords were very red and superficially eroded: the arytænoids and inter-arytænoid fold were swollen; the mucous membrane over them was dark red, and the redness was diffuse; the redness of the ventricular bands was of the same tone, but more irregular and patchy. She was not aware of any primary sore, but she said she had had rashes on the body. On examining her I found a squamous syphilide. She was ordered blue pill, one grain and a half with one grain of quinine three times daily, and her larynx was painted once a week with a solution of chloride of zinc, half a drachm to the ounce of water. At the end of a fortnight she was greatly improved. The redness was much paler, the swelling had diminished, and her voice was much clearer. At the end of a month the only morbid appearance in the larynx was a slight congestion of the vocal cords. The treatment was kept up. Her larynx was also sprayed with a zinc solution, three grains to the ounce of water. Soon after this she ceased to attend, being quite relieved of her trouble. The cutaneous eruption and the mucous patches were cured in one month's treatment.

Taking these last-named phenomena as typical of this period, we come now to the questions, Do mucous patches, or condylomata of some authors, occur in the larynx? and, if they do, are they at all in proportion to those appearing elsewhere? Notwithstanding what may be said against their presence in this organ by Mons. Ferras, whose views on this question I have cited to you, nearly all laryngoscopists testify to having seen them. When Türck speaks of the uneven vocal cords, looking as though they were superficially cauterised, he gives a very good description of certain mucous patches of the cords. Gerhard and Roth I have quoted to you. Tobold, in his article on Syphilitic Laryngitis, in referring to their observations and the difference of opinion that exists in reference to their views, says:—"As regards my opinion on this question, I lay but little stress upon the term 'broad condyloma.' I have, however, not unseldom seen neoplasms which did not at all resemble in form or appearance the various kinds of so-called laryngeal polypi, but which recalled at first sight the characteristic appearance of condylomata; so that I am inclined to retain for this kind of growth—at least, from a clinical aspect—the term 'condyloma-like growth.'" Further on he says:—"The so-called condylomata of the mucous membrane (*Schleimhaut Condylome*) and tertiary ulcers alone allow the true nature of the affection to be arrived at with greater certainty by means of the laryngoscope alone, without the aid of the history of the case." He then speaks of two forms of these condylomata—those which are flat, oval, grey elevations, and others which are more papular and pointed. Zeissl, in his work on Syphilis, speaks of mucous papules of the larynx associated with catarrhs. Dr. Krishaber, of Paris, who has made a very careful study of the appearances of the larynx in the early period of syphilis, has written a most interesting pamphlet on the subject, in which he gives a detailed account of fourteen cases in which these lesions occurred. He describes them as small oval exfoliations of the mucous membrane, with either even or fringed borders, sometimes thickened or even vegetating; in other cases they appear as erosions, surrounded by an opalescent zone. Dr. Krishaber found them on the vocal cords only.

My own observations, carried out with care over a period of five years, have thoroughly convinced me that this truly secondary manifestation has its place in the larynx as elsewhere. More than that, I am sure that, although mucous patches are rare when compared with the numberless ones in the mouth and pharynx, still they do occur more often than is allowed by some authorities. From the large number of patients that I am thrown into contact with at this clinique, I have records of 170 cases of syphilis, extending over a period of between three and four years. Out of this number eighty-eight cases were suffering with secondary syphilis, and eighty-two with later manifestations, some of these belonging to what is called the period of transition, the greater number representing tertiary lesions. Out of the first eighty-eight cases to which I have already alluded in connexion with the catarrhal congestions, I met with mucous patches in twenty-four of them. There were none among the eighty-two belonging to the other class. A fact like this latter one is, I think, sufficient to refute the theory that *all* superficial lesions of the larynx may occur indiscriminately at any stage of the disease.

I do not wish to offer this large average as a percentage of such cases. Were I to attempt to arrive at such a conclusion I should have to collect all of the cases that I have seen in that time, and the number I speak of is far from representing the total. I have, however, recorded nearly all of the cases of laryngeal mucous patches that I have seen here. Trusting to my memory, I should say that those which I have not recorded would not amount to more than ten or twelve more cases. This may, perhaps, give you a better idea of the rarity of this lesion. I cannot help thinking that the different views respecting its frequent or rare occurrence are based upon too limited a number of cases. Gerhard and Roth call them frequent manifestations, because they found them eight times in fifty-four mixed cases; that is, in about 15 per cent. It is evident that this is too small a number upon which to base any such statistics. Mons. Ferras says, on his side, that he only saw one out of nearly one hundred cases. He does not say how long he had these cases under observation; and this, I wish to impress upon you, is an important consideration. They may be present at the first laryngoscopic examination, and you may, on the other hand, carry out these investigations on the same patient for many weeks or months before you see one. Out of my twenty-four cases the lapse of time between infection and the date of their occurrence was as follows:—In the first month and a half, three cases; at two months, one case; at four months, four cases; at five months, one case; in the sixth month, four cases; one case at eight months; two at ten months; and two at the end of one year. In six cases the precise time after infection was not ascertained. The greater number, therefore, were met with within the first six months after infection. As regards the general manifestations that accompanied the laryngeal affection in these cases, mucous patches of the mouth and pharynx, or on the genital organs, were present in all of them; papular and papulo-squamous eruptions existed in seven, associated with a roseola in one. In one case which occurred at six weeks after infection the indurated cicatrix from the chancre was found. Enlarged glands with alopecia occurred in many of them. The mucous patches were upon the epiglottis in ten cases, and the vocal cords were also the seat of these lesions in ten cases. One I found upon the glosso-epiglottic fold. They were upon the arytænoids in four cases, twice upon the inter-arytænoid fold, and twice upon the ventricular bands or false cords. Those which most closely resemble the opalescent patches which are found upon the pillars of the fauces, on the soft palate and tonsils, and which therefore may be called *opalescent patches* of the larynx, occur most frequently on the epiglottis and its folds, and on the arytænoids. They affect more often the upper surface of the free border of the epiglottis. They are seen there as small oval or roundish elevations, rising gradually towards their centre, about the size of a pin's head or a shot, of a dull whitish-grey colour, not unlike the stain of nitrate of silver (which simile is often used in the description of such lesions). When situated upon the glosso-epiglottic or ary-epiglottic folds, they sometimes become somewhat lacerated, and assume the more decidedly ulcerated appearance of those on the frænum of the tongue. On the arytænoids there are two forms. When situated on the posterior surface they are still flat opalescent patches, but larger in size. Sometimes they are symmetrically arranged, and extend outwards from the inter-arytænoid fold towards the ary-epiglottic ligaments. None of these attain any degree of prominence unless they become irritated. I have seen them then get thickened and

stand out as red papules with an ulcerated surface, like hypertrophied patches in other parts of the body. These true mucous *papules*, or condylomata, occur also, apparently without irritation, and from the very first, upon the anterior surface and upper border of the inter-arytænoid fold, upon the anterior surface of the arytænoids, and on the ventricular bands just in front of the arytænoids. When they occur in these situations, they appear as circumscribed elevations or papules, firm, greyish or reddish-grey. The summit of these papules is covered with a scanty secretion like the others I have mentioned. This may be sometimes brushed off, leaving a denuded surface. On the vocal cords they occur as small opalescent bodies, more or less elevated, especially when on the edges, or arranged in lines when on the upper surface. These grey streaks stand out upon the reddened cord, giving to it a mottled look, and from their form they might be called *linear patches of the cords*. Another form that they have when in this situation is a circular erosion. The colour of this is red, and contrasts strongly with the whiter surface. Sometimes it is grey, with a red, excoriated-looking centre. They are all slightly above the level of the surrounding membrane. Sometimes they are prominent on their borders with a depressed centre.

You will see from this that they vary in their appearance according to their situations, and in this they resemble other mucous patches. Though differing from each other in certain respects, they have, however, one type in common, which is that in their primary stage they are all more or less papular. This would serve to distinguish them from superficial ulcers or erosions associated with ordinary catarrhs. When they ulcerate, the ulcers are more regular in outline. They are more distinctly circular and isolated than are those associated with ordinary catarrhal laryngitis, which have more the type of general erosion, with no well-marked outline. Take, for instance, an inflammation of the larynx of a non-specific nature; the patient complaining of hoarseness, dryness of the throat, and a constant desire to clear it—not uncommon symptoms in such cases. If you examine his larynx you will probably find, together with general congestion, more or less thickening of the vocal cords, which will be bright red, raw-looking, with very likely a certain amount of tenacious, adherent mucus. The patches of mucus might mislead you, but only for a few minutes, for they could be brushed off or coughed up, leaving the cord as I have described it. The ulcerated mucous patch will either be a papule with an ulcerated summit, or an oval grey ulcer, which may sometimes be somewhat ragged on the edges. It never attains any depth, and, as a rule, yields readily to treatment. Moreover, comparatively recent non-specific congestions of the larynx do not ulcerate. When ulcers are met with in more chronic cases, they might be confounded with the later syphilitic ulcers, but not with an ulcerated mucous patch.

(To be continued.)

Vomiting after Operations.—Prof. Verneuil made some observations at the Société de Chirurgie on the occurrence of obstinate vomiting after operations and wounds. He did not allude to vomiting that might be dependent on eating too soon afterwards, impure chloroform, regurgitation of the saliva, etc. In the cases he has in view, the patients vomit saliva, bile, or ingested substances without apparent cause; they become fatigued and anxious, and dare not eat or drink; while the efforts in vomiting sometimes induce oozing of blood from the wound. Prof. Verneuil meets with three or four such cases in his wards annually. This form of vomiting seems especially to occur in "alcoholics," as also in subjects of disease of the liver and kidneys, and in persons of bad digestion. The prognosis in these cases is not usually very serious, though sometimes it may cause uneasiness. Ice has been given with success, and in some patients morphia injections arrest the vomiting. It is of importance that the patients should be nourished; but wine, as well as milk, is badly tolerated. What succeeds best is ice, mucilaged and alcoholised water and pepsine, in the dose of fifteen grains morning and evening. Prof. Verneuil's object is to show that the cause of obstinate vomiting after operations is an anterior dyspeptic condition, and that frequently there are alterations in the internal organs, chloroform only playing quite a secondary part in the production of the vomiting.—*Gaz. Hebd.*, September 6.

ORIGINAL COMMUNICATIONS.

THE ORIGIN OF SOME MOTOR DISORDERS.

By OCTAVIUS STURGES, M.D.,
Physician to the Westminster Hospital.

A person (it matters not at present whether man or woman or child) is observed during waking hours to be in constant contortion and grimace, and with difficulty remains absolutely still even for a few moments; another is noticed as singularly quiet, preserving one attitude for a length of time and retaining almost any position in which the body is placed; a third, neither over-restless nor over-still, exhibits a want of power of control over certain muscles, tossing or turning the head or shrugging the shoulder or even contorting the whole frame repeatedly and at regular intervals; a fourth with no muscular disorder while in repose will be spasmodically moved when addressed or on attempting to make reply.

These are so many instances, amounting sometimes to very grave disorder, where the muscular system seems to suffer by itself. There are others in which the phenomena are similar yet with more or less mental involvement, as for instance, the temporary loss of power called hysterical paralysis, and the temporary contraction of muscle called hysterical spasm. Taken together these disorders comprehend a large number of affections, both those to which technical names have been given as chorea, hysteria, catalepsy, and others which have not been so named. These latter in their ordinary severity are recognised as familiar habits, but in their occasional or extreme severity as anomalous nervous diseases.

Call them as we will the question is as to the whole group, how are they to be explained? In all their variety they have many points in common and an explanation which is complete for one is likely to be of service for all. I propose in this paper, with no preliminary bias, to attempt some analysis of these phenomena which shall furnish such explanation or at least help to show the direction in which it must be sought.

Now the disorders in question agree in these respects. To first appearance (I do not say to ultimate analysis) they all obviously involve motor derangement, but do not all obviously involve nervous or mental change. They do not tend to destroy life, and their subjects are in other respects healthy and often long-lived. They do not occur indifferently but attach themselves respectively, as we shall see, with rare exception, to childhood and youth and age, while, as a very general rule, they are recovered from when occurring in the young but not recovered from when occurring in the old. They are aggravated by temporary weakness, local pain or mental distress, but on the contrary tend to disappear in the presence of acute illness. They are all to a certain extent in their earlier stages within will control.

It follows from these characters that the whole group of such affections are excluded from those modes of investigation with which the physician is most familiar. The pathologist's motto "*Nec mors silet*" almost ceases to apply. Death often *is* silent and all the phenomena disappear as it approaches. The best recognised of the disorders—such as chorea and hysteria—relax their hold as life advances leaving their subjects as they found them, a sufficient proof that such structure changes as occur are neither permanent nor destructive. What we may learn of these affections, therefore, must be learnt at the time. The fullest insight can accomplish no more than to exhibit the relationship between the phenomena in question and those of normal life. This it may do either by showing that the same laws are actually in operation in both cases, or else by demonstrating the presence of some disturbing element which, upon further and independent evidence, is shown to be capable of modifying these laws in the manner seen.

With this necessary direction of the inquiry to the living rather than the dead we have to consider, in the first place, the general laws which regulate muscular action in its ordinary working. It will be admitted at the outset that the government of the muscular system is limited and conditional. The voluntary muscles are obedient more or less and some of them more than the others, yet none implicitly.

There is great diversity between one individual and another not only as to readiness or slackness of response but also as to the particular mode and fashion of responding. This is the case indeed not only with mankind but with the lower animals and arises partly from inheritance and partly from habit and education, bad as well as good. There can be little doubt, for example, that the character and variety of muscular movement by means of which dogs, in common with men, express themselves, have become, under the gradual influence of domestication, much wider and more significant than those of their remote ancestors. By long association with his superiors this animal has acquired new modes of muscular expression corresponding with the increased range of his knowledge and sympathies and which are chiefly serviceable to him in his relations with mankind. The education of dogs has been progressive through generations. They have learnt to express shame, contrition and self-satisfaction as well as to disguise their real sentiments. And not only so but some dogs have a keener conscience (and, by consequence, a nicer mode of muscular expression) than their fellows. There are sensitive and callous as well as vain and humble and dull dogs and these dispositions are all plainly enough indicated by attitude and movement. With age and education these several characters become the more apparent and serve to give dogs, as well as men, individuality, all puppies like all children, being merely restless and frolicksome.

And what is seen in dogs is seen, of course, much better in mankind. It is seen at its highest in that perfect equipoise of the muscular system, maintained by a constant and never quite unconscious effort, in the mien of those who thus declare themselves at a single glance as superior to their fellows. This muscular repose does not imply disuse; it implies on the contrary such an adjustment of the body as that without conscious movement it is always expressing the present mental condition and something of the abiding power of the will. The general control by means of which this set of frame is maintained is, on the whole, exercised with ease but it needs a different degree of attention to its different parts. The face breaks into movement more readily than the hands and arms, these, again, more readily than the legs, and so on. To represent the muscular system therefore as a machinery ready for use but which may lie idle until its services are called for is quite erroneous. The power required to still it is much higher and comes much later than that required to move it. Growth and education tend to develop this power although there is no age and no training which can make it absolute or supreme. No limb or face can maintain stillness until it has first acquired the power of purposive movement. It follows, therefore, that a lessened control over this complicated system whose several parts differ in their obedience, will be evidenced not by a falling out of use (as with the wheels of a watch with its spring unbent) but by some sort of tumultuous movements which will be exhibited earliest on the part of those muscles which are the least easily controlled.

And when we come to examine the character of these movements it will appear further that the muscular system escaping from the active control of the will not only tends to movement but to a particular kind of movement. Thus every voluntary act—the movement of the arm in knocking or hammering, of the hand in writing or dealing cards—is always *tending to rhythm* although in each case owing to disturbing causes this may not be exactly preserved. Such causes are the varying resistance to the blow or the need of separating the written words or the unequal smoothness of the cards. And the more the mind is directed to the *intention* of the act and diverted from its mere mechanism the more does this rhythm emerge. The workman, not thinking of the single nail he is driving but of the finished work, the writer occupied with his subject, the card player with the chances of the game—all these in spite of obstacles move their muscles rhythmically and only cease to do so when something in the material they are handling disturbing this rhythm thereby calls back their attention.

And there is more than rhythm there is very exact *repetition*. The intervals are equal, and the character of each separate movement of knocking, or writing, or dealing is precisely the same or as nearly the same as circumstances permit. Numerous illustrations of this will occur to everyone. Perhaps the best is found in writing where the same words are written always in the same way. Observe too that in this exercise it is necessary to have up and down strokes of unequal length. So long as we write for writings sake the distinction in length between the letters is sufficiently marked. It may take twice as long to write *f* as to write *j*. But when the act of writing is forgotten in the object of it there is no such difference. Habitual writers get over the ground without observably altering their stroke except for the necessity, which with many never ceases to be grievous, of crossing *t*'s and dotting *i*'s. They shorten their tall letters, make them all of equal height and preserve rhythm by writing words in a series of up and down strokes and not as separate letters. And, as with the acts of knocking and dealing cards, disturbance of this rhythm brings back the attention. Even practised writers need to be on the alert to keep their *i*'s dotted and *t*'s crossed. In the full swing of an engrossing subject these attentions are commonly neglected.(a)

And together with rhythm and exact repetition there is to be observed, as a further law of muscular action, *association*. One act calls up another, and this without the agency of the will and sometimes in spite of it. The complicated acts of many handicrafts are illustrations of this. Even in the simple operation of brick-laying there are a number of distinct acts which follow each other quite automatically one giving origin to the other. Similarly when the muscles are surprised into action as in stumbling or starting they will recover themselves on each occasion in precisely the same way. Many persons whenever they stumble will perform a jump or some other superfluous muscular act which they have come to associate with stumbling. Some men surprised into laughter will assume a more serious aspect than usual so soon as the laughter is over, not that they are ashamed or sorry but because the two movements of the face have become conjoint acts. And again writing an *i* or a *t* has the effect with some without any mental assistance of bringing the pen back at the end of the word to make a dot or a stroke.

Another law of muscular action is to be seen in the conditions, disabling as well as enabling, under which the several groups of muscles combine in a common task. Experience and training impart a facility of co-operation in the performance of certain acts, but along with this a restriction of that absolute freedom which the term "voluntary" seems to denote. We have here a faculty of universal acquirement yet possessed by different individuals in different degrees of perfection and liable in all to many sources of disturbance. What then is the precise standard from which all departures are to be reckoned? In the simplest acts it is apparent that muscular consensus is possessed amply or sparingly. How many are the gradations between the clumsy and awkward person who can never learn to sit a horse or step a measure and the tight-rope dancer who with perfect freedom of limb preserves an unerring balance as by the exercise of a separate sense. But whatever the degree of muscular consensus it is liable to occasional disturbance. The commonest acts are done differently under excitement and observation. Apprehension will alter the character of the handwriting, prevent the due modulation of voice and even arrest speech.

From the foregoing analysis the muscular system is presented as paying a limited and conditional service subject always to the bias of habit and apt to assert itself in particular ways in opposition to the will. Within the strict law of its working come rhythmical movement, the obligation to precise repetition and invariable sequence, restriction to certain uses, involuntary combination, and defective coordination. With such liabilities absolute subordination is obviously impossible. And not only so but the degree of subordination is seen to vary very widely with the individual

(a) A man is removing one by one from a balloting bowl a number of written papers variously folded and each bearing the name of one or other of several candidates. These names he reads out as he unfolds each paper and then tosses it aside. Now in this duty exact rhythm and repetition are opposed by the several ways, requiring separate manipulation, in which the papers are folded; by the several names requiring different speech-muscles and different time to pronounce; by the varying legibility of the voters; and their various nomenclatures, one writing Mr. Jones another John Jones and so on. Nevertheless through all these obstacles the action of the individual is distinctly rhythmical and repeating. The hands so far overcome the unevenness of the work as to exhibit very obvious *time*, each name is pronounced on each occasion precisely the same and the action of the thumb of the left hand, the turn of the wrist and the movement of the elbow are every time absolutely the same. We know also that the same individual called upon again after a long interval to perform the same series of acts will perform them again precisely the same and that no one else, unless it be one of his own blood, will do it so.

and with the circumstances. What may be the precise degree of possible divergence from that ideal obedience which exists nowhere but in our own imagination can only be ascertained by a very wide experience. If a tendency to rhythm distinguishes all muscular acts this must be a source of infirmity as well as of help and must embarrass more or less certain purposive movements as surely as it assists others. The question is how much. If muscular consensus is variable and contingent remarkably developed in some, remarkably defective in others, incoördination in some degree or other is made certain. The question is what is the utmost possible degree of it. In a word self-assertion and variability and particular bias being admitted amongst the phenomena of muscular action the point to be settled is this: to what degree of prominence may these characters rise before they begin to reckon as disease; and when they come to be so reckoned is it simply on account of such prominence or because some new element is introduced? Until this is determined it is but loose talk to speak of certain motor phenomena as morbid because they strike the observer as unusual or are found to be inconvenient. Uncommonness or inconvenience although they often give the grounds on which disease is popularly imputed afford no basis whatever for scientific classification.

(*To be continued.*)

TWO CASES OF

CEREBRAL EXHAUSTION FROM PREGNANCY AND LACTATION, WITH CONTRASTING SYMPTOMS;

WITH CLINICAL REMARKS.

By C. HANDFIELD JONES, M.B. Cantab., F.R.S.,
Physician to St. Mary's Hospital.

Mrs. C., aged thirty-two, was admitted on May 25, 1877. Has been ailing about a year; has suckled a strong child the last fifteen months; her milk has now nearly ceased to flow; the right mamma has regressed and become small, the left is large and lobulated. She did not suckle her first child; her second she suckled eighteen months, the third fourteen months, and the last (as said) fifteen. Two children have been born dead. Has been married seven years and a half. Temperature 99°; pulse 93, soft, not very weak. Her head feels heavy; she is giddy and very weak, with a tendency to fall. Her eyes are sunken; aspect tranquil, but depressed; mental actions seem slow—she takes some time to answer a question; vision fairly good—she can read a rather small print; pupils rather large; motive power seems pretty good—she can grasp with fair force. Perspires easily. Appetite has been bad, is better. Lungs and heart healthy. Liq. ferri muriatis ℥xv., quin. sulph. gr. ij., acid. sulph. dil. ℥x., aq. ℥j., ter die. Meat diet; port four ounces.

June 4.—Countenance indicative of great depression; very anæmic. Pulse of good size and force. She sits very silent; hardly speaks to her friends; answers questions very slowly; appears quite in a state of melancholia attonita. Carotid pulses distinct. Has been in her present state four days; it was much less marked at her admission. Phosphori puri gr. $\frac{1}{33}$ ter die.

9th.—Is decidedly better; much more cheerful. Bowels costive; a large mass in the rectum.

11th.—Bowels cleared by pills of aloes gr. j., ext. nucis vom. gr. ss., 4tis horis. Looks cheerful, but still wan in face.

18th.—Reports herself well; wishes to go out. Went out soon after.

This woman's intellectual nerve-centres were undoubtedly in a torpid, paretic state; their functional activity was greatly impaired. The prolonged lactation was a sufficient cause of this paresis, and is recognised as such by the best observers. Dr. Tilt says "that he knows of no condition that so speedily drains the ganglionic nervous system of all energy as nursing—in some women even when they take abundance of food and are surrounded by every comfort. There is overpowering debility, bringing on extreme nervousness and a state of despondency leading up to insanity." The paralysis of the brain-cells is therefore not dependent necessarily on impoverishment of the quality of the blood, or on deficient supply of nutritious material, but on failure of power to utilise this material. Of two women affording the same supply of milk and equally well fed, one may suffer grave nervous depression, while the other does not suffer at all. That which tells injuriously on the system seems to be the loss of energy spent in the construction of the milk-cells of the mammary glands; just as in the case of profuse suppuration, which Sir J. Paget regards as exhausting a patient more by the expenditure of vital powers incurred in the formation of the corpuscles, than by the loss of albuminous and fatty matter. A weakly system feels the waste of organising force much more than a stronger does.

If this be admitted, it seems almost necessarily to follow (1) that nerve-force can be converted into metabolic gland-force; and (2) that the amount of nerve-force in one part can be diminished by its expenditure in another. On these points I may speak to you again some other day, but I wish now to utilise these cases of hyperlactation to illustrate another proposition, viz., that the apparently opposite condition of hyper-excitability may be produced by the very same circumstances which give rise to torpor and amentia. Of the latter I have just given you an instance; here is one of the former:—F. C., aged forty-one, married, admitted September 12, 1873. Was confined with her tenth child about twelve months ago. About two months after her confinement she had to wean the baby because she was so weak. She complains of a feeling of heavy weight on her head, and of great nervousness, and inability to sleep at night without some narcotic. She feels so excited that she seems as if she must run away. Has had for a long time a dreadful burning sensation all over, mostly in abdomen, but sometimes in her limbs also. Her pulse is good and steady; catamenia are regular; bowels are confined; appetite bad. Has flatulence and rising of sour water from stomach. Before her admission she had hysterical fits, and after her discharge complained of globus. During her stay in the hospital she used to complain bitterly of her head. Her stomach was irritable, and her temper absolutely melancholic. The ward sister, a very genial, kindly person, described her once as "never satisfied, never contented, a most miserable being." After she left the hospital she went to the convalescent asylum at Walton, but stayed there only a fortnight; the noise, she said, was too great. She continued under my observation over six months, and improved a good deal with nitric acid, cascarilla, and cod-liver oil. This patient's cerebral condition contrasts strongly with that of the first; yet both had experienced the same debilitating influences—both had tolerably good pulses, and in neither did the symptoms seem attributable to defective blood-supply. The exhaustion, induced by parturition and lactation, operated differently in the two cases. In one it simply impaired the production of nerve-force in the intellectual and perceptive centres; in the other it impaired especially the resisting or controlling power normally inherent in each cell, so that they were unduly excitable. In many instances these two effects are produced together. The loss of excitability in a nerve or nerve-centre, and the excess of excitability, are both alike aberrations from the normal mode of acting; in fact, signs of deterioration. I do not think this is always sufficiently recognised; the latter condition, when appearing as hyperæsthesia or hyperalgesia of some region in cases of brain or cord lesion, is apt to be regarded as an exaltation of functional power, whereas it is as truly a defect as that which declares itself by anæsthesia or paralysis, and results directly from the lesion, just as the latter does.

REMARKS ON THE ORIGIN OF FEVER, ETC.;

WITH A DESCRIPTION OF AN EPIDEMIC OF DIPHTHERIA.

By ALEXANDER YULE, M.D.

(*Concluded from page* 273.)

I shall now give an outline of the different cases of diphtheria and their treatment:—

A. B., aged twenty. Sore throat, weakness, and giddiness. Said that he had shivered and vomited. On examining the throat, the tonsils were observed to be coated with white membranes extending partly over the palate. I need not give the daily description of the case, but merely mention the chief symptoms. These were—stuffing of the nose, difficulty of swallowing and of breathing, swelling of the submaxillary and parotid glands. The membranes extended

into nose, pharynx, etc. There was albumen in the urine. His treatment included painting the tonsils with tincture of iron daily; stimulants in moderate quantities, and nourishment. For two or three days he was unable to swallow even fluids, but after a considerable hæmorrhage from the nose and throat, with detachment of membranes, he was able to swallow, and his breathing became much easier. The cottage where this patient lived was an old one, with a huge fireplace and chimney-corner, where wood, instead of coal, was burned. During the greater part of the time that he was sick he remained in this corner, and, as the door of the kitchen was left continually open, he had a very free supply of fresh air. He was able to get about in ten days time. After he had been about for a day or so he commenced to complain of a feeling of tightness over the central parts of the sternum and roots of the lungs, and a feeling of great faintness. For this I gave him ten grains of carbonate of ammonia every four hours, with a few drops of chloric ether. It is said that ammonia is a solvent of the fibrin in the blood, and, supposing that the faintness was in this case produced by a tendency to the deposition of fibrin in the heart, or some of its large vessels, by giving ammonia that danger might be averted; at any rate, it would act usefully as a stimulant. W. B., a young man in the same house, caught the disease, and it may be presumed that he caught it from A. B. The symptoms, in this case, were similar to those in the last one, only less severe. The treatment was different—he had a mixture containing ten grains of carbonate of ammonia every four hours, besides stimulants and nutrients. One or two emetics of ipecacuanha were given. Open-air treatment was adopted; that is, he had at all times a full supply of pure air—a matter I think of some importance.

There was another series of cases that occurred about the same time as A. B.'s, but which were not infected therefrom; and, as described before, had their origin in much the same way as A. B.'s. I shall give a condensed description of them:—S. S., aged thirteen, I visited on July 14, 1877. She was then suffering from a sore throat, and an herpetic eruption on her lips. She had been ill for three or four days before I saw her. On examining her throat no white patches were observed. She got well without any medicine. All the children in the family were ill, and only one or two presented any symptoms of diphtheria. The mother, C. S., aged forty-five, had diphtheria in a moderately severe form. She had vomiting and shivering at the outset, with headache, furred tongue, quick small pulse, faintness, and difficulty of swallowing. On examining her throat, white membranes were visible over tonsils and pharynx. She was treated with the inhalation of the steam of boiling water and vinegar, and with carbonate of ammonia in large doses. She was ill about eight days. S. S., the first case of this series, suffered from affections of sight, viz., confusion of colours and loss of accommodation. Minute objects she could not see, and the letters of the alphabet she could not distinguish. Another of the family, aged ten, had similar symptoms; and all of them had, more or less, some of the forms of diphtheritic paralysis; so that you may say these cases had some of the secondary symptoms of diphtheria, while the primary ones were but indistinctly shown.

Another series of cases occurred in a family, B.; and there were four cases of considerable severity. These cases, I think, had their origin from A. B.'s case. F. B., aged six, was seized with sore throat, etc. For the first two days he did not seem very ill. On the third day the tonsils and the back part of the mouth were coated with white membranes; and there was albumen in the urine. The disease ran a rapid course, membranes forming in the larynx and trachea, extending into the bronchi and, likely enough, into their minute ramifications. Emetics were given, and shreds of membrane were expelled, with temporary benefit. The slight cough that he had had from the outset of the disease now became more frequent and croupy, and he had stridulous breathing; his lips became blue and the features bloated; the pulse gradually failing. He died suffocated. He was ill four days. The next case was S. B., aged four; he had emetics and eight grains of carbonate of ammonia every four hours, stimulants, and fresh air. There was albumen in the urine about the sixth day. He passed through a severe attack. The carbonate of ammonia was continued for ten days. The emetics had the effect of bringing up shreds of membrane; and the ammonia, I am sure, did much good in detaching and expelling them during the whole progress of the disease. Bran poultices were applied to the swollen glands outside the throat, and he breathed freely of fresh air, and inhaled the steam of boiling water. In this case was observed much drowsiness at various periods during the progress of the disease; which was attributed to the accumulation of carbonic acid in the blood—the nourishment of the nervous centres being thus affected by contact with impure blood. A. B., aged six. Usual symptoms of diphtheria; pulse quick, small, rapid. Suffered much from drowsiness and faintness. Treatment the same as last. This case recovered. F. B., aged twenty-four. Symptoms same as last, but not drowsy. There was albumen in the urine. Treatment same as last. Only in one of these last cases were there any sequelæ, viz., in the mother, who went through the least severe attack of the disease. The sequelæ that she suffered from were paralysis of the muscles of the throat, and difficulty in co-ordinating the movements of the lower limbs.

About six months after the occurrence of these cases there were others. In a family, H., four were attacked, and went through a severe form of the disease. They underwent the same treatment as the last-mentioned cases; and the beneficial effect of the ammonia seemed to be very evident. Besides these, and included within the same time, were six other cases. None of these were of any severity, and they were treated in the same way as those previously described.

In all the cases of any severity a croupy cough was observed; while, in those cases that proved fatal, the cough at first was frequent, then less so, while in the intervals free from coughing the breathing was stridulous. Gradually the cough became less strong and frequent, while the breathing became shallower, and at last more or less continually of a stridulous nature. Then the pulse began to fail, the muscles of respiration lost their power, and death took place. In fact, in some of the fatal cases the continual spasm of the bronchial muscular fibres, irritated by the diphtheritic exudation, in a great measure prevented a due supply of air to the lungs. Again, the healthy elasticity of the lungs was interfered with by the diphtheritic exudation, the mucous membrane of the trachea and bronchi being in a state of congestion and covered with a thick layer of more or less tenacious matter. In cases of diphtheria of a severe and fatal character, on account of the diphtheritic exudations the act of expiration is imperfectly performed, and we have the characteristic hollow hoarse cough of diphtheria—often an ineffectual effort on the part of nature to expel the obstruction. Besides all this, there has been going on for some time a slow poisoning of the nervous centres that regulate the act of respiration and the motion of the heart. The breathing becomes shallow and gasping, and the pulse feeble and small. Besides death from asphyxia, death may take place from syncope caused solely by the depressing action of the poison or from a clot forming in the heart or large bloodvessels, or from lung complications. I think, when the larynx is filled with diphtheritic membranes, it will likewise be found that extensive exudation has taken place into the bronchi and their ramifications, which would account for the operation of tracheotomy being so frequently unsuccessful. Some forms of diphtheria there may be that chiefly affect the pharynx and tonsils; while others may chiefly affect the respiratory tract. The latter would be thought the dangerous cases, and the former those that were most frequently recovered from.

In the treatment the morbid state of the system, of which the diphtheritic exudation is the manifestation, must be taken account of. One evident symptom is prostration, and if a medicinal agent is made use of, that at the same time will act as a stimulant and promote the free circulation of the blood underneath the diphtheritic exudation, we shall have fulfilled an important indication of treatment. Carbonate of ammonia is a powerful stimulant, and an expectorant. This medicine, acting on the mucous membranes of the throat and the secretions, will tend to render them healthy, and it may be supposed that, by its action on the system, will promote the detachment and expulsion of the membranes or tenacious diphtheritic exudations. On account of the tendency to depression, other remedies might not be so safe, and I think that much larger doses than any that I have given of the carbonate of ammonia would be of advantage in severe cases

of diphtheria. In no case did the dose produce sickness, and in this disease there seemed to be much tolerance of the remedy. Every fever runs a course, and it has been often said that it may be guided, not cured; and so it may be said of diphtheria. When the exudation of diphtheria is thrown out, a process is set up by nature to detach the membrane, either by fresh exudation underneath, or by renewal of healthy secretion. The advantage of emetics will, for this reason, become evident. Of emetics ipecacuanha might be thought the best, for, in addition to its emetic powers, it improves subsequently the secretions of the mucous membranes by acting on their capillaries. Its primary, though transitory, depressing action is, I think, the objection to its use in diphtheria, and in small doses it would not be of any use: for a remedy to do good in diphtheria of a moderately severe type must act quickly and powerfully. The system must be kept up by beef-tea, milk, and other nutrients. I think that very moderate quantities of brandy are indicated, for where the eliminative organs are so much interfered with, the accumulation of alcohol in the blood is not to be desired. It is pretty generally acknowledged that the blood requires oxygen in this disease, and for that reason chlorate of potass has been recommended, and for other reasons. Is it not better to give pure air, and that abundantly, than to trust to the supply of oxygen by such doubtful remedies as chlorate of potass? By allowing a free supply of air to the impure blood we may expect it to be thereby renewed, and the nervous tissues to be better nourished. As oxygen is much wanted in this disease, would it not be worth while to impregnate the atmosphere with oxygen gas? The atmosphere which the patient breathed should likewise be rendered antiseptic. Thus the chief objects of treatment in this disease would be —to produce a healthy state of the secretions of the mucous membranes of the lungs and throat; to expel the unhealthy exudations; and to supply the blood with oxygen or pure air. From what has been stated it is evident that outward applications are not of much use in diphtheria, for the disease, when confined to localities within the reach of outward applications, is then not a serious one, and it is only when it is beyond the reach of local remedies that there is danger from the diphtheritic exudation.

Another point observed in the patients was their extreme pallor after they had recovered from the more severe symptoms of the disease. They looked like persons who had lost a large quantity of blood; and so indeed they had, for the fever-poison had set up changes in the nutrition of the system of a serious nature. In this way the asthenic character of the phenomena of diphtheria may be explained, differing as they do from those of other fevers in so far as that they are, as a rule, of a sthenic type.

Fernhurst, Sussex.

Electro-Puncture in Aneurism of the Aorta.—Drs. Dujardin-Beaumetz and Proust read a memoir at the recent meeting of the French Society for the Advancement of Science, in which they state that, as the result of the employment of electro-punctures in six cases of aneurism of the aorta, they are enabled to conclude that Ciniselli's procedure, as they have modified it, has become a simple operation unattended with danger, and constitutes an efficacious and rational mode of treatment. In one case described by Dr. Proust, the patient having died from hæmorrhagic infiltration of the lungs, it became possible to show that a thick layer of fibrinous coagula existed in the portion of the aneurismal sac where the needles had been applied. This case showed that electro-puncture could be successfully practised in patients whose general condition was a very grave one; that the coagula were deposited at the point of application of the positive pole; and that M. Gaiffe's improved instruments should be employed. M. Teissier observed that several experiments which he had performed corroborated the above conclusions, for he had found sphacelus produced in the arterial wall at the point of application of the negative pole, while several accidents arose during the application. But the application of the positive pole never gave rise to any accident, so that Drs. Dujardin and Proust have good reason for modifying Ciniselli's procedure by employing only the positive pole as the active agent, applying the negative one to a moistened plate with a broad surface placed at a distant part of the body.—*Gaz. Hebd.*, September 6.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

THE BRISTOL ROYAL INFIRMARY.

CASE OF STABBING OF BRAIN AND WOUNDING OF MIDDLE CEREBRAL ARTERY.

(Under the care of Mr. DOWSON.)

[Reported by J. Greig Smith, M.A., M.B., Medical Superintendent, from notes by Mr. G. M. Smith, Clinical Clerk.]

N. B., a Norwegian sailor, about twenty-five years of age, was admitted on May 24, 1877, with a history that he had been stabbed in several places, and knocked down by a fellow-sailor in a drunken brawl.

Condition on Admission.—Patient insensible, and collapsed. Pupils contracted, right more so than left; reacted sluggishly to light. Slight movements of left arm and leg. Right side motionless. Motions passed under him freely. Pulse 100, weak and small; respirations 22, noisy. No facial paralysis. From an incised wound an inch in length, above the left ear, blood issued freely in jets. The bleeding was found to come from a slit in the temporal bone corresponding to the wound in the scalp. Thinking that a meningeal vessel might have been wounded, the House-Surgeon trephined away the bone in the neighbourhood of the fissure, in the hope of being able to bring the bleeding point into view, and secure the artery. It was found, however, that the blood came out of a wound in the brain-substance, beyond the reach of surgical aid. It was evident that some large bloodvessel in the centre of the brain, perhaps the circle of Willis itself, had been wounded, and no treatment promised to be of any avail. Compression of the carotids did not stop the bleeding, though it diminished the force of the pulsations for a short time. Ligature of the carotids, therefore, was out of the question—in the first place, because it would not have controlled the hæmorrhage; and in the second place, because it would have aggravated the already excessive anæmia of the brain. Compression over the wound would simply have added a condition of laceration of brain to the existing one of cerebral hæmorrhage. In the remote possibility that a clot might form, a sponge and some dry lint were laid over the wound, and the patient was put to bed. Brandy-and-water enemata were administered, and hot bottles and warm blankets were applied. During the next four hours the bleeding continued with short intermissions. His right limbs continued motionless; but the movements on the left side of the body became more vigorous—so much so that his left arm had to be restrained. At the end of three hours, loud blowing murmurs were heard with both sounds of the heart at apex and base. At this time the pulse was 140, very small and weak; respirations 36, noisy, but not laboured. Six hours after the injury the breathing began to take on the "Cheyne-Stokes" character; and this continued, becoming more distinctly marked, till the end. At 2.30 a.m., twelve hours after admission, and immediately after an attack of vomiting, the left side of the body was violently convulsed. During the fit his head and his eyes were turned to the right. Temperature in left axilla 100·6°, right axilla 99·2°; heart-sounds almost inaudible; pulse 188, flickering and intermittent; respirations 40. At 5 a.m. he was slightly better: he swallowed a little milk; he put his left hand to his head, where it got stained with blood, and then stared at it in evident astonishment; convulsive twitchings less frequent; bleeding less in amount; circulation failing. At noon, twenty-one hours after the injury, he died, having had three convulsions similar to the first during the last hour of his life.

Autopsy, twenty-three hours and a half after Death.—Body well made and muscular. Surface blanched; rigor mortis well marked. One inch behind the insertion of the left deltoid muscle was a gaping clean-cut wound, seven-eighths of an inch long and one inch deep. There was a similar incised wound in the left side of the thorax. Head: Above the left ear were the incisions made for the trephine. At the junction of the left parietal with the external part of the frontal bone was a small stab, not before noticed, piercing the skin and half the thickness of the skull. The thickness of the cranium, about an inch above the torcular Herophili

was three-eighths of an inch; at the seat of the stab it was a little over one-eighth of an inch, the upper edge of the wound being thicker than the lower. On removing the skull-cap there was an irregular opening of the dura mater corresponding to the wound in the skull. The pia mater was of a dark pink colour. There was no blood under the meninges. On examining the base of the brain the knife-cut was seen to pass at right angles to the squamous portion of the temporal bone, through the middle lobe of the cerebrum. It entered about the middle of the second temporo-sphenoidal convolution; went through the middle lobe; passed across the anterior perforated space; re-entered the brain-substance in the left crus cerebri, which it pierced to the depth of a quarter of an inch; and terminated in the middle line of the brain, about one-eighth of an inch below the third ventricle. In its course the knife cut the left middle cerebral artery half through, about an inch from its origin, and just before giving off the anterior choroid. Above the crus it divided the posterior part of the extra-ventricular corpus striatum, and the anterior part of the optic thalamus, the contiguous surfaces of these ganglia being oblique, and the wound at right angles to the centre of the brain. None of the ventricles contained blood. The viscera were perfectly healthy.

Remarks.—The interest in this case is more medico-legal than pathological. The stabbing instrument was an ordinary clasp-knife, with a blade three inches long, and seven-eighths of an inch wide, which did not lock. The whole length of the blade had entered the brain. The force required to pierce the skull, even at this its thinnest part, must have been considerable; indeed, with an ordinary clasp-knife one would have thought it impossible. The unique point about the case is the wounding of the middle cerebral artery. But for this fatal accident the patient might have recovered, for there was very little disturbance of the brain-tissue. The nervous symptoms were just such as we might have expected from the character of the lesion.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

CASES OF UNIVERSAL ALOPECIA AND EPILEPSY.

(Under the care of Dr. GOWERS.)

Universal alopecia is so rare a disease that we know little of its associations. The two following cases, in which it was accompanied by epilepsy, are therefore of some interest from the side of both cutaneous and nervous affections. The notes of them are brief, being only taken in the ordinary routine of out-patient work.

Case 1.—W. G., a man aged fifty-four, came under treatment for epilepsy of four years' duration in November, 1877. He presented universal alopecia, the hair of the scalp, eyebrows, eyelashes, whiskers, and pubes being all wanting, the only exception to the universal want of hair being two or three hairs above the ears. When eleven years of age he had rheumatic fever, and soon after his hair came off in patches from his head. In consequence of this his head was shaved, but the resulting growth of hair was partial only, and it gradually, in the course of years, all came off. The hair from time to time grew a little, and then fell off again, until at the age of thirty the baldness of the scalp was complete. His whiskers were lost at about forty years of age, and during the next few years the eyelashes and eyebrows and the hair on the trunk successively disappeared. He had never had syphilis, and presented no sign of heart disease. There was no family history of nervous disease. His first fit occurred at fifty years of age. No exciting cause could be ascertained; there was no evidence of intemperance. The attacks occurred during both the waking and the sleeping state. They were preceded by no warning; consciousness was lost, and the character of the convulsion was clearly epileptiform. After the fits, for some hours he had almost constant jerkings. The attacks recurred about once every three or four weeks.

Case 2.—G. N., a man aged forty-nine, came under treatment for epilepsy of five years' duration in 1878. No history of syphilis or family neurosis could be obtained. The loss of hair was universal and complete, and occurred at about twenty-five, soon after a severe illness occasioned by some injury to his arm while clipping a horse (the exact character of the injury and illness was obscure). The fits were attributed to a fall, in which he cut his head, a month before the first fit. They were distinctly epileptiform in character, and occurred during both sleeping and waking, at intervals of about two days. During the last two years he had been "strange," emotional, and at times presented delusions, thinking other women were his wife, etc.

Remarks by Dr. Gowers.—The rarity of alopecia makes it a little doubtful what significance is to be attributed to the coincidence of the two conditions of cutaneous and neurotic disturbance, but facts are not wanting which suggest that the coincidence is not an accidental one. In each case there was no recognised cause to which the alopecia could be ascribed, and in one there was an equal absence of any circumstance to which the epilepsy might be due. In each case the epilepsy occurred late in life, long after the alopecia was complete. Other cases are on record which point to a disturbance of the nervous system as a cause of alopecia: one, for instance, in which universal loss of hair followed an injury to the brain. The undoubted influence of emotion in arresting the formation of pigment in the hair proves that the nutrition of the hair is closely connected with the function of the nervous system. Hence it seems possible that the alopecia may have been the result of a change in the innervation of the skin, depending on such an alteration of the central nervous system, cerebral or sympathetic, as predisposed, when farther advanced, to the occurrence of epilepsy, accompanied, in one case, by even more profound disturbance of cerebral function, as shown in the mental disturbance.

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Medical Times and Gazette.

SATURDAY, SEPTEMBER 28, 1878.

THE REPORT ON THE ARMY MEDICAL DEPARTMENT.

We have received a copy of the Report of the Committee which was appointed, on February 19 last, by the late Secretary of State for War, Viscount Cranbrook, to inquire into the causes which prevent a sufficient number of eligible candidates coming forward for the Army Medical Department; and to point out the remedies which might appear to be called for. The Report is an elaborate and able one, and, though we propose to remark upon its contents at some

length, it would not be possible to do it justice in any single article. The Report would be a valuable document if the Committee had confined themselves to the first subject submitted to them; but this is by no means the case. It contains much more than a summary of causes of dissatisfaction, and suggestions for their removal in the future; for it touches upon alterations of grave magnitude, and advocates a new policy which we may well call "Imperial"; and it confirms also, by the weight of its opinion, the decisions which had already been arrived at on some serious points. It does even more than this, for it bases some of its recommendations upon a future which depends on the establishment of a "one-portal system." It is in some respects a revolutionary Report from an Imperial point of view. It is in many ways, however, to be highly praised as a Report. The Committee have done their best, and have sought for information from a great many sources. They have considered suggestions from universities, schools, and individuals, and they have spared themselves no trouble. If they have been a little too ready to find excuses for the former alleged breaches of faith with the members of the Medical Department, it was their duty to make out as good a case for the Government as possible, and they have clearly expressed their opinion that the Medical Officers of the Army must be highly educated men, and honoured and paid as their professional standing requires.

We have used the word "honoured" advisedly, because one of the grievances of the Army Medical Officers was that they were not honoured; and this grievance was, we think, both real and imaginary, and the opponents of the profession often seized upon the imaginary grievanecs and held them up to ridicule, thereby hindering the real grievanees from coming to the light. There have always been some foolish men in the Medical Service, trying to insist upon being what they are not, and wishing to be mistaken in the streets or ball-room for combatant officers. With such men as these no one can have much sympathy. But there are other honours—those which spring from the fountain of honour—of which military medical men have not had their proper share; and we rejoice to see that the Committee recommend that in the distribution of crosses and ribands the doctors shall share for the future in equal proportion with combatant officers. The question of honour, too, is allied with the question of command. Relative rank without power of some kind is met with indifference or concealed contempt; and now the charge of hospitals is confided to medical men. So at least the Committee say, but we beg to call their attention to the fact that in the last quarterly Army List the name of Colonel R. C. Stewart appears as Commandant at Netley.

We have said that the Committee have done their best to inquire into the grievances of the officers who have served or are still serving in the Department, and that their Report excuses and explains many things which have been considered unfair and unjust. The loss of a soldier-servant is admitted as a grievance, but still as a minor evil following in the train of the great step of unification. The difficulties as to quarters are acknowledged as pressing hard upon the medical officer, but still unavoidable under the system which made army medical men a united staff corps. The loss of forage is treated not as a grievanee so much as a misunderstanding on the part of the medical officers, who had no real grounds for thinking that forage was part of the allowances intended to supplement the scanty pay of medical men. We think on this point the Committee have done their very best for the Government, in the hope of satisfying the heads of universities and schools, who, however, must be well aware that "allowances" do form a considerable addition to army pay, and that field-marshals and generals do not usually keep the number of chargers for which they draw forage. Other grievances are treated more plausibly. The unpublished roster is accounted for pretty satisfactorily. The non-discrimination between seniors and juniors is met by the argument that surgery knows no minor duties, and that no medical work is beneath the attention of the most advanced practitioner in cases where no junior officer is available. Still, while doing their best for Government, the Committee have by no means disregarded or explained away all grievanees. They acknowledge, for instance, that the old limit of sick half-pay was an injustice, and recommend that it should be remedied; and, above all, they recognise the justice of the complaints against the scale of pay and the system of retirement.

Turning now to the new policy to be followed in the reorganisation of the Medical Department, let us notice, first of all, two things of importance. In the first place, the regimental system has received one more nail in its coffin, and if it was dead before, it is dead and buried now. We have noticed how careful the Committee have been to inquire from many sources the best course of reconstruction or of destruction, but we think if they had called for the opinions of one class, they might have favourably considered some modified system of regimental service. We do not see, for instance, that the patients have been listened to, and we believe more would have been said in praise of a regimental system by old non-commissioned officers and privates than has yet appeared. However, we suppose we must accept the inevitable, and say farewell to regimental doctors. The other point dwelt on by the Report is the acknowledged failure of the ten-years system. The Committee recommend that it should be modified, but practically they confess that the ten-years plan would not work.

And now for the future policy. We called it an Imperial policy, and so it is, for it opens up the appointments of the British Service to the colonists of the Empire; in fact, it gives them a proportion of the vacancies in the Army Medical Department. And it does much more than this, for it gives up competitive examination in the case of the colonists, while it retains it still in the case of a portion of the English students. Something like competitive examination is partially enforced, indeed, on the colonial candidate, and it is recommended to be relaxed in the case of the English applicant; but the broad fact remains, that the colonial medical men will obtain their appointments by nomination, and part of the English students by a distinct competitive examination. We hardly see the wisdom or justice of this distinction, but we think we see the cause. *The Queen's Service must be carried on*, and it is clear that if English medical men will not come forward, colonists will be invited to take their places, and should they fail, no doubt foreigners would be enrolled in the Army Medical Department. Medical men must be had for the Services, and yet the expenditure of the State must not be increased without great care and caution. We see a shadowing forth of a coming increase of hard work, even if accompanied by more pay, in the case of the Army Doctors. The numbers of the Department are to be reduced. Half-pay medical officers, it is proposed, could manage brigade depôts, and small detachments could be placed under the charge of civilians; and to carry out this view it is suggested that retired medical officers in future should be liable for service in case of emergency up to the age of fifty-five years. That is, they are up to that age to join the Reserve.

We notice that the reduction of establishment will not be carried out in the British Medical Service only, for another coming event is foreshadowed in that paragraph of the Report which says that the Committee have been informed that it will be possible to reduce the Indian Medical Establishment by 150 doctors—we have heard it rumoured that the 150 are

to be replaced by natives of India, who will have to be content with a lower rate of pay than their European medical brethren; if true, this is another development of the Imperial policy, and, whether desirable or not, it is intended to combine efficiency with economy; and England insists upon both. Still, so far as the English medical students and junior practitioners are concerned, the question is, Will the terms now offered suit them? Will those who advise students be satisfied with the improvements suggested in the pay and treatment of the coming members of the Army Medical Department? Will the teachers of the schools be conciliated by the presentation to them of so many appointments to be at their disposal to reward diligent students?

We almost doubt it, for all schools will evidently not be favoured; and schools, if not candidates, will run the risk of patronage until the one-portal system of admission to the medical profession becomes law, when competitive examination is to cease. The Committee perhaps look for this immediately, and intend to conciliate everybody at once. It is not possible to enter more minutely into the examination of the whole long list of recommendations made by the Committee for the future good of the Medical Department; our readers will find them in another column, and can form their own opinion.

So far as we can judge, candidates of the British schools who enter the Service will receive more pay while on probation at Netley and subsequently, and better pensions than their predecessors, and they will probably obtain a larger share of the honours which the Crown bestows for meritorious service. After all, pay, pension, and honourable distinctions are the chief matters; and as for breaches of faith, those who enter the Service in the future will probably have little to complain of, for this elaborate Report is in itself a confession that it is dangerous to trifle with the Medical Officers of the Crown.

There are some other changes proposed which may require notice at another time, such as the creation of a new rank of Brigade Surgeons and other details of organisation; but we think we have marked out the most prominent points of the Report, and those most likely to interest our readers generally.

ACUTE MILIARY TUBERCULOSIS.

Few, if any, diseases are so desperately unmanageable as acute tuberculosis, yet for that very reason it demands to be studied in all its bearings with the greatest minuteness. Only in this way can we hope to learn how to prevent its outbreak or to check its progress. We are therefore deeply indebted to those observers who will take the subject up and work at it, even though they fail at present to provide us with a remedy for the malady, or to clear up many of its mysteries.

Dr. Litten, of Berlin, one of the rising young physicians of Germany, is the latest contributor to the literature of acute tuberculosis, and we have summarised in the remarks which follow the most salient points of his recent valuable lecture in *Volkmann's Sammlung Klinischer Vorträge* (No. 119).

In the first place, Litten points out that the theory that miliary tuberculosis *only* follows caseous resorption will scarcely stand, and that cases occur in which healthy individuals die of it without any detectable cause for the disease, either *intra vitam* or *post mortem*. It is further interesting, that, like the acute infectious diseases properly so called, miliary tuberculosis (and by this term the acute form with rapid course is here invariably meant) tends to vary in its frequency with the season, and at times to take on a sort of epidemic character. Thus Buhl states that at Munich he observed most cases in May, and none at all in July and August. Lebert, at Zurich, reckoned April and May as the months when the disease was most frequent, and Virchow, at Berlin, also speaks of the early summer months as the time when acute tuberculosis is *quasi*-epidemic.

The sexes are very unequally attacked, and of fifty cases observed by Professor Frerichs and Dr. Litten in the wards of the Charité Hospital at Berlin, forty-three, or 86 per cent., were males. The largest number of cases per decade (fourteen) occurred between thirty and forty years, and the next largest (ten) between twenty and thirty. The chief peculiarity of the disease in infants is the frequency with which the meninges are involved. In the course of tuberculosis affecting the diaphragm, the pericardium, and the meninges, peritonitis, pericarditis, and meningitis are not uncommon. The distribution of the tubercles in the different organs of the body varies extremely; but, while the pancreas scarcely ever suffers, it is rare for a case to be met with in which the lungs, liver, spleen, kidneys, bones, and choroid membrane are not affected.

Dr. Litten's statistics of fifty-two post-mortems, chiefly made by Virchow at the Berlin Pathological Institute, show that etiologically acute tuberculosis is associated more frequently with phthisical deposits and cavities in one or both lungs than with any other condition. This was true of twenty-eight out of the fifty-two cases. In *three* cases the tubercular eruption immediately followed the *rapid absorption of pleuritic effusions;* and Dr. Litten regards the hereditary predisposition, which was certainly present in two of them, as having been lighted up, so to speak, by the irritation (*Reiz*) caused by the removal of the pressure of the effusion from the vessels of the lung, and by the rapid re-expansion of the lung itself. With regard to the relative frequency with which the organs are affected with tubercle, it may be stated that the lungs are almost invariably attacked. In fifty-one cases out of fifty-two this occurred, and in thirty-six the pleuræ were also diseased. The lungs may be the only organ affected. In eleven out of the fifty-two cases there was serous pleurisy, and in two hæmorrhagic effusion into the pleural cavity. The most interesting fact in connexion with the digestive tract, apart from the occurrence of intestinal ulcers, is that of the existence in some cases (about 10 per cent.) of ulcers on the back of the tongue, with elevated edges, the seat of miliary tubercles. These ulcers may, according to Litten, develope quite independently of any disease in the larynx, pharynx, or elsewhere in the neighbourhood of the mouth, and they sometimes run their course very rapidly. The mesentery was affected in six, and the omentum in ten cases; while the liver and spleen were always the seat of tubercle. The enlargement of the spleen —which sometimes is considerable, and which was present in 70 per cent. of the fifty-two cases—deserves notice for its diagnostic value. The kidneys are frequently tuberculous, and less often the prostate, supra-renal capsules, and bladder.

In one rapidly fatal case, which occurred on the third day after childbirth, tubercles were found in the mucous membrane of the uterus alone of all the organs, if we understand Dr. Litten aright. The pancreas and salivary glands were not affected in a single one of the fifty-two cases, nor were any of the muscles except those of the heart. Tubercles are not very rare in the septum ventriculorum and the muscular walls of the latter organ, and they are also found under the endocardium and pericardium. In the bones the tubercles occur in the marrow, without the existence of other disease, such as caries. Their favourite bones are, next to the long bones, the sternum, vertebræ, and ribs. They were

present in the bones in 31 per cent. of Litten's cases, though more careful examination would probably have detected them still more frequently.

The most important fact, however, connected with the location of tubercles is their almost constant presence in the *choroid membrane* of the eye. They were found there in the fifty-two cases thirty-nine times; and their absence was specially noted, as far as the naked eye could judge, in the thirteen others. They are found varying in size from 0·4 to 5·0 millimetres diameter, and are not limited to any particular part of the choroid, though, if anything, most common quite posteriorly. As many as fifty-two have been counted in one eye. They become visible with the ophthalmoscope during life, when they have reached a certain size, owing to the atrophy of the pigmented epithelium over them as they bulge forward under the retina; and Von Graefe, who first observed choroidal tubercles in the living subject, stated that tubercles of less than 0·5 millimetres can be detected, especially if a retinal vessel crosses them. It is not necessary that there should be tubercles in the brain or its membranes because they are present in the choroid. In the thirty-nine cases of choroidal tubercle observed, this connexion existed only in nineteen, or in less than half; and even where it exists, the appearance of choroidal tubercles may precede the development of cerebral symptoms by several days, or, *vice versâ*, appear later than the latter. Curiously enough, in thirty of the thirty-nine cases of choroidal tubercles, the *thyroid gland* was affected with a more or less extensive eruption of tubercles. That this must be an accidental coincidence, however, seems clear from the fact that in the remaining nine cases the thyroid gland was unaffected, while in nine other cases the thyroid was involved and the choroid not. The most frequent pathological conditions of the brain and its membranes associated with choroidal tubercles were simple tuberculosis of the pia mater, and tubercular meningitis. Tubercles are rare in the retina. The choroidal tubercles generally become visible late in the course of the disease; but they have been seen as early as eight weeks, and even as early as *four months* before death. They appear with the ophthalmoscope as yellowish-white roundish spots, which gradually shade off into the surrounding pigment. They are occasionally, when confluent, as large as the optic disc, but are generally much smaller. Their growth can be watched from day to day; and changes can be recognised in them in as short a period as twelve to twenty-four hours. Vision is scarcely ever impaired by them. Diagnostically their presence justifies an assertion of the existence of general miliary tuberculosis more conclusively than any other symptom.

Returning to tuberculosis of individual organs, we find 60 per cent. of the cases complicated with tubercle of the brain and its membranes, its most common situation being in the *pia mater*. Two points deserve especial attention in connexion with the nervous system—(1) that tubercles may develope extensively in the membranes *without a trace of exudation;* and (2) that, on the other hand, there may be hydrocephalus present *without a trace of tubercle.*

The list of organs in which tubercles develope is now, with the occasional exception of the synovial membranes of the joints, the middle ear, etc., practically exhausted. The characteristic of acute tuberculosis is not that it attacks particular organs, but that it attacks *many* organs, and runs an acute course. Miliary tuberculosis may originate in the presence of any chronic disease, and it should be especially noted that emphysema does not by any means exclude it, as Rokitansky supposed. This has been proved most conclusively by Wunderlich and Burkart, as well as by Litten's own observations. There is also an acute form of emphysema which is not uncommon at the edges of the lungs, and which is produced by the impediment to respiration set up by the tubercles embedded in the tissues of the lung.

We have not space to reproduce the picture of the clinical symptoms of miliary tuberculosis drawn by Dr. Litten, and can only refer to two or three of its details. Though miliary tuberculosis is generally accompanied with marked febrile symptoms, cases occur where the temperature *never*, throughout the whole course of the disease, reaches 39° C. The severe dyspnœa which is present in the majority of cases appears to be only partly explicable by the attendant bronchitis and fever, and is probably due to a direct stimulus exerted by the tubercles on the peripheral fibres of the vagus nerve, which is conducted from them to the respiratory centre in the medulla. The enlargement of the spleen has been already alluded to; and it should be added that it is painless, as a rule, in the absence of fresh perisplenitic inflammation. Owing, too, to there being, as a rule, no meteorism, the splenic tumour is more readily detected than in typhoid fever—a point of some diagnostic value. Lastly, we should remember that nervous symptoms in the course of acute tuberculosis may be simply due to the intensity of the fever, and to the abnormal nutrition of the brain with the infected blood, and not to actual disease of the nervous system.

The *diagnosis* of miliary tuberculosis must depend on a consideration of all the phenomena present, and not on any one symptom. Irregular fever, rising high from the outset, and accompanied early with bronchitis and cough, considerable increase of respiratory frequency, with cyanosis, rapid wasting and loss of strength, with perhaps an eruption of herpes on the lips, would favour the idea of its existence, especially in a person with old disease of the apices of the lungs. If no roseola appears at the end of the first week, and diarrhœa, meteorism, and ileo-cæcal tenderness are absent, the probabilities are still more in favour of acute tuberculosis; and, still later, the absence of bedsore, so frequent in typhoid, would further strengthen the diagnosis. Dr. Litten calls attention to the occasional difficulty of distinguishing between diffuse bronchitis *in elderly persons with emphysema*, and miliary tuberculosis, at any rate at first. The chief difference between them consists in the abundance of the physical indications of catarrh (râles), and of the sputa, which is early met with in diffuse bronchitis. Miliary tuberculosis runs its course in two to eight weeks. The prognosis is almost absolutely fatal, and only when a case recovers in which choroidal tubercles have been observed with certainty *intra vitam* will it be possible to affirm that the disease is ever cured.

Therapeutic measures can only be directed, in our present hopeless state of ignorance, to reducing the fever and alleviating the bronchial catarrh.

THE INCREASE OF LUNACY—REAL OR APPARENT?

The alleged increase of lunacy must be a question of the greatest interest, not only to the members of the medical profession, but also to the general public. In noticing a few weeks ago the issue of the thirty-second Report of the Commissioners in Lunacy, we gave a brief summary of their statistics for the year 1877, which reiterated the never-failing annual announcement of a very marked increase in the number of registered lunatics and persons of unsound mind. The importance of the question whether insanity is really increasing as rapidly amongst us as would thus appear from a superficial inspection of the available statistics, justifies our examining this matter in some detail.

The fact being notorious that there has been an uninterrupted and rapid increase in the number of registered lunatics during the last twenty years, the first point to settle

is, whether that increase has been in a greater ratio than would result from the mere natural increase of the population. The statistics in the Report before us show that in the last twenty years the number of registered lunatics in England and Wales has increased from 36,762 on the 1st January, 1859, to the enormous number of 68,538 on the 1st January of the present year. Now, the increase of the population of England and Wales during these twenty years has been in a much smaller ratio, viz., from 19$\frac{7}{10}$ millions at the middle of 1859, to 24$\frac{17}{20}$ millions at the middle of 1878. From a comparison of these figures it is found that twenty years ago the number of lunatics bore to the general population a ratio of 18·67 for every 10,000, which was increased to a ratio of 27·57 per 10,000 on the first day of the present year. Thus far, therefore, the figures are certainly the opposite of satisfactory.

On going a little deeper into detail we observe that of the 68,538 lunatics under supervision when the present year began, no fewer than 60,846 belonged to the pauper class, and we further learn that the rate of increase has been much quicker in this class than among the private lunatics. Thus the ratio of the latter class to the general population, which was 2·50 per 10,000 in 1859, is 3·09 per 10,000 for the present year, the figures for the corresponding ratios of the pauper class in these two years being 19·85 and 29·40. If the pauper lunatics had increased no faster than the private lunatics, the last number, instead of being 29·40 (per 10,000), would have been only 24·53. While, therefore, both classes have increased in a greater ratio than the general population, there is a considerable difference in the ratio of increase as between the two classes themselves.

But there is another very noticeable difference seen in tracing the increase in these two sections, viz., this—that whereas in the pauper division the ratio to the population has never for any single year since 1859 been so low as for the immediately preceding year, always receiving, without any exception, an annual increment, a far more cheering history is true of the private section. There have been several instances during the last twenty years where the ratio of the private lunatics to the general population has either remained stationary for a few years, or has even shown a small decline as compared with preceding periods. Such a state of matters is happily true of recent years. Thus there were no more private lunatics, relatively to the population, at the beginning of the present year than there were in 1874 or 1875; and the present ratio is even smaller than that of 1876, the numbers expressing the ratio of this class, per 10,000 of the population, for 1874 and succeeding years being respectively 3·08, 3·09, 3·10, 3·09, and again 3·09. During the last five years, therefore, the continued increase in the ratio of lunatics to the population has been entirely due to the excessive augmentations of the pauper division. It now remains to be seen whether any explanation can be offered for the ever enlarging increments of this section, which necessarily constitutes the great bulk of collective lunacy.

The mere fact that the number of pauper lunatics has, as nearly as possible, been doubled during the last twenty years, while the total number of paupers for each of the last five years has been absolutely smaller than in 1859, would in itself seem to indicate, what is no doubt the case, that many paupers are now classed and treated as lunatics who would not, twenty years ago, have been formally regarded as insane at all. And in the report before us there is further evidence of the reality of this explanation. Roughly speaking, we may divide lunacy into three grades of severity or acuteness, corresponding to the three different kinds of residence where pauper lunatics are located—(1) asylums, hospitals, and licensed houses; (2) workhouses; (3) the houses of relatives, or others. Now, the most striking feature in the distribution of pauper lunatics, in recent as compared with former years, is the very small number of outdoor cases now found resident with relatives or others, and the very large number deemed suitable for the special care and treatment of asylums and hospitals. In 1859 their distribution was as follows—56·70 per cent. in asylums and hospitals, 25·06 in workhouses, and 18·24 with relatives or others; while for the present year the corresponding percentages are—63·06, 26·73, and 10·21 respectively. And this tendency to the maintenance of an ever-increasing proportion in asylums, and a smaller percentage as outdoor paupers, has been especially noticeable during the last four or five years. In reference to this point the Commissioners remark:—

"There is, we think, little doubt that the operation of the Parliamentary grant of four shillings per head per week to the guardians, towards the expenses of every pauper lunatic maintained in an asylum, has tended largely to promote the removal of chronic cases from workhouses and as outdoor paupers into asylums. . . . We have noticed very generally that when chronic cases become at all troublesome, they are no longer, as formerly, retained in the workhouse, but are removed to the asylum. Such patients are undoubtedly embarrassing to workhouse management, and are better cared for in asylums, although they do not require the more costly arrangements necessary in curative establishments."

These being the facts, we think there can be little doubt of the truth of our assertion—that many paupers are now returned as lunatics, who can scarcely be said to come under the older and stricter definition of insanity. We find, as a matter of fact, that there are many pauper lunatics in asylums whose mental condition alone would hardly suggest their location in these curative institutions, and so, too, we may readily conclude, there are many workhouse and outdoor paupers now classified as lunatics who do not fall under the strict meaning of the term. This tendency to regard as lunatics many "troublesome" and "embarrassing" cases, especially when of a chronic nature, is well known to all who are practically familiar with the working of the lunacy laws, and is doubtless the chief explanation of the great and continuous increase in the number of registered lunatics of the pauper class. In the case of very many of these so-called lunatics there will be found, not lunacy proper, but only the manifestations of imbecility and dotage, or the nervous sequelæ of vice and dissipation.

In corroboration of this view of the matter is another fact made apparent by the Commissioners' statistics, viz., this—that it is just in those localities where there has lately been provided most accommodation for pauper lunatics that their increase has been relatively most rapid. This is especially true of the metropolitan district, where the ordinary workhouses are supplemented by the excellent district asylums for pauper lunatics. If we compare this district with many counties of Wales, for instance, where there has been recently no material increase of the available accommodation for pauper lunatics, we shall find a very different condition of affairs. In many of the Welsh counties the increase in the number of pauper lunatics has scarcely been proportional to the increase in the general population, and in several of these counties as many as 50 per cent. of the pauper lunatics are still treated out of doors. But in the home counties the proportion of outdoor pauper lunatics does not now exceed 3·5 per cent., while the increase in the total number has been notoriously at a much faster rate than that of the general population. The inference from such comparisons is altogether confirmatory of the above explanation of the apparent increase of insanity, and suggests the likelihood of the continuance of this apparent augmentation as accommodation is provided

for the care of these so-called lunatic members of our pauper population.

Some other minor circumstances may be adduced as also tending to swell the returns without indicating a real advance of lunacy in our midst, such as the prolongation of life among lunatics from the modern improved methods of detention and treatment. But, as compared with the explanation given above, all other considerations, we think, are of very little account.

On the whole, then, it may be safely said that there is much less ground for real alarm in regard to this ogre of increase of lunacy than would at first sight appear. For the last four or five years the proportional number of private lunatics has *not* been increasing, and the enormous increment in the pauper divisions is unquestionably, for the reasons stated, to a very great extent more apparent than real.

THE WEEK.

TOPICS OF THE DAY.

At the Southwark Police-court, last week, a person of the name of Kavanagh, residing at 100, Jamaica-road, Bermondsey, was summoned, under the 21st and 22nd Vict., cap. 90, sect. 40, for wilfully and falsely pretending to be, and taking and using the name and title of, a Licentiate of the Royal College of Physicians, implying that he was a registered practitioner according to the Act of Parliament. Mr. Hicklin, who appeared to prosecute, stated that he was instructed to proceed against the defendant by Mr. George Joseph Cooper, a qualified medical gentleman in Bermondsey, and others in the same profession, in order to protect themselves and the public against unqualified practitioners. The defendant had practised for some time in the Jamaica-road and its vicinity, putting himself before the public as a legally qualified medical practitioner, and had actually imposed upon the registrar of deaths by calling himself a Licentiate of the Royal College of Physicians. Mr. Hicklin produced a certificate of the death of a child four years of age, attended by the defendant, dated June 20 last, and signed by him "E. R. Kavanagh, L.R.C.P.," meaning that he was a Licentiate of the Royal College of Physicians. Mr. Hicklin was informed that the defendant had succeeded to the business of a properly qualified medical man, and that at the present time he was only preparing himself to obtain the legal qualification. With very considerate leniency, he refrained from pressing for the full penalty of £20. The defendant pleaded guilty, and the magistrate fined him in the mitigated penalty of £5 and 23s. costs.

A "Hospital Physician" has written to the papers to warn the charitable against falling victims to a very clever imposture which has already proved too successful. The plan is to present a petition, purporting to be the production of a hospital physician, in which the bearer is represented as having lately recovered from a serious illness, and the good-natured doctor has taken the trouble to set forth all the matter with a view of commending the applicant to the charitable public. A complete ventilation of this swindle will doubtless be the best means for defeating its success, and it is with this object that we mention it.

We have given elsewhere some account of a case of alleged hospital mismanagement which has lately caused some excitement in Dublin; and at the inquiry before the coroner, instituted at the instance of Mr. Callan, M.P., some of the evidence given was curious and contradictory, and the verdict was very Irish. It is satisfactory, however, to find that the jury blamed systems, and not individuals; and condemned even the doctors only for slowness in diagnosis. We regret to learn that on leaving the Mercer's Hospital, where the inquest was held, Mr. Callan was subjected to some indignities at the hands of the students, who had chosen to consider themselves aggrieved by the tone the inquiry had taken.

The Brighton Waterworks Committee have presented to the Corporation, on the recommendation of their engineer, Mr. Edward Euston, a report, in which they resolve upon a rearrangement and improvement of the water service in the town at an estimated cost of £14,430. The plan, which is intended to secure a duplicate source of supply at present, and would amply provide for future contingencies, has been agreed to by the Town Council.

It is satisfactory to find that the Government has not been unmindful of the possible consequences of the present epidemic of yellow fever in America, but has issued the following circular through the Local Government Board to the port sanitary authorities:—"I am directed by the President of the Local Government Board to state that, in view of the epidemic of yellow fever which is now prevailing in certain parts of America, it appears to him desirable to draw the attention of port sanitary authorities in England and Wales to the possibility of the importation into this country of cases of this fever. Such experience as has hitherto been had in Europe of yellow fever, which is essentially a tropical disease, has shown that it does not spread except under very special conditions. On the rare occasions when it has extended from vessels arriving in European ports, its extension has appeared to be exclusively amongst persons on shipboard, or employed in the harbour, or living in the immediate vicinity; and persons who have been taken inland sick of the disease have not communicated it to others. The present outbreak, however, appears to be of so malignant a character that no care should be wanting on the part of port sanitary authorities to meet the possible contingency of the introduction into this country of a malady so fatal. In England, besides other arrangements of the nature of quarantine that are made in respect of this disease, measures of isolation and disinfection of vessels infected with yellow fever are adopted by the Commissioners of Customs, under the orders of the Privy Council, as a part of their duties under the Quarantine Acts. Port sanitary authorities, though not themselves charged under the Quarantine Acts with the duty of securing this isolation and disinfection, can, on occasion, render important service to the Commissioners of Customs in executing these functions in regard to yellow-fever ships. In the event of any case of yellow fever finding its way, notwithstanding the precautionary measures taken by the Customs, into any English port, the action of the port sanitary authority should be the same as in the case of the common infectious diseases of the country—viz., removal of the patient with all necessary precautions into a place of isolation, and the destruction or disinfection of any articles of clothing or bedding that may have been used by him. The Board trust that the port sanitary authority have already provided themselves with means of such isolation and disinfection; but if the authority have not already done so, the Board would take the present occasion of again pressing upon them the importance of having such means at all times in readiness."

At a meeting of the Hornsey Local Board, held last week, an important question was discussed as to the powers possessed by the Board to order a house-to-house visitation for the inspection of sanitary arrangements. The question arose, it will be remembered, in consequence of an outbreak of diphtheria at Hornsey, which was attributed to bad drainage, and the recommendation of Mr. Harrison, the Local Government Inspector, that a house-to-house inspection should be instituted. The Solicitor to the Local Board

quoted the Public Health Act to show that the Board had the power to order such inspection, but one of the members of the Board, a barrister, dissented from the opinion thus given. It was, however, eventually determined to carry out all the recommendations contained in Mr. Harrison's report. Two fresh cases of diphtheria are stated to have recently occurred in Hornsey-lane.

Sanitary affairs at Honiton are by no means improved since we wrote last week. Typhoid fever still exists, and at a meeting of the Town Council, held last Saturday, the proceedings were of the most animated description. At the previous meeting of the Council it was decided to write to their late Medical Officer asking his advice, but it was now stated that he declined to make any suggestion, being convinced from former experience that if his advice proved unpalatable to certain sections of the Council it would not be acted on, seeing that by the advice he tendered after a similar outbreak last year he had laid himself open to considerable abuse. An angry discussion followed this announcement, and it was eventually decided to advertise for a fresh Medical Officer, and in the meantime to flush the drains with disinfectants. A fierce argument followed the statement that the water-supply of the town was in some measure responsible for the present outbreak of the fever; but although much recrimination was indulged in, no definite action to effect an improvement was taken.

At the St. Albans County Court, last week, the case of Mr. Charles Woollam, of the Abbey Silk Mills, against the Corporation of St. Albans, under the Public Health Act, in respect of the pollution of the river Ver by allowing sewage to flow into it, came on for hearing, it having been adjourned from the last court-day to allow the defendants time to carry out a complete scheme of drainage which they had then in view, and which they have now decided to adopt. On behalf of the Corporation a further adjournment to March next was solicited to enable them to perfect a scheme propounded by Mr. C. Roper, C.E., of Dudley. It was stated that the intention of the Corporation was to issue the necessary Parliamentary notices in November next on the owners of land which the scheme would affect, and further to prepare a Bill in Parliament to sanction the extension of the municipal district which would be required for the purposes of the scheme. Counsel for Mr. Woollam strongly objected to this adjournment, but eventually it was granted, and the further hearing of the case was postponed until March next. The judge refused to allow costs.

At the meeting of the Metropolitan Asylums Board, on Saturday last, an important letter was received from the Local Government Board, in answer to an application from the Asylums Managers "for an inquiry into the causes and conditions which protract the present epidemic of small-pox." The Local Government Board do not consider that the duration of the present epidemic has exceeded the average duration of small-pox epidemics in the metropolis, but, on the contrary, think that, if anything, its duration has been rather shorter than the average. The Board agree with the Managers "that any serious amount of mortality, even under epidemic influences, from a disease so capable of control by efficient vaccination as small-pox has proved to be, requires grave consideration." And the letter goes on to say:—"The facts within the Board's knowledge are, however, quite sufficient to account for the serious mortality which has occurred from the disease since 1876, and point, as did the facts of the epidemic of 1870-72, to three causes especially in connexion with vaccination—namely, deficient amount of primary vaccination, insufficient vaccination of past times, and absence of revaccination." The letter then proceeds to deal at some length with these three causes; but we must defer further notice of, and all comment on, the document to a future occasion. The Board consider that the inquiry asked for is unnecessary.

THE MEDICAL INSPECTION OF THE "RESERVE."

Much has been written concerning the men of the Army Reserve, and everyone has recognised and praised the sense of honour and duty that prompted the men to respond so readily to the appeal of their country. Much sympathy has also been justly expressed for individuals who had been obliged to sacrifice fair prospects in civil life at the call of duty. Military critics, too, have praised the soldierly bearing of the men who rejoined the ranks, and all curiosity as to the value of the Army Reserve is pretty well satisfied. But there is still one question we should like to have answered—What was the proportion of men who, on rejoining, were found unfit for duty by the medical officers? Rumour says that the proportion was considerable; and certainly it does not seem desirable, in the interest of the public service, that men should be retained on the list of the Reserve after they have ceased to be fit for duty. Payment should not be given as a retaining fee for service which can never be performed, and possibly it might prove a grievous hardship to men themselves ignorant of the extent of their physical disabilities, to find themselves, on rejoining, rejected by medical officers, while they might also be unable to resume the places they had just quitted in order to fulfil their military engagements. We believe the regulations for the medical examination of the Army Reserve are partly in fault in the matter. We are informed that it is only when a first-class man of the Reserve *has been reported* to the staff-officer of pensioners, that an application is made to have the man examined by a medical officer. No man can be expected to report himself, and his friends will not do it for him. Even the staff-officer of pensioners must be ignorant of diseases which can only be detected on medical examination. It appears to us that the authorities would do well to consider whether, in the interests of both the parties to the contract, an annual medical inspection of all men of the Reserve should not be made imperative.

THE CONVEYANCE OF THE WOUNDED IN PEACE AND WAR.

At the instigation of the Ancient Order of St. John of Jerusalem, Surgeon-Major J. H. Porter, Assistant-Professor of Military Surgery at the Army Medical School, Netley, has prepared a pamphlet "On some forms of Extemporaneous Conveyances for Sick and Wounded in Peace and War." Extemporised transport, Mr. Porter says, may be divided into (1) means for assisting sick or wounded by supporting them with the hands of bearers or some appliance; (2) the construction of hand-litters; (3) the adaptation of general service-waggons and country carts, of railway carriages and vans, of river- and sea-going vessels; and (4) the construction of horse-litters. Under each of these heads some practical hints are given, showing what articles may be utilised in emergencies, and the best methods of employing them. We entirely agree with Mr. Porter's concluding remark—namely, that even with the best description of transport much injury may be occasioned, and slight wounds formed into grave ones, by unskilled persons attempting to remove the disabled. It is with a view of rendering the numerous willing but unskilled helpers in accidents of everyday life less "injurious" to their fellow-mortals that the Order of St. John began, and is so earnestly carrying out, its ambulance movement. And if the requisite amount of knowledge can be imparted, and retained efficiently (which time alone will show), Mr. Porter's encomiums on the Order will not have been exaggerated.

AN IMPORTANT INQUEST IN DUBLIN.

During the past week an important inquest has been held in Dublin, which we mention particularly, as some charges were brought against one of the hospitals in that city in connexion with the case. A man named John Anderson, a constable in the Royal Irish Constabulary, died at Steevens' Hospital on September 11. He was fifty years of age, and had suffered for fourteen months from "modified epileptic fits," which came on especially after exposure to cold or wet. When admitted, on August 27, he was evidently in very broken-down health, and, as already stated, he died on the 11th inst. By direction of Mr. Hamilton, one of the surgeons to the Hospital, under whose care the deceased had been, a post-mortem examination was made, and, as had been anticipated, disease of the kidneys was found to be the starting-point of the "fits," and the principal cause of death. The Coroner, in opening the inquiry, said that "a statement had been made that probably the man's disease was mistaken, and that he was, in fact, treated as a 'malingerer,' and that the real nature of his case was not recognised. The jury were to inquire into the cause of death, and they were, moreover, to satisfy themselves as to whether there were any grounds for the charge that had been made. He need not tell them that it was of the utmost possible importance that the public should have full confidence in their hospitals. This was the hospital to which the members of the constabulary were brought, and of course it was of the utmost importance that they, and of course everybody else, should be properly treated. The jury had then to consider whether, under all the circumstances, the deceased was treated *bona fide* during his sojourn in the Hospital." The inquiry extended over several days, and the next-of-kin of the deceased, the Hospital authorities, Mr. Hamilton, Sub-inspector O'Brien in whose district the deceased had been stationed, were all represented by counsel. Mr. Philip Callan, M.P., appeared for the children of the deceased. At the close of the inquest, on September 18, the Coroner, in summing up, observed that:—"According to the evidence, Constable John Anderson died in the Hospital on September 11, 1878. The medical witnesses differed somewhat as to the precise nature of his complaint, but they all agreed that disease of the brain was the immediate cause of death. Any of the doctors who were asked the question unhesitatingly stated that his death was hastened or accelerated by his removal to Dublin on August 27, 1878, and of that there could be no doubt whatsoever. They would have the duty of considering whether any censure was incurred by any person or persons in connexion with that removal. It would appear that the rules of the Constabulary Service provided for the case of a constable reported unfit for duty at a country station who might be unable to come up to the depôt for medical examination; and it was deplorable that this provision was not availed of in this case. In considering this point, however, they would bear in mind that Dr. Leclerc's order for the removal of the deceased was qualified by the provision, 'if, in the opinion of the district surgeon, Constable Anderson was fit to travel.' On Anderson's arrival at the depôt on August 27 he was so ill that Dr. Leclerc very properly at once sent him to this Hospital, where he died. Here, again, it was to be regretted that no detailed history of his case accompanied him, so that, according to the evidence of Dr. Johnston, the house-surgeon, the doctors of the Hospital had 'to grope and examine for themselves into the cause and nature of his disease.'" And Dr. Johnston had said, "I stated it as my opinion that the fellow was malingering and putting it on very thick." In the absence of this history of his case the doctors frankly admitted that they were somewhat puzzled to determine the nature of his disease. With regard to the treatment of the deceased in the Hospital, no one would question that the highest skill, the most advanced knowledge, and the most careful consideration were brought to bear upon his case. But the jury would have to determine whether the nursing was adequate and efficient." The jury retired, and returned after two hours with the following verdict:—"We find that the deceased John Anderson died in Steevens' Hospital on Wednesday, September 11, 1878, from disease of the brain and kidneys, and that his death was hastened by his removal from the county Waterford to Dublin, and we have no evidence before us to hold anyone responsible; but we condemn the system by which he was removed, also the physicians not understanding the nature of his disease until too late to remedy it, they being for some time of the opinion that deceased was a malingerer; and we consider the attendance in the ward where the deceased was confined far from efficient."

THE EPIDEMIC OF SMALL-POX IN BETHNAL-GREEN.

In his annual report on the health of the parish of St. Matthew, Bethnal-green, for the year 1877, Dr. George Paddock Bate, the Medical Officer of Health for the district, offers some remarks on the subject of the recent epidemic of small-pox in the metropolis, which are well worthy of consideration. After extended observation, Dr. Bate is compelled to express his conviction that the present plan of carrying out the provisions of the Vaccination Act is inefficient. He thinks that all vaccination, by whomsoever performed, should be certified, after inspection, by a public vaccinator only, and his instructions should be to grant two classes of certificates. Those not having sufficiently good marks to be placed in the first class should only be granted a provisional certificate, with the understanding that they should be submitted to a second vaccination in a year or two, as the protective influence of an imperfect vaccination rapidly wears away, and the operation must be repeated to insure immunity from small-pox. Further, Dr. Bate remarks, the isolation of patients affected with the disease is at present most imperfect. In the existing state of the law, people are practically allowed to exercise their own option as to removal to small-pox hospitals, and only under certain conditions can the sanitary authorities legally interfere. Therefore, Dr. Bate thinks, removal should be made compulsory by law in all cases of infectious disease, when the means of isolating the affected person are not deemed satisfactory by the medical officer of health; and in disputed cases the nearest magistrate should have the power to issue an order for removal. Vigorous proceedings of this kind would, in Dr. Bate's opinion, succeed in putting an end to an epidemic, and be the means of saving many valuable lives. Again, the only legal mode by which persons can obtain admission to the hospitals of the Metropolitan Asylums Board is by an order signed by the relieving officer or the master of the workhouse, and the certificate of a district or workhouse medical officer. Much valuable time is thus lost in obtaining the attendance of the Poor-law officials and getting the necessary certificates made out and signed, and Dr. Bate conceives that it would be a much better plan, and would save much time to the already fully occupied district medical officers, if the certificate of any properly qualified medical man were accepted by the hospital authorities as sufficient for the purpose.

THE GENERAL MEDICAL COUNCIL.

A special meeting of the General Medical Council has been summoned for October 16, "in order to fulfil the requirements of the Dentists Act, 1878." We understand that no other business will be brought forward by the President but the settlement of the registration of dentists; and that

a session of one day is expected to suffice for the business that will be before the Council. It may be in the recollection of our readers that before the close of the meeting of the Council in July last the following resolution was passed:—"That the constitution of the Council needs revision; and that the Council do affirm and represent to the Government that, at its first meeting after the present session of Parliament, it will consider what modifications of its constitution are demanded and required, and will report to the Government accordingly." We suppose, however, this does not apply to a special meeting, and certainly the month of October would be a most inconvenient time for a prolonged session of the Council. The President will no doubt tell us why it has been deemed necessary to call the Council together to settle the registration of dentists.

SANITARY INSTITUTE OF GREAT BRITAIN.

The autumn Congress of this body will be held this year at Stafford, and will extend over the four days from October 2 to 5, inclusive. On the first-named date, Edwin Chadwick, Esq., C.B., the President, will deliver the introductory address on "The Need of Reform in the Administrative Organisation of the Sanitary Service, with special reference to the Appointment of Medical Officers of Health." On the succeeding mornings addresses will be delivered by Dr. Henry Day of Stafford, and Dr. W. B. Richardson. Many papers on important sanitary subjects will be read during the meeting by well-known authorities, as Sir Henry Cole, Dr. Angus Smith, Dr. Arlidge, etc. An address to the working-classes will be delivered in the Borough Hall on the evening of Saturday, October 5, by Dr. James Russell, M.A., B.Sc., Edinburgh, on the subject of "Food and Drink." In connexion with the Congress there will be an exhibition of sanitary apparatus, appliances, and articles of domestic use and economy. This exhibition will remain open for inspection up to October 19.

SUMMARY OF THE
RECOMMENDATIONS OF THE COMMITTEE ON THE ARMY MEDICAL DEPARTMENT.

1. That retirement be optional. [14, 15.]
   Surgeons and Surgeon-Major—
   After 10 years' service on a gratuity of £1250.
   „ 15 „ „ £1800.
   „ 18 „ „ £2500.
   „ 20 „ a pension of £1 a day.
   „ 25 „ „ £1 2s. 6d. a day.
   „ 30 „ „ £1 5s. „
2. That horses be maintained at large stations by the Army Service Corps, for the use of medical officers requiring to be temporarily mounted. [27.]
3. That a medical officer placed in barracks be allowed a distinct "medical officer's quarter." [32.]
4. That it be considered whether it is necessary to have so many resident medical officers. [32.]
5. That in case of sickness a medical officer may be allowed, if necessary, leave on full pay up to one year for the recovery of his health. [34.]
6. That half-pay in case of wounds or ill-health be governed by the rules applicable to combatant officers. [34.]
7. That the question be considered of giving a new title to the Medical Department. [39.]
8. That the Army Departments have no precedence *inter se*, but be arranged alphabetically. [40.]
9. That honours and good service rewards be bestowed on the scale applicable to combatants. [41.]
10. That the Honorary Physicians and Honorary Surgeons to the Queen have letters Q.H.P. and Q.H.S. appended to their names in the Seniority List. [42.]
11. That the names of the Queen's Honorary Physicians and Surgeons be printed in the Army List after those of her Majesty's Aides-de-Camp. [42.]
12. That appointment as Honorary Surgeon or Physician raise an officer, *ipso facto*, to the rank (supernumerary) of Deputy Surgeon-General. [42.]
13. That Surgeons-Major rank with Lieutenant-Colonels according to the date of completing twenty years' service. [43.]
14. That Surgeons rank as Captains; probationers as Lieutenants. [44.]
15. That Principal Medical Officers be instructed to make the best arrangements practicable for relieving Senior Executive Officers from the mere routine duties. [47.]
16. That at certain large stations Medical Institutes be formed. [71.]
17. That the condition of Indian Service for the rank of Deputy Surgeon-General be promulgated. [72.]
18. That for all new entries, retirement after ten years be made optional instead of compulsory. [77.]
19. That officers who joined under the "ten-years rule," if allowed to come under the new system, retain their £250 a year; but, in case of subsequent retirement on gratuities, be only eligible for sums less by £250 than those shown in Recommendation No. 1. [78.]
20. That one-half of the vacancies be filled up without examination, but subject to the approval of the Director-General, by registered surgeons nominated and vouched by the Medical Schools of Great Britain, Canada, and Australia in rotation. [83.]
21. That one-half of the vacancies be filled by half-yearly competitive examinations in advanced practical subjects. [84.]
22. That probationers be sent to some large station for practical instruction, until the Netley course begin. [85.]
23. That probationers rank as Lieutenants, and have pay at 8s. a day. [85.]
24. That the maximum age for admission as probationer be reduced to twenty-eight. [87.]
25. That an executive rank of fifty Brigade Surgeons be interpolated between the Deputy Surgeons-General and the Surgeons-Major. [92.]
26. That promotion to Brigade Surgeon be by selection. [92.]
27. That Deputy Surgeons-General be selected from Brigade Surgeons. [92.]
28. That the rates of pay and retirement be as shown in Section 93 of this Report.
29. That all Medical Officers retiring before the age of fifty-five be liable until that age to be called upon to serve in time of declared national emergency; that their names be retained meanwhile in italics, and that they be allowed to wear their uniform. [99.]
30. That the numbers of the executive ranks be gradually reduced to 796 Surgeons-Major and Surgeons. [100.]

The rates of pay and pension recommended for the Department are as follows:—

Effective.	Daily pay.	Yearly pay.	Relative rank.	Estimated pay and allowances, excluding forage.	Present rate [Warrant of 18 3], excluding forage.
Surgeon.	£ s. d.	£ s. d.		£ s. d	£ s. d.
On appointment	...	200 0 0	Captain..	291 5 0	260 11 3
After 5 years	...	250 0 0	Captain...	341 5 0	306 3 9
„ 10 „	0 15 0	273 15 0	Captain...	365 0 0	365 0 0
Surgeon-Major.					
On appointment (at 12 years' service)	1 0 0	365 0 0	Major ...	483 12 6	365 0 0
After 15 yrs.' serv.	1 2 6	410 12 6	Major ...	529 5 0	483 12 6
„ 20 „	1 5 0	456 5 0	Lt.-Col....	584 0 0	565 15 0
„ 25 „	1 7 6	501 17 6	Lt.-Col....	629 12 6	620 10 0
Brigade-Surg.					
On appointment	1 10 0	547 10 0	Lt.-Col....	675 5 0	No such rank.
After 5 years in the rank	1 13 0	602 5 0	Lt.-Col....	730 0 0	
					Maximum.
Dep. Surg.-Gen.	2 0 0	730 0 0	Colonel .	876 0 0	803 0 0
Surg.-General...	3 0 0	1,095 0 0	Maj.-Gen.	1,368 15 0	1,186 5 0

Salicylic Ointment.—Salicylic acid three parts, alcohol six parts, and fresh lard thirty parts. This is useful in wounds in which cicatrisation is tedious, and in which stimulation and disinfection are required. It is also of service in eczematous affections of the face.—*Union Méd.*, Sept. 17.

DR. WM. FARR ON TRUE TEMPERANCE.

We lately noticed the Thirty-ninth Annual Report of the Registrar-General, and intimated that there was in it a letter by Dr. William Farr on the causes of death. This treats effectively of the use and abuse of alcoholic liquors. This letter has its full share of Dr. Farr's characteristics as a writer: the flavour of classical erudition, and the apt and ready quotations which remind us of the days when physicians could truly be called learned; the subtlety and acuteness in exposing errors, only equalled by the gracefulness and neatness which leave no rankling wound, and the sterling vein of good sense fortified by long experience in the art of medicine, and in dealing with the theories which from time to time enlighten or obscure it.

To begin with: Dr. Farr demolishes a fallacy which has obtained extensive circulation of late; it is that the working-classes are becoming more and more intemperate, and that high wages are squandered in drink. "In the three years (1871-73) of high wages in the manufacturing districts, the proportion of deaths by alcoholism was low. The deaths by drink rose, on the other hand, in the three years (1874-76) of depression, probably because some sought consolation in drink, because the hours formerly spent in the workshop were spent in the public-house, or because the previous habits then began to bear fatal fruit. The fact remains, independently of any theory, that in three years of hard work and high wages—three years of prosperity—2230 people died of drink; while in the three years of idleness and reduced wages—three years of adversity—3316 died of the same causes, delirium tremens and other results of intemperance. This is contrary to a current opinion; and it may be worth while to point out that in the three years of prosperity the annual consumption of spirits in the United Kingdom was less than in the three years of adversity. It was 36,000,000 gallons a year in prosperity, 42,000,000 gallons a year in adversity!"

Dr. Farr easily demolishes that sensational pessimism that seems to delight in exaggerating the total quantity of drunkenness amongst us. Drunkenness, he says, unlike gluttony, is a "*public* scandal," and therefore is a very unfair test of the general morality of a population. Worse things are done in secret, and never talked about. In 1876, in the metropolitan police district, 32,328 charges of drunkenness were made. Taking it that 32,328 persons were disorderly drunk during the year, then 4,179,379 were sober. In the month of June, 1877, the number apprehended as drunk and disorderly daily was 97, of whom 80 were convicted. "Thus such drunkards in a given day were to the rest of the people of the metropolis as about one to 43,419. In studying the question on both sides, it is plain that an immense majority of people are sober." Evidence derived from prisons, police-courts, and lunatic asylums is often taken as proof of general intemperance; but from such sources we learn the condition of but a morbid fraction of the population.

Dr. Farr does not hesitate to express his belief that the present customary mixed diet, including wine and beer, in due proportion with vegetable and animal food, "while it yields the maximum energy of life, is conducive to its duration." But as there are men of weak heads, incapable of self-control, the various temperance societies offer them judiciously the pledge of total abstinence. But whilst denouncing excess of any sort, he denies the ill effects of its moderate use, and challenges the teetotalers to show the mortality of large bodies of total abstainers. Repudiating the insane dictum that alcohol is always and everywhere a poison, he claims for it a medicinal effect in many maladies. It is a capital remedy in fevers—reduces burning heat and calms delirium. May it not, he says, arrest the action and prevent the invasion of some zymotic diseases? But, above all, it is the moral effects that deserve eulogy. The true effects of wine are not learnt from chemistry, but from the senses, of which the poets of all ages, and philosophers, are natural expositors. "Material stimulants play their part in the emotions of the loftiest as well as of the lowest orders of mind. Whilst, therefore, conceding the prudence of total abstinence in some cases, the temperate use is the more excellent way—with this further recommendation: that its principles may be extended to dishes as well as to glasses, and to luxuries of every sort. Excess in food is not so noisy but quite as injurious, and is a much more degrading vice than excess in drink."

The self-control furnished by religious training, and the mental stimulation engendered by education, are the real remedies for intemperance, while teetotalism is a mere patch.

We should like to see Dr. Farr's little gem of a paper printed separately and widely circulated among the well-meaning clergymen and women who are now spending their strength in propagating teetotalism.

A PATHOLOGICAL FUNCTION OF PERIOSTEUM.

Those surgical pathologists who are striving to raise the question of tumours above the bare level of an artificial and stagnant classification will read with interest a paper by Dr. Creighton, in the *Journal of Anatomy and Physiology*, vol. xii., "On a Pathological Function of Periosteum." In his work upon the Normal and Morbid Physiology of the Breast, Dr. Creighton, as is well known, offers a rational explanation of tumours of that organ by regarding them as the products of functional irregularities. As regards the other great *epithelial* seats of tumour-formation, the stomach and uterus, the physiological factor is not so obvious, as there is not the same periodicity of action as in the mamma, to throw light upon the possible vicissitudes of the secreting structure. Still, the element of cell-formation, which is constantly to be kept in view in considering the origin of tumours, is to be found in the morbid physiological processes of these organs also; for simple catarrh, to which they are pre-eminently liable, is nothing else than an enfeebled and largely cellular kind of secretion.

But when one comes to consider tumours of the *connective-tissue* type, such as the "*sarcomata*," it seems as if they had from the outset to be accepted as independent existences, possessed of an individuality, and comparable to parasites on the body. The physiological factor is not available in their case as in the case of tumours forming in secreting structures, because the tissues of the connective-tissue series, in which they take origin, are not endowed with an activity that may be described as functional; as Virchow has remarked, the connective tissues "are always essentially passive in their working." There is, however, one tissue belonging to the connective-tissue series that has a "function" of an intelligible kind. Periosteum is a typical example of connective tissue, while its bone-forming function brings it into comparison with a secreting organ. Beside the constant renewal of secreting epithelium in an organ like the breast may be set the incessant activity of the periosteum, at least during the growing period, in producing osteoblasts. It is this formative function that makes periosteum perhaps the most dangerous of all the connective tissues. Many of the most malignant sarcomatous tumours occur in young subjects, and of these the greater number are of periosteal origin. The tumour-formation in such cases is a disease of growth, and it is incidental to the bone-forming function of periosteum. In the work before us Dr. Creighton describes a particular case of malignant tumour as illustrating this pathological function of periosteum; and shows how the mode of explaining tumour-formation in the case of the breast may be resorted to in certain cases of sarcomata or new growths of the connective-tissue series.

A girl of nineteen, with rickety spine and head, died in St. Thomas's Hospital, under the care of Mr. Simon, with tumour of the metatarsus, enlarged inguinal glands, and symptoms of secondary invasion of the thoracic viscera. Post-mortem the tumour was found to grow from the periosteum solely; the lymphatic glands of the groin and of all parts of the abdomen were enlarged and whitish; the lungs were full of white nodules; and both ovaries were diseased, being occupied by several cysts of various size, while the remaining stroma had the whitish appearance of the tumour-

tissue. In proceeding to consider the essential nature of this case, Dr. Creighton first states that he considers the patient to have been unquestionably rickety. As regards the tumour of the foot, it might be described as an "alveolar sarcoma," consisting as it did of trabeculæ of matrix-tissue, lined on both sides by cells arranged in regular order. The ground-substance was occupied with spindle-shaped nuclei, and at numerous points there occurred groups of the cells that were the characteristic cells of the tumour, while at other parts the groups of cells might be seen beginning to form from the nuclei by enlargement and proliferation, the cells arranging themselves round the firm margin of ground-substance, and the original centre of their formation becoming a space or alveolus, which they lined like epithelium.

In such a case as this the physiological suggestion lies near at hand. The matrix-tissue is periosteum, the trabeculæ are bone-trabeculæ, the alveolar spaces are medullary spaces, and the tumour-cells are osteoblasts. The periosteum of the metatarsal bone has produced a malignant tumour, but that tumour has all the features of bone growing in periosteum, except the hardening with earthy matter. The tumour was soft and white throughout its whole extent, and there was nowhere found a particle of grit. In the absence of earthy matter in the periosteal formation lay the essential departure from the normal function of periosteum. This brings to mind at once the rickety disposition of the patient. The tumour occurred in a rickety subject; and the structure of the periosteal new-growth is suggestive of the crude periosteal formation of rickets. The patient's rachitic disposition made it possible for the tumour to form, and determined its structure and character. Now, in the normal formation of bone from periosteum or in membrane, the keeping up always of a free row of cells just outside the ossifying substance is a contrivance to secure the continuous proliferation of the cells till growth is complete. The sole reason of the osteoblasts ranging themselves on the surface of the trabeculæ is that the substance of the latter is getting calcified. Calcification is a check upon the proliferation of the cells; after a few generations of osteoblasts have become included in the ground-substance, the central cavity is greatly narrowed, and proliferation ceases. In the case of the tumour, the osteoblasts have arranged themselves as in normal calcification; but the calcification has not taken place. The error underlying the whole of the morbid process is the absence of calcification. And since there is no calcification, the formation of new cells goes on indefinitely, and the formative process becomes a tumour-process. The cause of the tumour is thus discovered to consist in the departure of the periosteal function from the normal. The tumour is an excessive development of osteoblastic tissue by the side of a particular bone; the unrestrained productiveness of the periosteum depending on the entire absence of the hardening constituent of osteoblastic tissue; and this absence being "explained" by the rickety disposition of the patient. Virchow has himself remarked that he is not disinclined to admit that the predisposition to enchondromata may possibly be viewed as arising from rickets or from a similar abnormal process.

With respect to the *malignity* of the tumour, the secondary tumours in the lungs, ovaries, and lymphatic glands proved to have exactly the structure of the primary—the same appearance of trabeculæ and osteoblasts. Dr. Creighton does not attempt to account for the infection, and wisely limits himself to certain general remarks on the subject which he had occasion to make in his previous investigations on malignant growths.

A highly suggestive remark, which may be studied with advantage by morbid histologists, is made in the course of this paper. Among other organs secondarily infected by malignant growth were the ovaries. Dr. Creighton says that, apart from the rarity of its occurrence, the tumour-infection of the ovaries is more than ordinarily interesting. In all other cases of organs secondarily infected, such as the liver, lung, and lymphatic glands, the organ remains purely passive under the working of the infection; its tissue becomes transformed at a number of spots into the likeness of the parent-tumour. But the ovary in this case gave a certain character of its own to the infective process—namely, a cystic character. The stroma of the ovary appeared to be a matricular tissue, which, even under the influence of the infection, did not entirely surrender the physiological properties that are inherent in it.

SAPONIN-POISONING.

A curious instance of acute poisoning in the cause of science is reported by the victim, Dr. F. Keppler, in the *Berliner Klin. Wochenschrift*, Nos. 32, 33, 34. He wished to test the value of saponin as a local anæsthetic, and injected a solution containing 0·1 gramme into the inner side of his left thigh. Saponin, it may not be superfluous to premise, is a glucoside extracted from *Saponaria officinalis*, and it is identical with senegin, the principle of *Polygala Senega*, so much used in chronic bronchitis.

Experiments on animals have been made with saponin by Eugene Pelikan, Herman Köhler, Schroff, and others, who found that this body in sufficient doses paralyses the heart and the vaso-motor and respiratory centres, and in smaller doses probably acts as a local anæsthetic. Hypodermic injections of saponin were tried in three cases by Eulenburg, with doses ranging from 0·06 to 0·02 grammes; but the ill-effects which followed were so severe as to lead him to warn others not to use saponin for anæsthetic purposes in human beings, especially as the neuralgia for which in each case the injection was made continued unrelieved.

The preparation used by Keppler on himself was obtained from Merck of Darmstadt. It was an amorphous clear brown powder with a feeble acid reaction. With water it formed a cloudy liquid which frothed a good deal, and even at a little distance caused severe sneezing and a sensation of burning in the eyes and throat. At the commencement of the experiment Dr. Keppler's pulse was normal, 85 per minute, and his temperature *in the hand* 36·2° C. The effects of the injection may be divided into (1) those merely due to the local irritation of the injection and the inflammation excited in the tissues, and (2) those entirely the result of the saponin-poisoning. The first consisted of the most painful local inflammation of the skin, reaching its height in twenty-four hours and then subsiding, and general symptoms of depression; pallor, cold perspiration, giddiness and actual fainting. These symptoms also occur after injections of other substances (*e.g.*, corrosive sublimate). The true saponin symptoms were, locally, a peculiar anæsthesia of fifteen minutes' duration, which prevented the prick of a sharp needle being felt, while it did not remove the continuous pain of the injection itself; and generally, alterations of the temperature, pulse, intelligence, etc. The temperature was not exceedingly raised. The highest point reached was 38·6° Cent. three hours after the injection; but on the third day there was still fever in the evening—37·8° Cent. On the fifth day there were abnormally low temperatures, reaching 33·6° Cent. at 3 p.m. As the pain and inflammation at the seat of injection were so severe, Dr. Keppler believes that the saponin acted as an antipyretic, and that it was not until the fifth day, when the local symptoms had nearly subsided, that its depressing effects were really able to show themselves. This view seems further justified by the state of the pulse on the fifth day, when it fell to 65 per minute, the normal being 85, and the average pulse on the first four days of the experiment having ranged from 80 to 100. The other general symptoms on the *first* day of the experiment were intense pain in the head and eyes, and especially in the left eye, intermittent rigors, and extraordinary depression of mind, with indifference to everything that was going on around, and terminating in a state of unconsciousness of several hours' duration. On the *second* day the pain in the head was still worse than before, there was exophthalmos of the left eye, the breathing was superficial and slow, and speech difficult. Standing was almost impossible. The pulse was scarcely perceptible, but there was subjective palpitation. Pains in the teeth were also perceived, though not one of them was carious. The appetite was quite lost, but there was no thirst. On the *third* day there were still slight rigors. There was less pain, but nausea, salivation, and intense weakness were present. The indifference even to matters which a few days before were of the highest interest, was remarkable. On the succeeding days the pains in the head and eyes as well as the weakness gradually disappeared, but even on the sixth day giddiness came on on getting up, and continued all day, and Dr. Keppler felt as if he was recovering from a severe illness. Considerable inflammatory thickening was present under

the injected area of skin a year after the date of the experiment.

It thus appears that the subcutaneous injection of saponin for anæsthetic purposes is a complete failure, and that the use of the drug is by no means unattended with danger; but Dr. Keppler thinks there is a possible future for it as an antipyretic and excitant in cases of acute pleurisy and pneumonia with so-called "cerebral symptoms," and in malignant typhoid forms of endo- and peri-carditis. Possibly also the severe local inflammation excited by the injection may be applied to the destruction of certain morbid growths, lupus, sarcomata, etc., which may not be suited for operation. The maximum dose which should be tried at the first injection should not exceed 0·06 gramme, or one grain.

FROM ABROAD.

Quackery and the Clergy.

The following article from the *New York Medical Record* of August 3, though its tone and expressions are here and there such as we should not like to adopt, may be perused with advantage by not a few of the "religious world" on this side of the ocean:—

"In its efforts to educate the people upon sanitary matters, and in its struggles to elevate medicine to a science before the public, the medical profession has no more formidable antagonistic influence than that exercised in general by the clergy. The latter, as educated men, are looked upon as teachers for the community, have an influence with their auditors which is almost supreme, and yet choose to use their influence in an ignorant and prejudiced manner against scientific and legitimate medicine. There are exceptions to this general rule, it is true, in many leading clergymen, who abominate quackery in medicine as they do hypocrisy in religion, and who at all times and on all occasions uphold the hands of the physician; but these, alas! are only exceptions, too insignificant to weigh in the balance against the host of their brethren who, not only in the way of omission, but of commission, openly, nay defiantly, sin against our profession. How often is the physician called upon to blush for some prominent divine who boldly recommends a patent medicine, who certifies to its efficacy either upon himself or some member of his family, who endorses fraudulent testimonials of cure-alls, and who eloquently advises the public to patronise some miserable barefaced quack. But this is an evil which is growing into such proportions that it is time that the clergy as a body should have its attention directed to it with a view of suggesting some remedy. It strikes us that they are travelling out of their sphere in professing such a knowledge of medicine as enables them to prescribe remedies for the sick, and especially the latter, whom they can only reach through the advertising columns of the secular or religious papers. Then, again, diagnosis is a science to which the profession have for centuries paid a good deal of serious attention. Aside from the ridiculous presumption of undertaking to diagnosticate and treat disease, there is a responsibility about it which few right-minded and conscientious men would care to assume."

Puerperal Convulsions after Labour.

Dr. Hubbard related the following case at the New York Academy of Medicine (*New York Medical Record*, August 10). He was called to a primipara, aged thirty-six, on March 16, about three weeks before her expected confinement, and found her with flushed countenance, imperfect vision, headache, and constipation, the urine containing about 50 per cent. of albumen and some granular casts. After free action of a cathartic, infusion of digitalis was given (℥j. ter die), and three drachms of bitartrate of potass were ordered to be given in water during the twenty-four hours. At the end of a week the quantity of albumen had become reduced to 10 per cent. The bowels were kept freely open by the potass, but there was more or less persistent headache and confused vision. On April 2, at 5 a.m., the child was born after an entirely normal labour. The headache continued, and, the patient being somewhat restless, two drachms of paregoric and ten drops of laudanum were given. At 7 a.m. there was a violent convulsion, lasting a minute or two; and when it had ceased, chloroform was given, and venesection to the extent of twelve or fourteen ounces performed. The patient became conscious, but was kept moderately under chloroform. At eight, fifteen grains of chloral were thrown into the rectum, and she then had a fit more violent than the first. As she was restless, from time to time chloroform was again administered, and the infusion of digitalis was increased to two drachms every four hours. At eleven another convulsion occurred, which was less violent than the others. The treatment was continued, and a glass of milk given every four hours. When the chloroform was "let up" for a few minutes, the patient complained of headache and almost complete loss of vision. The pulse after the first convulsion was 130, and continued from 116 to 120 during the first twenty-four hours; temperature 101°. On the evening of the next day, the patient having become restless, an injection of fifteen grains of chloral was given, and soon repeated, and the last convulsion occurred. The effect of the chloral was continuous, although the dose was small. From this time she went on well, the disturbance of vision continuing, however, for a week, and traces of albumen being found in the urine during two weeks. Dr. Hubbard, in respect to the treatment of this class of cases, concludes—1. That general bleeding is called for when headache continues after labour, and is attended by flushed face, restlessness, convulsions of a tonic character, and there has not been much loss of blood during the labour. 2. That infusion of digitalis is useful to steady the heart's action, to allay nervous irritation, and also as a diuretic when aided by bitartrate of potass. 3. That chloroform should be used sparingly. 4. That, although this was his first trial of hydrate of chloral in these cases, its continuous action was apparently greater than that of chloroform, and he thought it less likely to disturb the brain. 5. That in cases where there has been great loss of blood, or great prostration attended by nervous exhaustion, dependence may be placed upon hypodermic injections of morphia for controlling the convulsions. He would not resort to chloroform or to chloral under such circumstances, fearing that they might increase the nervous exhaustion, and thereby favour uterine hæmorrhage. In Dr. Hubbard's experience, the occurrence of puerperal convulsions *after* the birth of the child is quite rare. General bleeding had been employed in two of the last three cases that came under his care, and in these recovery took place, the other case dying, although chloroform, leeches, and dry-cupping were resorted to. All were primiparæ.

Dr. Sell referred to a case in which convulsions occurred during and after labour. The patient was treated with croton oil because of suspected overloaded primæ viæ, and by chloroform both internally and by inhalation. She had six convulsions during and three after labour, and although bleeding was not resorted to, a good recovery took place. Dr. Downs stated that of fifteen cases which he had met with, only in two did the convulsions occur after labour, and both these proved fatal. In one there was no albumen in the urine. Those of the other cases who were bled all died, while those who were not bled recovered. He had employed chloral with good results. Dr. Caro observed that he had seen puerperal convulsions at nearly all stages of pregnancy, during and after labour, and that he had never resorted to general bleeding or to leeches except in two instances. He had chiefly relied on infusion of digitalis given in half-ounce doses three times a day, and bitartrate of potass in one-drachm doses three times a day, for their prevention. He thought that they occurred as the result of nervous disturbances, especially after confinement, and independently of albuminuria, or even independent of urea. A case was referred to in which convulsions occurred apparently from urethral irritation, because they came on only when the woman attempted to pass water. When the catheter was used they did not occur. There was no albumen in the urine, and the quantity of this was normal. There was neither headache nor œdema of the feet, but the countenance was bad—a puffed, pallid appearance—and there was disorder of vision.

REVIEWS.

Du Froid en Thérapeutique. Par le Docteur F. Labadie-Lagrave, Lauréat de l'Académie de Médecine (Prix Godard), etc. Paris, 1878. J. B. Baillière et Fils. Pp. 284.

The Therapeutic Uses of Cold. By Dr. F. Labadie-Lagrave, Laureate of the Academy of Medicine (Godard Prize), etc. Paris, 1878. J. B. Baillière and Son.

This is a *resumé* of modern researches into the influence of cold as a physiological and therapeutic agent. The author, however, expressly excludes from discussion the surgical uses of cold, and cold regarded as a "hygienic and prophylactic modifier," and confines himself to the "description of the physiological action of cold on our tissues and organs, studying first its topical action, and the reflex phenomena which it induces, and then its general effects on the organism, and distinguishing its intrinsic and direct effects from those indirectly due to the reaction of the system as a whole." The study of cold is distributed over six chapters, of which the first takes up the physiological effects of cold on the circulation, respiration, on temperature, on the muscles, the blood, the secretions and excretions, etc. The second chapter treats of cold as a modifier of local circulation; the third of cold as a modifier of temperature and of the production of heat in various diseases, with the technical methods employed in its application. The fourth chapter describes the sedative and stimulant effects of cold on the nervous system; and the fifth its tonic influence on the nutrition in anæmia, chlorosis, cardiac affections, etc. The sixth chapter enters into the details of the principal forms of hydro-therapeutics; and the remainder of the book is devoted to the histories of five cases of typhoid fever treated by cold baths, a copious bibliography of thirty pages comprising the whole literature of cold from a medical point of view, and twenty-six temperature-sheets of cases treated with cold baths and affusions.

There is nothing original in Dr. Lagrave's work, but, as we said before, it is a good *resumé*, and the author is up in all the best work on the subject he treats of. His worst fault is a tendency in his arguments to lay too much stress on the *argumentum ad verecundiam*, the appeal to authority, and to doubt everything which does not accord with the doctrines of some one of his "*maîtres illustres*," be he Trousseau, Guéneau de Mussy, or some other physician, always of French origin. Thus, in dealing with hyperpyrexia in acute rheumatism, he does not deny the good effects of cold baths as its remedy; but he maintains, following the "*fluxion*" doctrine, which, like that of the "dartrous diathesis," so largely impregnates French medical ideas, that "the hyperpyrexia is not the cause of the cerebral accidents which occur in acute rheumatism," "the elevation of temperature is the consequence of a tendency of the original disease (the rheumatism) to localise itself in the brain," or, as he puts it further on, "a new fluxion occurs, which, instead of attacking the joints, turns on the 'noble' organs, as they were once called, and in particular attacks the brain." "The brain," he says in another passage, "becomes delirious because it feels the stroke of a fluxion (*sic*), but not because there is more heat distributed through its vessels."

In spite of his assertions, Dr. Lagrave has no evidence to bring forward in favour of his fluxion theory, and he is candid enough (whether intentionally or not we cannot say) to admit that the cases of cerebral rheumatism which are accompanied by high temperatures are much graver than those with moderate fever, and further, that of thirty collected cases of rheumatic hyperpyrexia treated by cold baths, only seven died, showing a mortality of 23 per cent., whereas without cold baths it would have been 100 per cent.

Among the other therapeutic applications of cold, Dr. Lagrave naturally devotes much space to the treatment of typhoid fever by its aid. On this subject he expresses himself with a tone savouring a little of bitterness, and we cannot help feeling that the fact that the Germans have largely tried and advocated this treatment puts his back up, so to speak, against it. He charges the Germans with failing to remember that "cold does not in the least modify the local lesion," and he refuses to believe in the statistics of typhoid cases treated with baths, asserting that "figures prove what you wish to make them prove," and that "when a person is prejudiced in favour of a method, he generally takes care to eliminate the bad cases from his statistics, pretending that the treatment was tried on them too late to be of any good." These criticisms are scarcely nice, as they imply bad faith; and there are reasons why Frenchmen least of all should sneer at what comes from Germany.

In spite of Dr. Lagrave's general objection to treating typhoid fever by cold, we do not for a moment doubt that most English doctors would agree in his opinion, that it is better to restrict the use of cold to those cases where the fever is actually very high, and there is cerebral excitement and muscular incoördination. The labour of giving several baths a day to an ordinary typhoid case is enormous, and to our mind there are few nations except the German which would have the patience and perseverance to carry the system out.

The author's method of dealing with a subject he does not like is again shown when he comes to speak of the use of cold (*i.e.*, of hydrotherapeutics) in phthisis. Though there is direct evidence—for example, that of Brehmer of Görbersdorf, and of the Davos doctors, Spengler and others, not to mention Fleury in France—of the utility of the cold douche in some cases of this disease, Dr. Lagrave has no hesitation in calling such treatment "not only barbarous, but in the highest degree culpable." On the other hand, he quotes with satisfaction Dr. Guéneau de Mussy's "molly-coddle" plan of washing the chest "in patients whose chest no longer presents any appreciable lesion, and who have no more cough"! After this we begin to doubt whether Dr. Lagrave knows what phthisis is.

In the preceding remarks we may have been a little hard on the author; but we hope not unjustly. However, his book is one which, remembering his prejudices, may still be read with advantage, especially as we have so few books of the kind in English, and the Sydenham Society's translation of Wunderlich's Thermometry, which covers part of the ground, is almost out of date owing to the rate of progress of modern science.

Die Medicinal-Gesetzgebung des Deutschen Reichs und seiner Einzelstaaten, begründet von Dr. G. M. Kletke. Band III. Berlin, 1878. Verlag von Eugen Grosser.

The Medical Legislation of the German Empire and its Individual States. Compiled by Dr. G. M. Kletke. Vol. III., containing the Laws and Regulations for 1877. Berlin, 1878. Publisher, Eugen Grosser.

This is the third annual issue of a most useful compilation, which gives the full text of every law and decree relating to medical subjects promulgated in 1877 in Prussia, Bavaria, Hanover, etc.

The first page contains an order from the Chief of the German Admiralty, to the effect that only English porter is to be used by the sick German sailors at sea, as other kinds keep badly in the tropics. Then we have Bavarian regulations as to the transport of cattle by rail, and as to the measures for checking rinderpest, the forms for registering deaths in Hesse, and the rules of the Prussian deaf and dumb institutions at Königsberg, Augsburg, and Marienburg.

The book also contains the regulations for lunatic asylums at Altenburg, Silesia, Hanover, Deggendorf, and Pomerania, all with the respective costs of board, the forms for investigating cases, and the lists of clothing for the inmates. These regulations will be of interest to medical men and others in this country who have the control and direction of lunatic asylums.

The form for examining epileptics, at page 217, as used in Saxony, would be a good one to put in the hands of our union doctors, some of whom, to judge from a case which recently came under our notice in the West of England, require that an epileptic shall attempt to murder some one in a fit of mania before they will certify that he needs control.

The hydrophobia craze appears to have worn itself out in this country, but it may not be amiss to call attention to the Würtemburg regulation, that a post-mortem examination shall be made by a qualified veterinary surgeon of every dog which has bitten a human being, and in whom rabies was suspected at the time, or developed during observation under restraint. The object of the regulation, it is stated, is to render easier the proper medical treatment of a man bitten

by a mad dog, and also (supposing even no one has been bitten) to decide the question whether other animals which have come in contact with the suspected dog shall be killed.

The last point we shall call attention to in this compilation is the Bavarian regulation of April 25, 1877, as to the duties of druggists, the arrangement of their shops, and the dispensing of their drugs. Section 11 binds the druggist to keep in stock an adequate supply of all the drugs and preparations of the German Pharmacopœia, and we wish English druggists were bound to do the same. The chances are that if you send a prescription to a country chemist, unless it contains some very simple ordinary drugs it will not be properly made up; and even a simple prescription often comes to grief. For example, what a mess a bismuth mixture compounded with mistura amygdal. becomes, and what a difference there is between almost any mixture made up in London and in the country! Even the public are aware of the deficiencies of country chemists, and many habitually send to London or to some large centre to get their medicines dispensed. The country doctors who dispense at home (and what nasty medicine some of theirs is too!) are partly to blame for this; and if British doctors and chemists mutually treated one another more loyally, there would be better dispensing in the country, nor should we need to wish for a legal enactment like paragraph (1) of Section 19 (Bavarian regulations)—"The druggist is bound absolutely to abstain from all prescribing on his own account"—here in England. Other paragraphs of Section 19, which are well worthy of imitation among us are—(4), which forbids a prescription for very active and poisonous drugs, such as emetics, hypodermic injections of morphia, solutions of atropine, chloral hydrate, and the preparations of morphia and opium, to be dispensed a second time without a special order from the doctor; and (7), which enjoins the druggist to reject absolutely all prescriptions written by persons known not to belong to the medical profession, or which are probably, judging from their style, the work of non-professional persons.

FOREIGN AND COLONIAL CORRESPONDENCE.

FRANCE.

PARIS.

CONTINUATION OF THE QUESTION OF SEWAGE IRRIGATION IN PARIS: FINANCIAL ASPECT OF THE QUESTION—AGRICULTURAL RESULTS—EFFECT UPON THE HEALTH OF THE NEIGHBOURHOOD—CONCLUSION.

IN my last letter I gave some account of what has been hitherto done in Paris with a view to the disposal of the sewage with safety, and I stated that hitherto nearly a thousand acres of land belonging to independent proprietors have been irrigated with sewage-water, which has been delivered gratis by the town of Paris to the fields of those who have accepted the gift. I stated further that the cultivators have recently offered to pay for what water they get, so as to avoid the evil to which they have hitherto been exposed, of having their lands oversupplied with liquid. The scheme for the further extensoin of sewage irrigation meets this difficulty to some extent, and at the same time it gives the town a far greater hold over the independent cultivators than it has at present. It is intended as soon as possible to extend the operations over 12,000 or 15,000 acres, of which between 3000 and 4000 will consist of State property lying just to the north of the Forest of St. Germain, a few miles below the outfall of the sewer at Clichy. The soil is here so arid and unfruitful that it is at present allowed to lie completely fallow. This being State property, the town of Paris will there undertake its own agricultural arrangements, and the area is sufficiently large to absorb, if necessary, a very considerable proportion of the whole sewage of Paris.

Here, then, the town will be able to keep the sewage, if necessary, very much in its own hands, and having instilled into the minds of the cultivators a knowledge of the utility of sewage material in agriculture, it will be able to make its own terms with the latter when they come to ask to be supplied. Moreover, having this great receptacle at St. Germain, it will be able to supply the independent farmers with just such quantity as they may desire, and hence the value of the sewage irrigation will be very greatly enhanced. In this way it is hoped that there may be a greater and greater demand for the material of which the town has to dispose, and that thus the area of irrigation will constantly increase. As the area becomes larger, the mean quantity of water supplied to each acre per annum will necessarily diminish, and thus it is hoped that eventually an approximation may be made to the complete *utilisation* of the sewage as well as to its complete *epuration*. However this may be, the engineers confidently look forward to a period, not far distant, when they may reduce the mean quantity supplied to each acre per annum from 18,000 cubic metres (the present average) to 12,000, 10,000, or even to 8000.

I now come to the financial side of the question. This, the town of Paris may be said to have left almost entirely aside. It is determined to get rid of its sewage-matter with safety, and it has refrained from inquiring too closely what it may cost, or whether the undertaking can be made a profitable speculation. If it should turn out to be profitable, so much the better; but if not, the town is quite ready to pay, even heavily, to be rid of the nuisance. This is in striking contrast with the mode of looking at the question in England: and the difference between the two countries in this respect is well described in the report of one of the Commissions before mentioned. The report says:—"According to the English custom, whenever a heavy outlay has to be made in the general interest, the money is raised specially for the purpose, so that every undertaking has its own peculiar budget. This rule, eminently just and precise as it is, is entirely opposed to French habits. Here the money at the disposal of the authorities forms a general fund, which can be drawn upon for purposes of the most diverse description, and it is quite exceptional to specialise receipts and expenses. The advantage resulting from the English custom is, that though a work of public utility will require an increase of taxation for a few years to pay off the loan with which it has been accomplished, as soon as this is done the tax ceases for ever. The advantage in favour of the French custom is, that the execution of great public works is more easily undertaken, and there is greater facility in having recourse to credit for various purposes." The actual expenditure incurred by the town of Paris has hitherto amounted to about £120,000, and the return has been *nil*. The works which are now contemplated to completely purify the Seine will cost about £250,000, so that it is hoped that the entire epuration may be effected for a sum not exceeding £400,000.

A few words as to the agricultural results of the irrigation. These have exceeded all expectation. A Commission appointed in 1874 to inquire into the matter reported that the yield of cabbage, beetroot, beans, and other vegetables was double, triple, and in some cases fourfold, the average yield in fields not subjected to irrigation; their quality is excellent, as was evident to all members of the Congress who accepted the invitation to inspect the irrigation works at Gennevilliers. Fruit-trees grow with remarkable rapidity and strength; and one plot of land is converted into a flower-garden, which is rented by one of the leading horticulturists of Paris, who, finding that he obtained better results from ground soaked with sewage than from any other, has ceased to cultivate land elsewhere than at Gennevilliers.

It only remains to consider the influence of sewage irrigation upon the health of the population living in its neighbourhood. It is from this side especially that the scheme has been attacked by those who, for personal or other reasons, are opposing it. It has been stated on the authority of certain medical men that since the commencement of sewage irrigation several diseases have been induced, or, if previously existing, that they have increased in frequency and severity in the peninsula of Gennevilliers. An accusation of such importance naturally became the subject of very careful investigation on the part of the authorities, and a Commission was appointed for the special purpose of inquiry into the matter. It was found that the chief complaints referred to the prevalence of dysentery, intermittent fever, and intestinal worms. The accusation, so far as the question of dysentery was concerned, was soon found to be without foundation; but the question of the increase of ague was more difficult to dispose of. It was, in fact, found that this disease had always been present in the peninsula of Gennevilliers; but that there had been a gradual increase in the

number of cases in the first four years after the introduction of irrigation on a considerable scale. It is well known that for the production of ague, water must be stagnant; and as in sewage irrigation, when properly carried out, no large quantity of water should be allowed to remain stagnant, there is no reason why ague should be induced by it. As a matter of fact, there is a considerable quantity of stagnant water in the peninsula; but this was shown to be mainly due to an elevation in the level of the subterranean water produced by an alteration of several feet in the level of the Seine, caused by the construction of a new weir a few miles below. The Commission appointed to investigate the subject was of opinion that, with care in the distribution of the water, and with adequate drainage to clear the land of superfluous liquid, there was no evident reason why stagnation of water should occur; they saw no appearance of marshy ground in the irrigated district; and they thought the accusation brought by the opponents of the scheme was not made out. As regards the increase in the prevalence of tapeworm, the investigation was one of great difficulty, and nothing conclusive was ascertained.

To all who took part in the excursion to Gennevilliers it was evident that here and there the air was somewhat contaminated by the odour of the sewage; but this does not appear to have been considered a point of much importance, either by the friends or foes of the undertaking; and it is easily conceivable that when a much smaller proportion of liquid is distributed to each acre than is at present the case, this nuisance will become abated.

It would appear, then, that the Parisians are about to solve the great problem of the disposal of the sewage of a very large town with safety to themselves and others, and with advantage from the economical point of view. The further development of their system will be watched with great interest by all who are interested in sanitary advance. It must, however, be borne in mind that the circumstances under which the experiment is made at Paris differ from those met with in our large English towns in this respect: that in Paris only a small proportion of the solid ejecta finds its way into the sewers, the rest being carried off to the "poudrette" establishment. The presence of a larger proportion of organic matter in the sewage-matter of our English towns would render it necessary to have a larger proportionate acreage for epuration; and greater care would be required to avoid deterioration in the health of the district round the sewage farms. These, however, are only points of detail, and would not put any insuperable difficulties in the way of applying the Paris system to our larger English towns.

We regret to learn that on the 21st inst. the Metropolitan Asylums Managers received a letter from Dr. Cortis, who has been an active member of the Board from the beginning of its labours, and held the position of Chairman of the Caterham Committee, stating that he felt compelled to send in his resignation on account of ill-health (arising from an accident). The Managers passed a resolution expressing their deep regret at having to part with such a colleague.

Glasgow Southern Medical Society.—The thirty-fifth annual meeting of the above Society was held on the 19th inst., when the following gentlemen were elected as office-bearers for the ensuing session:—*President*: Peter Stewart, M.D. *Vice-President*: John Niven, L.F.P.S. *Treasurer*: Edward McMillan, L.R.C.S.E. *Secretary*: Andrew J. Hall, M.D. *Editorial Secretary*: Alex. Napier, M.D. *Seal-Keeper*: William Carr, M.B. *Court Medical*: T. F. Gilmour, L.R.C.P., Convener; Eben. Duncan, M.D.; James Norton, M.D.; A. L. Kelly, M.D.; and James Whittaker, M.D.

Medicine in Greece.—The University founded at Athens, in 1837, is one of the most magnificent edifices of the capital, in which are taught theology, law, medicine, and philosophy, possesses a botanic garden and a hospital for diseases of the eye, syphilis, and accouchements. Medicine is taught there by twenty-one professors and seven substitutes, and during the forty years that have elapsed, 1118 medical students have obtained their diplomas. The 1,457,894 inhabitants of Greece may at the present time have recourse to 797 doctors, 333 pharmaciens, and 769 midwives.—*Lyon Méd.*, September 16.

OBITUARY.

BARON KARL ROKITANSKI.

Seldom has an expression of grief and admiration so ardent been exhibited as that which the somewhat sudden death, at an advanced age, of this great scientific luminary called forth from the Austrian and the German press. It has, indeed, sometimes been embodied in terms somewhat hyperbolical in estimating the scientific results of his great services—the labours of observers in other countries, and especially those of the great French pathological school, being unduly overlooked. Nor is this surprising when we remember the undoubted benefits which he conferred on German medical thought by freeing it from its trammels, and developing a channel of productive usefulness; as also the uninterrupted career of beneficial activity which he pursued at Vienna for half a century.

Born at Koniggrätz, in Bohemia, in 1804, Rokitanski received his early education at Leitmeritz, where his father officiated as *Kreiscommissär* until he died in 1815. Intended for the medical profession, Karl Rokitanski pursued his preliminary studies at the Carolo-Ferdinand Institute at Prague, whence he came to Vienna in 1824, "bringing with him," says Prof. Heschl,(a) his enthusiastic admirer and successor, "only a slender purse and few introductions, but possessing vigorous youth, a keen relish of life, a penetrating intellect, and an earnest, inflexible determination." The post of Pathological Prosector or Professor in the Vienna General Hospital had been founded in 1812, and to it was conjoined in 1818 that of Juridical Anatomist of the Municipality (*Gerichtsanatom des Stadtphysikat*)—so that the whole of the pathological material came under the same hands. These were indeed, at that time, Professor Heschl remarks, feeble enough; but here was a secure basis formed for future fructification. When Rokitanski arrived in Vienna, the indefatigable and earnest Johann Wagner was officiating as Assistant Prosector, succeeding to the professorship itself in 1830. He brought to his office a keen spirit of inquiry, and was most anxious for the methodical utilisation of so immense an amount of material (about 1000 bodies annually), which had hitherto only run to waste, his object being not the mere search for pathological curiosities, but the discovery of the laws of recurring changes. It is not surprising that a man of the mental power and earnestness of Rokitanski should eagerly attach himself to so thoroughly solid a worker as Wagner, and he soon became his ardent fellow-worker and friendly rival. It is to Wagner's influence that the bent which Rokitanski's ideas then assumed was doubtless greatly due. By 1827 he had become second assistant, and in 1828 took his degree. In 1830 his now widely known name first appeared in print, in one of Wagner's reports, acknowledging his great and voluntary services to the museum. Wagner had collected around him a small band of earnest-working young men, among whom were Skoda and Schuh; and on his too early death, in 1832, the direction of this band fell to Rokitanski, the most powerful amongst them, and who soon must naturally have assumed that position, even if Wagner's life had been prolonged. That this must have been so is seen from the first production we have from his pen, which, though merely relating to the autopsies executed during 1830-31, yet in the few pages of which it consisted rendered it obvious to all how impassable was the chasm which separated him from all who had preceded him or who surrounded him—even his master, Wagner himself.(b) At a very early period he laid down resolutely and in full confidence the dogma that the appearances after death, not the symptoms observed during life, constitute the disease. With the means of investigation then accessible this was the only fact of a disease that was indisputable; so that change of structure became with him the very pith and centre of the question of the nature of disease.

On Wagner's death he was appointed Extraordinary Professor, only attaining the full professorship in 1844. In 1834 he began his lectures, but although these drew great numbers to Vienna in consequence of the importance attached to his researches, he never shone as a lecturer or as a teacher, his voice being almost inaudible, and his manner

(a) "Karl Rokitanski und die Grundlagen der Wissenschaftlichen Medicin" (*Wien. Med. Woch.*, February 14, 1874). (b) Heschl, *loc. cit.*

negligent. Assisting him in his labours he had the able Kolletchka, too early cut off in his career; and as a volunteer in the dead-house, Schuh, whose name at a later period shone forth in the first rank of Austrian *savants*. To these Rokitanski entrusted the office of putting forth his views, and the results of his labour, to the great advantage of the students. In 1840 he began the publication of his "Handbuch," the third volume, containing a part of the special pathological anatomy, first appearing. The work excited the highest interest throughout the entire medical world, and it may be truly said that rarely has a book produced so great an effect. The natural consequence was that its doctrines, and especially those contained in the first volume, on general pathology, which appeared in 1846, were subjected to the severest criticism. Pathological anatomy became the most prominent of special studies; and in 1847 two young Berlin physicians, Virchow and Reinhart, founded a journal, now known all over the world as *Virchow's Archiv*, which became the centre for all the young working-power in that department. As a consequence of this activity, a rapidity of progress ensued which Rokitanski had never anticipated as the consequence of his work. The special part of the "Handbuch" was exhausted before the year had expired, and students repaired to Vienna from all parts. This success, that of the penetrating intellect of Skoda, the great attractions of Kolletchka's and afterwards Joseph Engel's private classes, the classical mode of teaching adopted by Rokitanski's highly endowed assistants, and the applications made by Schuh in the department of surgery, imparted a scientific life to Vienna which she had never yet known. Rokitanski himself, although naturally of a phlegmatic and close nature, was carried away by the prevalent scientific impulse. He lost his "passivity" amid the great results attained by his labours, and felt an irresistible striving for yet further conquests. The shed which served as a dead-house, in which he was enthroned, became the centre of scientific medicine, and the lectures had to be delivered in the open air in the courtyard for want of room. During the interval between the two editions of the first volume of the "Handbuch," containing the general pathology, Rokitanski had known no repose, his ordinary quietude having been exchanged into almost feverish activity. The doctrines contained in that volume also had been subjected to severe criticism, and pronounced faulty; for invaluable as were his special pictures of disease, some of his generalisations were imperfect, fanciful, and erroneous. In the new edition of the "Handbuch" (1855-61), now transformed into a "Lehrbuch," he admits that the results of criticism and the accumulation of new facts had compelled most essential alterations, and they were such indeed as to convert this portion of the book virtually into a new work. This, which seems a very natural procedure, is magnified by his eulogists into almost an heroic act, one of them characterising it as his greatest triumph, showing that he was not blinded by the idea of his own infallibility. The work thus remodelled attained its true position as holding the highest place in pathological anatomy, and even when superseded by advancing knowledge it will always retain the merit of having first placed this branch of science on its true basis. For the last ten years it has been out of print.(c)

In 1858 was founded the new Institute of Pathological Anatomy, and on the occasion of its opening, in 1862, he delivered an address on "Freedom of Inquiry," which attained great celebrity, and in which he advocated unlimited freedom as a primary postulate. This aroused many opponents; but a year later he was nominated Referee for Medical Education in the Ministry of Public Instruction, as if to prove that, even in Austria, free inquiry and free opinion were to be respected. This office was one of high importance and great influence in medical affairs, but one likely to cause great difference of opinion as to the proper mode of executing its functions, especially when in the hands of one himself a professor.

Seldom has there been, indeed, a more prosperous career than that of Rokitanski, or one marked by fewer reverses. Enrolled in almost every scientific and academical body in Europe, the recipient of almost innumerable decorations and diplomas, President of the Academy of Sciences and of the Medical Society, and since 1867 a life-member of the Herrenhaus, his position was one of quite unprecedented eminence in Vienna. Leading a life of great simplicity, and much esteemed for the benevolence of his character in his social circle, active in his political career, and deeply interested in educational and social questions, the beneficial influence he exerted for so long a period was very great. The prominent significance of his career was amply manifested towards its termination, on the occasion of the celebration, at the Academy of Sciences, of his seventieth birthday in 1874, when he still remained in his full vigour, and seemed likely to live many years. Our want of space quite precludes our giving any account of a ceremony which, from the number and position of those present, might well be termed imposing. Ministers of State, academicians, the faculty, and deputations from thirty-two societies and universities, took part in the presentation of his bust, or at the subsequent banquet.

Although for some years he had ceased to perform the active duties of his professorship, and at the attainment of his seventieth year definitively resigned it, yet his position as President of the Academy and Medical Society, and as Medical Referee, retained him in close connexion with the medical and academical world, while his name was widely known to the general public as a Liberal member of the Herrenhaus. In that assembly, Ritter von Arneth observed, in the eloquent address which he delivered at his grave in the name of the Academy, the same belief in progress guided him as in his scientific career. It was only after he had carefully and exactly examined a subject, and had recognised the end in view as beneficial, that he pressed forward with all his energy for its realisation; and, having secured it for all futurity, hastened along the path leading to other gains. A bold and eloquent speech which he delivered during a debate on the Education Laws in 1868, and published under the title "Freiheit des Unterrichts," excited great attention far beyond the limits of the Austrian empire.

Another field for Rokitanski's inexhaustible activity was found in his juridical appointment of Gerichtsanatom, which he held from 1847 to the resignation of his professorship. In this capacity he had to perform all the juridical autopsies that occurred in Vienna; and the enormous amount of material thus offered to his investigation may be appreciated when it is stated that by the year 1866 he is said to have already made 30,000 autopsies. In this office also his well-proved acuteness and remarkable acquirements were evidenced, and it was no rare occurrence for him by his ready apprehension and explanations to be the first to shed light on obscure questions, giving the earliest perception of the chain of events. His reports were, for simplicity of style, clearness, and precision, accompanied by plainness of language, quite unsurpassable, and it would have been impossible for anyone to have added anything to them without its seeming superfluous. And so readily comprehensible were they always, that anyone might understand them on a single reading. If, however, it happened that any point remained obscure, he would explain it with the most admirable patience and goodwill, going over a second time the grounds upon which he had based his judgment.

Rokitanski married in 1834 a lady of great talent and high artistic gifts, and by her he had four sons, who have themselves also all become professors, two at the Conservatorium —one, Hans Rokitanski, having attained the highest rank at the opera—and two at the Medical Faculty. Whether considered socially or professionally, in fact, it would be difficult to find a more enviable career than that of Rokitanski. From 1838 he had mounted from step to step, from honour to honour, and at the period of his death was the subject of almost universal honour and respect. Death came rather suddenly at last, on July 23, during an attack, apparently of neuralgia of the heart, to which, accompanied by asthmatic paroxysms, he had been subject at intervals for some years. These had increased upon him of late, and chloroform, which he used to call his sheet-anchor, at last failed to be of any service. Problematical, however, will the actual cause of death always remain, for not only had any satisfactory diagnosis never been formed during his life, but no examination of his body was made after death; so that—strange contradiction—the man who had passed the greater part of his life in discovering the cause of death in others, was to pass into the grave without that of his own having been revealed. And here we may note a remarkable fact: that in a large propor-

(c) It is much to be regretted that we have no translation of this edition into English. The translation of the first volume of the first edition by the Sydenham (Old) Society was published in the same year that the third edition appeared in Germany, and from its fundamental alterations rendered the general part of the first obsolete.

tion of members of our profession who die, autopsies are not performed. All will be able to call to mind the names of several of note where this has been the case. This should not be so, and the fact would operate very prejudicially to the public, as a matter of example, if generally known.

The death of Rokitanski was regarded in Vienna as a real public loss, and all classes testified their sympathies. The Government having declined the expense of a public funeral, the Vienna Medical Society undertook all the charges of the interment of its long-honoured President. It became, indeed, a public funeral, from the participation of all members of society, from the Imperial Family downwards. There was no pomp of any kind, the impressive character of the ceremony being derived from its extreme simplicity, the enormous numbers who were present, and the widely representative character of these, the scientific and medical element of course largely predominating. One touching circumstance made a great impression upon those who witnessed it. Close against the church stood a carriage containing the pallid form of the half-dead Skoda, who had himself carried from the bed where for so many weeks he had been racked by pain, in order that he might take the last farewell of his life-long friend. The knowledge of his death could not be kept from him, as he saw the newspapers. It produced only temporary excitement, for he envied the lot of Rokitanski at becoming released from his sufferings. 'Alas," he said, "I cannot die, and yet is my pain not less than his!" It would require an able pen, a spectator observes, to depict the impression produced by the appearance of Skoda, lying rather than sitting in his carriage, while taking a silent farewell of his dear friend.

Although some of the expressions employed by his admirers may seem somewhat exaggerated, and the labours of his predecessors and contemporaries of the French school, as Bayle, Laennec, Louis, and above all Cruveilhier, not always sufficiently borne in mind, yet the enthusiasm aroused is little to be wondered at when the enormous effect his teaching has produced is considered. Thousands of pupils during his long career have been drawn to Vienna by his reputation, and by the great teaching power of Kolletchka and his other able and enthusiastic assistants and colleagues at the early portion of this. Indeed, without the co-operation of these ardent spirits—some of them, such as Schuh and Skoda, of great mental power and scientific acquisitions, and well acquainted with the necessities of practical medicine—Rokitanski could never have reached his high renown. In this last point of view his lifelong intimacy with the great clinician Skoda (the German Laennec) has been of the highest importance, the celebrated "Abhandlung über Percussion und Auskultation" being the first product resulting from the adoption of the new exact method of observation in Germany. The gratitude felt towards Rokitanski, in fact, arises not only from the positive and large contributions he made to the mass of human knowledge, but that by his scientific methods and the aid just mentioned he operated an entire revolution in the medical ideas of the epoch, and constituted what has been termed the New Vienna School. Everyone knows, Ritter von Arneth observes in the address we have already alluded to, that the Vienna Medical School attained great celebrity in the second half of the last century under Van Swieten and De Haen, but fell into decline during the first decade of our own; and not only in Austria, but throughout Germany, a flagging in the investigation of disease prevailed, so that English, and still more French, medicine everywhere led the way. When Rokitanski appeared upon the scene, that freedom of inquiry to which he attached such high importance, and made his device during his entire scientific life, was by no means in favour. He, however, quitted the beaten track of those who only saw what they believed, believing only that which he saw. The dead, examined with an exactitude and penetration such as, perhaps, no one before him ever exhibited, yielded rich and valuable treasures for science, supplying the material for his immortal work. Immense as the services of this work have been, diffused over the entire world in translations, by the faithful pictures of disease which it rendered accessible everywhere, Prof. Heschl maintains that it is not in this direction his greatest merit lies; for while these special researches, admirable as they are, only render him more or less comparable with other distinguished investigators, "his inestimable merit, a true and actual Copernican fact, consists in the conscious searching for and discovery of the for more than 2000 years sought for and never discovered scientific foundation of medicine." In less grandiose terms the same idea is expressed by most who have noted his death, the influence of his systematic procedures extending, indeed, far beyond the scope of his own immediate researches. "Other branches of medical science," says a well-written notice in the *Boston Journal*, "have reaped much profit from his work, and, after being acted upon favourably themselves, have reacted favourably on pathology. It is not too much to say that the progress of medicine towards the position of an exact science, which has made specialties possible, and indeed inevitable, may be ascribed rather to the development of pathology in the direction given it by Rokitanski than to any other one thing. We think that we may safely repeat his own feeling in regard to his own work, as expressed when returning thanks for the honours paid him on his seventieth birthday: "Pathological histology and pathological chemistry have been built up; experimental pathology has been calledint o being. My science has not only brought healing to the sick-bed, but also—and upon this I lay great stress—co-operated directly and indirectly upon all fields of natural science, and thereby enriched natural science in general. By the study of pathology not only is light thrown upon a limited and hitherto obscure region, but it is also shown what results are to be reached by material investigation in every direction. I confess I rejoice and take pride in this, that every advance in my department is followed by advances in others." With an immense expenditure of working-power, a Berlin writer observes (*Berl. Klin. Woch.*, August 5), Rokitanski continued on German soil, with the happiest results, pathological investigations which had borne so much fruit in the hands of the leaders of the French school; and that in close union with Skoda, who by aid of the pathologico-anatomical changes established scientifically the conditions of the signs in physical diagnosis. Only on a foundation based upon a knowledge of the signs of diseased organs, derived from the most exact investigations, could we have attained the correct views on the changes induced by diseased processes and all those methods of investigation which we have since to thank for so powerfully advancing our pathological knowledge, whether general or special. The Vienna inquirers did not stop at the mere anatomy, but sought, while combining a picture of the different stages through which a diseased process passed, also to obtain results as regarded the course of disease, which might be a gain to pathology. A number of already designated diseases now had first given to them a true basis; many a diseased condition that had hitherto been regarded as simple was shown to be manifold, and apparently dissimilar portraits were recognised as connected and as forming but successive stages of the same process. Much has since been said and written on the weaknesses of the Vienna Medical School, arising from its exclusive reliance on pathologico-anatomical facts. We are aware how by its doctrines the process of disease is thrust into the background by the products of disease; how in a practical relation it leaves no space for etiology; and how, in view of the obvious material changes in organs, the possibility of preventing these by therapeutical procedures is too strongly denied, leading to the well-known "therapeutic nihilism" of the Vienna School. Still, with all this, the immense progress in our science which has been brought about by Rokitanski cannot be questioned.

That much that Rokitanski produced has long been superseded by more recent investigators is a matter of course, and we should not judge of his claims to our admiration by comparing him with his later contemporaries and the state of science in our own day; but by the condition of knowledge, and of surrounding circumstances when he commenced his career. And, as Prof. Heschl observes, in spite of all the brilliant results which the newer science of our time can show, with its perfected instruments and exacter methods yet the pathological anatomy of our time will always retain the impress which Rokitanski's great gifts and untiring industry conferred upon it. Although his system, as a system, was long since shaken and superseded by the operations of Virchow and his school, yet this in nowise derogated from the value of the special work he had done, and his definitions and admirable descriptions of diseased processes will remain models for ever. No one has acknowledged this more explicitly than Prof. Virchow himself.

Besides his celebrated manual, Rokitanski published, we

believe, but one other work of importance separately, and that as late as 1875, viz., "Die Defecte der Scheidenwände des Herzens." His numerous other publications appeared in the "Denkschriften," or the "Sitzungsberichte" of the Vienna Academy of Sciences, or in the "Jahrbuch" of the Vienna Medical Society. Some of these are of great importance, such as the treatises on cysts, diseases of arteries, bronchocele, and the various forms of cancer. A tolerably complete list is given in the *Allgem. Wien. Med. Zeitung* for July 30.

MEDICAL NEWS.

APOTHECARIES' HALL, LONDON.—The following gentleman passed his examination in the Science and Practice of Medicine, and received a certificate to practise, on Thursday, September 19:—

Garrett, Charles Frederick, Walsall, Staffordshire.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Bentham, Newton, St. Thomas's Hospital.
Bunn, Charles Grinling, Charing-cross Hospital.
Corder, Sheppard Ransome, University College.
Mantle, Alfred, London Hospital.

At the Preliminary Examination in Arts, held on September 20 and 21, 109 candidates presented themselves, of whom thirty-seven were rejected, and the following seventy-two passed and received certificates of proficiency in general education, viz.:—

In the First Class, in order of merit—

1. Annie Jacob; 2. Mary Susan Mungearn; 3. J. O. Braithwaite, F. Freeman, J. H. Spitzly, and J. S. Withers; 7. W. C. Faulkner, J. V. Salvage, and John Smith; 10. Clarinda Boddy, Thomas Carr, C. E. Cormack, E. F. Halliday, J. W. D. Hooper, Elizabeth Longheed, Catherine Mitchell, A. L. Tireman, and S. H. Wass.

In the Second Class, in alphabetical order—

M. Angelo, B. Aslanian, A. J. Beardmore, P. C. C. Billups, H. T. Brickwell, C. J. G. Bunker, H. P. Butterworth, S. Camps, J. R. Cater, C. B. Chamberlain, H. L. G. Chevers, Julia Cock, H. M. Cox, W. S. Crawford, G. Darwin, L. B. Diplock, W. R. Etches, C. H. Evans, Elizabeth Grace Evans, C. H. Fitzroy, R. F. B. Halpin, J. Y. Hicks, J. D. Hill, A. E. Y. Hughes, J. L. Jackson, P. Jennings, A. G. Kealy, W. W. Kingston, H. J. Ley, H. T. G. Liude, C. F. Lovibond, Janet Michie, E. H. B. Nickoll, H. E. Noble, H. G. Plimmer, R. W. Quennell, L. Robinson, W. W. C. Robson, C. H. Sharpe, Edwin Shillcock, W. B. Silverwood, P. W. Smith, A. Sollitt, F. J. Spilsbury, J. H. Spreat, R. G. Taylor, J. T. Tupholme, A. J. Weakley, F. Wells, H. G. O. Wharry, Robert Williams, A. Witchell, Everard Woods, and G. R. M. Wright.

BIRTHS.

CHANT.—On September 19, at Lowestoft, the wife of Thomas Chant, M.R.C.S., of Lowestoft, of a daughter.

MACCALL.—On September 19, at 207, York-street, Cheetham, Manchester, the wife of William N. Maccall, M.D., of a son.

ROGERS.—On September 22, at St. Stephen's, Shepherd's-bush, the wife of Hildyard Rogers, M.R.C.S., of a son.

MARRIAGES.

DICKINSON—WRIGHT.—On September 13, at Kelso, N.B., William Gilbert Dickinson, L.R.C.P. Lond., M.R.C.S.E., of Wandsworth, Surrey, to Charlotte Annie Wright, of Colville House.

FENN—WATKINS.—On September 24, at St. George's, Bloomsbury, C. D. Fenn, M.R.C.S., of Diss, Norfolk, to Mary, widow of Justinian C. S. Watkins, solicitor, late of Calcutta.

GARRETT—GREATREX.—On September 24, at Paddington, Charles Frederick Garrett, M.R.C.S. Lond., L.S.A., to Mary Augusta, younger daughter of James Frederick Greatrex, both of Walsall.

KENT—OTTLEY.—On September 19, at All Saints' Church, Margaret-street, Osborne Charles Kent, M.A. Oxon., to Henrietta, youngest daughter of Drewry Ottley, M.D.

MOSS—WINNETT.—On September 19, at Charlwood, Surrey, Boyd Moss, F.R.C.S., to Caroline, eldest daughter of the late William Winnett.

NOOTT—LILLEY.—On September 17, at Croydon, William Francis Noott, M.D., of Millbrook, Hants, to Emily Holles, widow of Joseph Lilley, Esq., of Broadwater Down, Tunbridge Wells.

ROUGHTON—HARWAR.—On September 17, at Friern Barnet Church, Walter Roughton, F.R.C.S., of Knebworth House, New Barnet, to Edith Mary, second daughter of Joseph R. Harwar, of Rushton Lodge, Muswell-hill.

DEATHS.

MEREDITH, EDWARD BISHOPP, L.R.C.S.I., L.K.Q.C.P.I., Surgeon Bengal Medical Department, at Viper Island, the Andamans, India, on August 19, aged 24.

PINCHING, WILLIAM WYATT, M.R.C.S., L.R.C.P., third son of C. J. Pinching, of Gravesend, lost overboard from the s.s. *Eldorado*, one day's sail from Colombo, on August 16.

WILLIS, ROBERT, M.D., at Barnes, Surrey, on September 21, in his 80th year.

WRIGHT, MINA, wife of Thomas Wright, M.D., F.R.S.E., at 4, St. Margaret's-terrace, Cheltenham, on September 24, aged 56.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BRISTOL MEDICAL SCHOOL.—Medical Tutor. For particulars apply to E. Markham Skerritt, M.D., Hon. Sec., Coburg Villa, Richmond Hill, Clifton.

DERBYSHIRE GENERAL INFIRMARY.—House-Surgeon. Candidates must be members of the Royal College of Surgeons of London, Dublin, Edinburgh, or Glasgow, and unmarried. Applications, stating age, accompanied by diplomas and testimonials, to the Secretary, not later than October 12.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population in computed according to the census of 1871.

RESIGNATIONS.

Bridgwater Union.—Mr. H. M. Kemnies has resigned the Second District; area 8548; population 5388; salary £70 per annum.

Samford Union.—Mr. Thomas Pink has resigned the Stratford District; area 3149; population 1044; salary £31 10s. per annum.

Sunderland Union.—Mr. J. W. Horsfield has resigned the Ford and Hylton District; area 3670; population 3115; salary £10 per annum.

APPOINTMENTS.

Downham Union.—Henry F. Steele, L.R.C.P., M.R.C.S., L.S.A., to the Sixth District.

Malling Union.—Peter M. Pope, M.D. St. And., L.R.C.P. Edin., M.R.C.S. Eng., L.S.A., to the First District.

Sheffield Union.—Lewis G. Hunt, L.R.C.P. Edin., L.F.P.&S. Glasg., to the Workhouse.

NEW FRIGORIFIC APPARATUS.—At the meeting of the French Association, M. Clement described an apparatus that has been for some time in use in the Lyons hospitals. It resembles in appearance a life-belt, and is made of caoutchouc. It is made up of four tubes, two of which bring the cold water employed, and two carry it off again. This belt is placed around the abdomen and lumbar region, and refrigeration is readily produced; so that in employing water at from 20° to 25° C. the temperature may be reduced 2·1° every quarter of an hour. It may also be used as a calorimeter. —*Union Méd.*, September 17.

WANT OF HOSPITAL ACCOMMODATION IN PARIS.—According to a report addressed to the Administration by M. Moring, the Director of the Assistance Publique, the number of beds in the different hospitals amounted in 1859 to 14,364 for a population of 1,174,346. In 1877, for a population of 1,988,080 inhabitants, the Administration had at its disposal only 17,017 beds, so that while the population of Paris has augmented by 69 per cent., the number of beds has only increased by 18 per cent. In order to remedy this defect, the Administration proposes to make the temporary hospital in the Rue de Sèvres a permanent one, and to considerably increase the assistance given at the patients' homes (*à domicile*).—*Gaz. des. Hop.*, September 21.

THE JOHN HOPKINS UNIVERSITY, BALTIMORE.—It is announced in the *New York Medical Record* (August 24), that on September 24 what is termed the "preliminary medical course" is to commence; and, like all that has emanated from this new institution, it is devised in a very complete manner, and, if successful, will create a positive revolution in medical education in the United States. It is to extend over three years, and on its completion the student will be well prepared to enter upon the study of the regular branches of medicine. Students entering upon the above course, if they have not already matriculated at the University, will be obliged to pass an examination in elementary mathematics, algebra, and geometry, and to render translations from Cæsar and the Æneid. The first year's course is to consist of French, German, and free-hand drawing, with lectures and laboratory work in experimental physics, elementary mechanics, and chemistry. The curriculum of the second year includes chemistry, general biology, an elementary course in comparative anatomy and zoology with dissections, an elementary course in physiology and histology with laboratory work, human osteology and the anatomy of the ligaments and joints, and logic. The studies of the third year are to be human anatomy, an advanced course in physiology and histology, the elements of embryology, and psychology. An examination will be held at the end of each

year. This preliminary course has been instituted to meet the requirements of those students who wish to obtain a sound scientific basis for their professional studies. A formal diploma will be granted to the graduate of this preliminary course, and it is believed that it will be that of M.B. The expense will be $80 per annum, besides small charges for laboratory material; and the cost of living in Baltimore is about $35 per month, including lights, fuel, etc. The term lasts until June.

THE INDIAN MEDICAL SERVICE.—On the recommendation of the Government of India, her Majesty has been pleased to confer a good-service pension on Deputy Surgeon-General Henry Mills Cannon, M.B., of the Bengal Medical Department. This gentleman served in medical charge of the army head-quarters during the Punjaub campaign, when, in addition to a medal and three clasps, he received the thanks of the Supreme Government for his services, and is recommended by the Commander-in-Chief for brevet promotion and medal. General C. T. Keyes, C.B., the Commander of the Jowaki Expedition, in his report to the Government, speaks with well-deserved commendation of three of his medical officers. Of Surgeon-Major G. Farrell, of the 2nd Punjaub Cavalry, he says:—"On this officer devolved the duty of organising the field-hospital at Gumbat, and in attending the greater portion of the sick and wounded—duties which were performed to my entire satisfaction, Mr. Farrell displaying much skill and energy in the arrangements which he made with very inadequate means at his disposal." To Surgeon-Major J. W. N. Johnson, of the 5th Ghoorka Regiment, the Senior Medical Officer at Camp Shindeh, to whom was entrusted the duty of arranging for the field-hospital in the operations at the Dargai heights, he feels much indebted for his ever-ready co-operation. Colonel Mocatta had expressed himself much pleased with the manner in which Surgeon-Major T. P. Wright, of the 29th Punjaub Native Infantry, and Surgeon-Major A. P. Holmes, of the 1st Sikh Infantry, the senior medical officers at Camp Turki, carried out their responsible duties.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

M.D.—We have no direct information on the subject; but rumour says that fever has been unusually prevalent: and as there have been considerable disturbances of the soil of the City, caused by excavations for buildings and "improvements," it seems probable that rumour may in this instance exaggerate only, instead of lying.

Corrigendum.—In our issue of September 21, page 365, line 21, second column, *for* "Section 439," *read* "Section 43 : 3."

Cellar-Dwellings.—The Public Health (Ireland) Act deals with cellar-dwellings. It enacts that it shall not be lawful to let or suffer to be occupied any cellar not seven feet high in every part, and at least three feet of its height over the surface of the adjoining street, unless there is outside the cellar, and extending along the entire frontage thereof and upwards from six inches below the level of the floor thereof up to the surface of the street, an open area at least two feet six inches wide, unless the cellar is effectually drained, and has an earth-closet, ash-pit, etc., and unless it has a fireplace, external windows, etc.

The Architect and the Doctor.—The Northwich Rural Sanitary Authority proposes to erect a new hospital for infectious diseases, and plans have been prepared for a permanent building. These plans, it appears, have been criticised by Dr. Fox, the Medical Officer of Health, who is in favour of a series of temporary sheds or shanties. The architect, however, maintained that a permanent building will be more economical in the end, and that effectual isolation of cases can be provided for.

The Port Sanitary Authority, London.—A steam-launch has been provided by the Corporation for the staff of the Port Sanitary Authority, to facilitate the discharge of the important duties of the medical officer and his inspectors.

Mortality of Children of the Well-to-do Classes.—Some important tables of statistics have recently been drawn up on this subject by Mr. Charles Ansell, jun., for the National Life Assurance Society of London. In this work, entitled "Statistics of Families of the Upper and Professional Classes," published in 1874, the author shows, from inquiries made respecting 48,040 children of the well-to-do classes in England, including members of the clerical, medical, and legal professions, and nobility, that in the first year of life only some eighty children die per 1000 born of such parents.

Westminster.—The late Mr. William Bewicke Lynn, who died at Claygate, Surrey, a few weeks ago, was Consulting-Surgeon to your hospital, and, we believe, the oldest Fellow of the College of Surgeons, of which institution he was admitted a Member so long ago as October 2, 1807. He was a nephew (*not* the son) of Mr. William Lynn, who was elected President of the College of Surgeons in 1825.

Gun-Cotton and Carbonic Oxide Gas.—Her Majesty's Inspector of Explosions, Major Ford, severely impugns the statement in a pamphlet issued by the Patent Safety Gun-Cotton Company, with reference to a fatal accident caused by exploded gun-cotton, which occurred in a tunnel in course of construction near Holywell. He states that it is quite true there is little smoke from the explosion of gun-cotton, but that carbonic oxide (carbon monoxide) is evolved therefrom, and as this gas does not extinguish a light, it would very probably not be perceived in time to prevent fatal results. He adds that he was not prepared to find such a dangerously misleading statement with regard to the character of the fumes of gun-cotton as is contained in the Company's pamphlet, which had been distributed among the manufacturers of the country, and he thinks its immediate and unqualified withdrawal absolutely necessary.

India.—The Municipal Corporation of Bombay have decided to ask permission of the Local Government to borrow 27 lakhs of rupees (£270,000) to proceed with the most pressing portions of the new drainage scheme, the entire estimated cost of which is 60 lakhs.

American Medical Women.—On the first Wednesday in November, 1848, the first medical college for women in the world was opened at Boston. Twelve women formed the first class of female medical students. This was the small beginning of the medical education of women that has since spread so rapidly over America and Europe. The census of 1870 reports 525 women-doctors in the States, whereas in 1848 there was not one.

An Irish Coroner.—At an inquest recently held at Kinsale on the body of a man who had committed suicide, the foreman of the jury put some apposite questions to one of the witnesses as to the sanity of the deceased, and elicited one or two facts which justified the interrogatories. Suddenly, however, the coroner intervened, and declared that such questions were irrelevant, and that "he did not want to lose the train while listening to them." Nothing daunted, the foreman replied that "he and the other jurors were there to ascertain information touching the state of the man's mind, and that he, for one, was determined to do so, regardless of whether the coroner lost the train or not." This rejoinder was characterised as "impertinent"; and an altercation ensued, during which the irascible judge exclaimed, "If I had a warrant about me I would commit you!" whereupon he was dared to do his worst. And in hurrying off to catch the train this unseemly wrangling was brought to a close by the remark, "When I come to Kinsale again, I'll not come without a warrant, and I'll not forget you!"

H. F. T.—All the candidates at the recent preliminary examination in arts, etc., for the diplomas of fellowship and membership of the College of Surgeons received notices of the result on Saturday last.

A Chemist as an Apothecary.—At an inquest held at Gosport, a few days since, on the bodies of two children who died of typhoid fever, it appeared that the parents of the children consulted a chemist who supplied one child with six or seven, and the other with about three bottles of medicine. The county analyst, on analysing these medicines, discovered that one bottle contained 0·25 grains to the drachm of solid matter, which consisted of cotton fibres and dust; another bottle was found to contain 0·30 grains of solid matter to the 154 grains. The sediment was similar to that found in bad spring water. The jury returned a verdict that the children died from typhoid fever, adding that the father had committed an error of judgment in not procuring the advice of a duly qualified medical practitioner.

The Truck System and Drink.—A publican summoned a labourer at the Hammersmith Police-court, lately, for throwing a brass counter at him because he refused to serve more beer, the defendant being drunk. It was shown on evidence that the publican issued these counters to the foreman of the works at which the defendant was employed. The foreman delivered them to the workmen, who might, if they thought proper, have their whole week's wages in drink. The system, the publican stated, was carried on by his predecessor, and he had continued it. In dismissing the case, the magistrate advised the publican to discontinue what seemed a revival of the truck system. The direct encouragement afforded by this practice to excessive drinking of intoxicating liquors is a matter well deserving attention. Such a system seriously frustrates philanthropic efforts to check drunkenness, and cannot be too peremptorily dealt with.

A Snuff-taker and a Smoker.—Yes, the Customs and Inland Revenue Act, 41 Vict., cap. 15, prohibits, after the 1st prox., the use of certain alkaline salts, and limits the quantity of certain other salts, in the manufacture of snuff and tobacco.

A Desirable Improvement.—The alterations necessary to adapt the old churchyard of St. Mary, Newington, as a pleasure-ground are nearly completed, and it will shortly be opened for the use and recreation of the public.

Abstainer.—The Irish Sunday Public-house Closing Act comes into operation on the 13th prox.

A Poor-Law Guardian.—According to an account submitted to the St. Pancras Board of Guardians, the produce of the farm attached to the schools at Leavesden and Watford during the past half-year shows a total value of £445, and an expenditure on the land during the same period of £236, leaving a profit of £209 for the half-year.

A Dilapidated Hospital.—The medical officer in charge of the Small-pox Hospital at West Ham has addressed a letter to the Board of Guardians, directing their attention to the dilapidated condition of the establishment, and stating that he should decline to admit any fresh patients until the place was put in a proper state. A Guardian remarked that "it would be penal to decline to admit any case," and the Clerk was directed to inform the doctor that he had no power to act as he had threatened.

A Certificated Nurse.—The benefit at the Gaiety Theatre on the 14th inst. for the Hospital for Sick Children produced (including the Toy Fund) about £150.

Honour to Dr. Atkinson.—A committee of the aldermen, councillors, and leading inhabitants of the borough of Crewe have ordered to be painted two life-size portraits of Dr. Atkinson, the first Mayor of Crewe—one for the Corporation, and the other for presentation to Mrs. Atkinson.

COMMUNICATIONS have been received from—

Dr. Octavius Sturges, London; Mr. John Chatto, London; Dr. Thos. Barlow, London; Dr. J. Milner Fothergill, London; Mr. C. J. Cullingworth, Manchester; Dr. Alexander Yule, Fernhurst, Sussex; Dr. J. Pearson Irvine, London; Dr. Robert Druitt, London; Dr. C. Handfield Jones, London; Dr. Edward Sparks, Crewkerne, Somerset; Dr. W. MacNeill Whistler, London; Mr. J. Styrap, Shrewsbury; Dr. B. Foster, Birmingham; Dr. Richard Neale, London; Mr. R. C. Lucas, London; Mr. C. J. Egan, King William's Town; Mr. George Gaskoin, London; Mr. J. T. W. Bacot, Seaton; Mr. W. Harrison Cripps, London; Mr. T. M. Stone, London; Dr. J. W. Moore, Dublin; Dr. A. J. Hall, Glasgow; The Registrar of Apothecaries' Hall, London; Messrs. Griffiths and Co., Liverpool; Mr. M. Becher, Ramsgate; Dr. John Williams, London; The Principal of King's College, London.

BOOKS AND PAMPHLETS RECEIVED—

Richard Hughes, L.R.C.P. Edin., A Manual of Therapeutics according to the Method of Hahnemann, parts 1 and 2—J. H. Aveling, M.D., The Influence of Posture on Women in Gynecic and Obstetric Practice—Louis A. Duhring, M.D., Atlas of Skin Diseases, parts 3 and 4.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médicale—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Nature—Centralblatt für die Medicinischen Wissenschaften—Cincinnati Lancet and Clinic—Gazette Hebdomadaire—Guy's Hospital Gazette—Quarterly Journal of Inebriety—Journal of Anatomy and Physiology.

APPOINTMENTS FOR THE WEEK.

September 28. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

30. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

October 1. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

2. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 1½ p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

Obstetrical Society, 8 p.m. Specimen: Fleshy Mole, by Dr. Godson. Paper: Dr. Herman, "Remarks on the Treatment of Pregnancy complicated with Cancer of the Genital Canal."

3. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

4. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 21, 1878.

BIRTHS.

Births of Boys, 1335; Girls, 1156; Total, 2491.
Average of 10 corresponding years 1868-77, 2209·6.

DEATHS.

	Males.	Females.	Tota
Deaths during the week	635	615	1250
Average of the ten years 1868-77	642·3	603·6	1245
Average corrected to increased population ...	...	...	1333
Deaths of people aged 80 and upwards ...	...	...	41

Note.—The births and deaths registered last week may be compared wit the average numbers in the corresponding weeks of the ten years 1868-7 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Popula-tion, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa
West	561359	...	...	3	...	9	...	1	2	1
North ...	751729	1	...	7	1	7	...	8	...	1
Central ...	334369	...	...	...	...	4	...	3	1	
East	639111	...	...	5	1	7	...	8	...	1
South	967692	3	2	9	8	16	...	5	2	3
Total	3254260	4	2	24	10	43	...	25	5	8

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·734 in.
Mean temperature	54·4°
Highest point of thermometer	68·6°
Lowest point of thermometer	38·3°
Mean dew-point temperature	47·8°
General direction of wind	W.S.W.
Whole amount of rain in the week	0·49 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, September 21, 1878, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1878.*	Persons to an Acre. (1878.)	Births Registered during the week ending Sept. 21.	Deaths Registered during the week ending Sept. 21.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall In Inches.	In Centimetres.
London	3577304	47·5	2491	1250	68·6	38·3	54·4	12·44	0·49	1·2
Brighton	103923	44·1	42	36	68·0	42·4	54·9	12·72	0·97	2·4
Portsmouth ...	129461	28·9	74	36	...	...	...	...	...	...
Norwich	84620	11·3	56	36	67·8	43·0	54·6	12·56	0·24	0·6
Plymouth	73599	52·8	35	23	65·0	43·5	57·5	14·17	0·86	2·1
Bristol	206419	46·4	137	77	66·9	36·3	54·9	12·72	1·25	3·1
Wolverhampton ...	74240	21·9	5	31	67·4	39·6	52·1	11·17	0·64	1·6
Birmingham ...	383117	45·6	282	206	...	...	...	...	...	...
Leicester	121473	38·0	89	46	...	...	...	...	...	...
Nottingham ...	165267	16·6	112	58	71·0	38·4	52·9	11·61	0·32	0·8
Liverpool	532681	102·2	354	280	66·1	46·2	53·5	11·95	1·30	3·3
Manchester ...	360514	84·0	229	139	...	...	...	...	...	...
Salford	170251	32·9	123	66	64·5	36·2	51·8	11·01	1·96	4·9
Oldham	107366	23·0	72	54	...	...	...	...	...	...
Bradford	185088	25·6	122	80	65·0	39·0	52·5	11·39	1·56	3·9
Leeds	304948	14·1	222	139	69·0	40·0	54·1	12·28	1·20	3·0
Sheffield	289537	14·7	197	138	68·0	39·0	52·8	11·56	1·31	3·3
Hull	143139	39·4	99	69	68·0	38·0	52·6	11·45	1·02	2·5
Sunderland ...	112459	40·6	83	65	71·0	43·0	55·4	13·00	0·43	1·0
Newcastle-on-Tyne	144570	26·9	99	72	...	...	...	...	...	...
Edinburgh	222371	53·1	150	65	64·2	41·0	51·6	10·90	0·86	2·1
Glasgow	566940	94·0	354	209	62·3	43·0	52·9	11·61	1·47	3·7
Dublin	314666	31·3	196	135	68·9	36·5	53·3	11·84	0·62	1·5
Total of 23 Towns in United Kingdom	8373953	38·0	5673	3310	71·0	36·2	53·6	12·01	0·97	2·4

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·73 in. The lowest reading was 29·38 in. on Sunday evening, and the highest 30·03 in. at noon on Saturday.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1878 by the addition of seven years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. Nottingham, Salford, and Oldham, however, form exceptions to this rule, as the estimates for these three towns have been revised with the aid of local information as to the rate of increase of inhabited houses. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

INTRODUCTORY ADDRESS

DELIVERED AT THE OPENING OF CHARING-CROSS HOSPITAL MEDICAL SCHOOL.

By J. PEARSON IRVINE, B.A., B.Sc., M.D. Lond.,
Assistant-Physician to the Hospital.

GENTLEMEN,—An honourable duty in all lines of life is not infrequently painful and troublesome; and when my colleagues were good enough to charge me with the Introductory Lecture, I accepted the trust with much misgiving. The lecture has been abolished by some schools, but, in spite of this, it has a perennial popularity, and many are well pleased that the venerable institution has not altogether perished. A man's memory need not be very old to bring back a first of October which was a day of journeying and rejoicing to many a practitioner, who regarded it as *the* day of his year, and revisited his *Alma Mater*, sometimes with a son in charge to be entered at the old place. And in the eyes of medical men there is a kind of sanctity about the introductory lecture, and many who have survived enthusiasm and excess of sentiment prefer it to the substituted *conversazione*. Its charm is not difficult to find: it lies in its power of renewing old remembrances, and recalling a man's student-days, and of bringing new students into an immediate relationship with all connected with their school. Nor is a single half-hour badly spent if it can make the first-year's man believe that his teachers are earnest for his welfare; if it can give hints which may guide or encourage him; if, in fact, in a multiplicity of ways which this assemblage illustrates far better than could any words of mine, it can make teachers and students and their friends not only acquainted with one another, but full of trust in one another—a condition of things on which all our pleasures and all our prosperity at a medical school must greatly depend. We wish our students success, and the prosperity of the school is the best proof that we have laboured to attain it. I mention that prosperity for this chief reason—to remind you that it is due as much to the students of the school as to their teachers. I would most earnestly impress on you, gentlemen, that it is in your power to make or mar the fame of Charing-cross Medical School. I, for one, have no doubt of its continued advance; let me ask you to share my confidence, and find in it an incentive to work hard and conscientiously in a school which time, patience, and steady efforts have already raised to a high position amongst friendly rivals. In the certainty that good work is being done here, and in the hope that each one of you will be earnest in aid, I perform a most agreeable duty, and that is, to welcome in the name of the school you gentlemen of the first year, all the present and past students, and all friends of this institution. This welcome is no piece of hypocrisy, gentlemen; you have adopted a profession not without careful consideration on the part of yourselves or your friends, and I welcome you because I am persuaded that the great majority of you will never have need to regret the step taken, provided that you follow it up by the best of your endeavours. All cannot achieve success in medicine; but remember that our profession has no monopoly in this direction.

I do not want to say a single word by way of discouragement to you first-year's men. You are here as students, and plainly it is our business to make the best of you—to make you fit to combat human disease, and to be a credit to our noble profession. But I must remind you that you will have many great and many little difficulties in your career as students of medicine.

The fact is, you are entering upon a very trying study; but my endeavour will be to convince you that its difficulties must, if properly appreciated, be of the greatest advantage to you. The charms of the study of medicine really lie in its difficulties. I dare say many of you will not quite agree, and will ask if it is charming to have to master the dry facts of such subjects as anatomy and botany. My reply is, Yes: you can find pleasure in the difficulty of accumulating facts of the so-called driest subjects, if you look on them as stores from which your developing reasoning powers will with time draw all the more and more freely. The mind's opportunities come with difficulties—its opportunities for improvement in all directions; and facts and reasoning in the case of most men are inseparable. And when you are striving to amass facts and dry details, remember that you should also be training your minds to look upon them scientifically. Not only is there a charm in the driest work to some students, but an actual danger, for the brilliant man finds so much pleasure amidst difficult problems, that he is apt to be run away with—so to speak—and to neglect that cautious accumulation of facts which is so essential in the medical profession. It is certainly the teacher's part to guide you aright in such cases: and thus guided while your faculties are developing, no one will blame you for finding a difficulty in study attended by certain theoretical consolations. It is possible to illustrate the line an earnest student should take by reference to the old masters in medicine. In their search after truth they sought for facts and stored them for future use. Their facts might not include the whole truth, but they led up to it and remained with the workers' arguments thereon for the guidance of future observers. Their ever-growing reasoning powers saw the bearings of work which others had done, and they toiled over wastes which others had partly cleared, and marched with careful steps over lands where pitfalls were still numerous. The very errors of earnest workers guided their successes, and many now settled problems in medical science were only solved by the laborious work of generations whose care in observation and care in reasoning finally enabled individuals to determine each particular truth. In all great discoveries this has been the case, and in all facts have been made the food of the busy intellect and permanently subservient to its exercise. These difficulties are akin to the difficulties of the medical student, who should look upon himself in the light of an original worker, whose duty it is to master his subject as far as he can, and guided but not driven by his teacher to reason on it with an original mind. The more this is done, and the more you are compelled to think, the more likely is this generation to leave behind names of men worthy of those who have preceded us. Englishmen never forget ancestral work, and your successors will expect from you an attempt at that excellence I ask you to imitate. They will look for it, and I do not think in vain; and what is more, I trust they will find worthy representatives of classical names, not only in the superiority of a few individuals, but in the general labours of the profession. For we should try to attain this height of excellence, to hand down to posterity not only individual but general perfection—perfection as complete as past teachings and our great present opportunities admit of.

It is clear, then, gentlemen, that the difficulties of study should make you both conscientious and determined, in which case the counteracting charms I have spoken of will speedily be yours. I cannot conceive that any one of you will find no attractions in the study of medicine; and it is certainly a rare thing to find a miserable medical student, or even a gloomy practitioner. Perhaps this is because they are of Mark Tapley's mood, and find in the difficulties of life their truest, best, and most noble of pleasures. I have spoken of your difficulties generally, but I desire to allude to one in particular—viz., the long list of subjects which, I have no doubt, alarms many of you. This long list is not quite so formidable as it looks to the novitiate; for the science and art of medicine have been so well and wisely elaborated by workers in past years that they cannot be taught except by a division into branches. But this division has not been made to specialise medicine; and careful study of our systems of lectures shows that, though it must manifestly continue for long imperfect, there must have been in the minds of reformers a constant desire to make subject depend upon subject, to make no one free of its fellows, and a constant fear lest changes should interrupt that harmonious blending which is necessary to make a student a sound practitioner. Therefore, gentlemen, do not let this seeming difficulty discourage you. It is intended not only to make the mastery of facts easier, but to show the interdependence of the various branches of medical science, and in the best possible fashion to induce you—to force you, in fact—to inquire into things for yourselves. You see the importance of even minute details, when you understand how one subject is scarcely complete without another. In your first year, for example, you study anatomy, physiology, and chemistry, and the

diligent student finds a solace in his labours, and a help to his intellect, by comparing and contrasting one subject with the other, and by mastering the relationship which one has to the other. I am fully persuaded that every one of you who attends his lectures with zeal *must* improve in the way I have indicated. And the same is true for future years; session by session you will find even in the multitude of subjects of study the charm which great difficulties can yield. Variety itself alleviates the pains of prolonged study, and, as time advances, you will be the less inclined to condemn those who have condemned you to pursue so many apparently different branches of knowledge. I am perfectly well aware that some of the leading scientific men of this age have urged that the medical student is over-burthened, but I venture to add that this opinion has been most frequently advanced by those who have not actually practised the profession of medicine. On the so-called "extraneous" subjects, which many examining bodies demand a knowledge of, I will not dilate, but here again I would add a word. A medical man in town and country alike is expected by those about him to be able to speak and give information on anything having the least bearing on science. The public have raised him to this unenviable status, and the better he can meet their demands the more he is thought of. Let me ask you to consult country practitioners on this point, and I will be bound to say that a vast majority will tell you that a knowledge of botany, for example, is as important to them as a knowledge of the composition of blue pill. It is a social attainment which enables them to beat a town practitioner completely out of the field.

This is an illustration which might, with a change of subject, be extended to the practitioner in this metropolis, or indeed in any part of the globe. And not only the ordinary public, but the public services, demand the general knowledge alluded to; and many of the subjects which students neglect because they can see no immediate good in them, as once they could see no good in Euclid or Horace, are often the direct means of rapid promotion of those who, in spite of drawbacks, which are a disgrace to a civilised empire, have ventured on a medical career in the army or navy of this country. These things, gentlemen, teach an important lesson. For what do they prove? That the medical profession has made tremendous advances; that the general body of the profession are not simply regarded as compounders of nauseous mixtures, but are honoured as only the leaders in medicine were honoured but a very few years ago. The public can pay no greater tribute to our profession than it yields in insisting on its members being educated gentlemen. Fifty years ago scientific lights shone by contrast rather than by comparison; now the case is completely altered, for the general bulk of the profession is taught, and not the special few only. The public have been quick to recognise our progress (in town and country alike), and have a perfect right to demand that the medical man should be a highly cultured gentleman.

I believe that one of the most discouraging difficulties to a medical student is the seeming and real uncertainty which pervades all the subjects of his study. Everything is, as it were, in a maze to him. Well, there is no harm in this, for it demands the exercise of the student's faculties; it is a difficulty which yields, if properly met, an abundant reward. And it is met by hard work alone, by regular attendance at lectures, and by that firmness of purpose which makes a man "once a student always a student." The moment each one of you gentlemen is initiated, the greatest attraction in the study of medicine you will gather from its uncertainties. These should be an everlasting inducement to you to make new efforts. Who would care to belong to a profession where these elements did not prevail? A profession is especially distinguished because it continually makes original demands on a man's mind; and in the difficulties of solving uncertainties the true physician finds his sincerest pleasure. Were everything in medicine and surgery capable of being written out in a fine round hand, and printed in the clearest type, the charms of the study of our profession, and the mental delights which alleviate the hardships of its practice, would have perished. In fact, you would be taught, but not educated, and instead of being drawn out into beings capable of lifelong improvement, you would be sent away to degenerate into mechanisms which existed and moved, but had no being. There is much to be discovered in our profession, and the sooner the student knows this, the better for himself. Many things are uncertain, and the danger to each one of you is the temptation to theorise in consequence. Yet infinite good has come of theories, and for my part I would rather that you should theorise a little than allow your minds to become solely the tillage-ground of facts. I am of opinion that a young gentleman's mind cannot absolutely lie fallow, and that, if he be a student in this school, earnest in his work, and not inflated with his own importance, his theorising on physiological, chemical, or other problems, is better than theorising on the ordinary topics of the day.

It is "uncertainty" which has made our profession a science superior to all sciences. Its very imperfections make it a science more worthy of study, and of our attempts at advancement, than any other under the sun. The professors and practitioners of medicine have to deal with everything which concerns the human race—with human failings, human responsibilities, and human diseases. We are asked to watch and cure human failings, we are asked to teach our fellow-man his responsibilities, we are bound to attempt to cure his diseases, and above all things to prevent them. I venture to think that medical men at the present time accept their duties in the spirit which should actuate members of a noble profession. An outside world which knows nothing, or at any rate little, of our labours may ridicule us because we disagree; but such ridicule let us accept with a smile, provided that we are full of a determination to aid, year by year, by good work, the advancement of the medical mind. Our disputes and uncertainties amuse certain sections of the community, but insomuch as we are always in the van of scientific progress, we must be always prepared to receive with good temper their harmless strictures. It is good to be criticised, gentlemen, and criticism must teach you this important truth: that no matter whether you may be placed to practise your profession on a bleak mountain-side, or in the heart of a great city, you can one and all bring, if you like, facts and opinions which the highest in the profession will feel bound to make use of. There is not a medical man in this room who will not second these opinions, not one whose practical experience will not justify what I have said. Gentlemen, there are rich fields, comparatively untrodden, which await your footsteps; the more the science and art of medicine advance, the more wide are the fields of study, the greater the good to mankind. In such a case I cannot do otherwise than welcome the first year's men who come prepared to sacrifice much in the desire to advance human progress.

And, that you may meet these uncertainties, you, gentlemen of the first year, must come prepared to be "educated." You must not be made hermits, or bookworms, or beings allied to these, but men who have to do good work in the busiest, best, and most important lines of life. You must be taught to take an enviable place in a workaday world. You must, in fact, be made capable of reasoning for yourselves, and capable of acting on your own responsibility. There is no profession in which this is more necessary; for picture to yourselves a medical man a dozen miles away from any advice except that of old women, and in charge of a case where immediate action means the life or death of a human being. What shall be done? the practitioner asks himself; and no one except the man who has experienced the difficulty can know the anxiety, which each moment increases, in such cases as these. Gentlemen, it is our bounden duty not only to teach you the routine of medical practice, but to train your minds for emergencies. Once you have the training, the emergencies become valuable practical experiences; without the training they make your confusion ten times confounded. And I do not hesitate to say that the school which sends forth students capable of meeting such demands as that alluded to, should be honoured far more than the school which looks to its university scholars only, and takes contemptuous heed of those men (the stupid, the careless, or the unambitious) who in the actual practice of their profession will weigh well the teachings of their medical school. Gentlemen, at this school, I am convinced, the brilliant man and the obtuse man are received and met in a friendly spirit. Let me sum up the theory of education which we attempt to put into practice. We say, "Let each man have his chance of being taught and not crammed; make him use his powers, and teach him how to use them. He must store up a vast number of facts: make the labour lighter by showing

him how such storage must be of value in actual life. In a word, don't make the man a mere machine, but an educated gentleman, capable of further education by his own unaided efforts both in the study and the practice of his profession." Now, in spite of carping critics and of the assertions of outsiders who have dabbled in physic, but really know nothing of it, though they are never weary of well-doing in the way of stringent advice—in spite of all these things, I maintain that the highest standard of excellence is being rapidly attained by many of our medical schools. The fact is, medical schools and medical students are now awake not only to the errors of their predecessors, but—what is more important—to the good work done by them; and almost every school nowadays earnestly attempts to benefit all its students by extending to them the advantages which only particular men formerly enjoyed. The schools recognise this great fact: that they are teaching an undeveloped science, and that, if they can arouse in their students a true exercise of their minds, they must not only advance the students, but the science which is being taught. They teach that the profession cannot stand still, and turn men on original roads; and once a student sees there is something to be done beyond a routine of questions and answers, he becomes earnest in his work and ambitious to advance our knowledge. I have said that you may theorise too much; but imagination is one of man's highest powers, yields to him the sublimity of pleasure and the depths of woe, and I don't think its exercise will harm any of you, provided that you are properly trained at your medical school. And remember, gentlemen, that the fault of imperfect training is, very commonly, the student's. Let me therefore ask you, one and all, to be true to your *Alma Mater*; true to her, you can teach your teachers, not once or twice, but throughout your career as students; false to her, you injure not only yourselves, but the friends and companions around you, and the profession to which you aspire. You have opportunities which ten years ago did not exist. No decennial period during this century shows more advance in medical teaching than that now passed. The work done amidst darkness, so to speak, by our forefathers, has been elaborated and made fit food for every student; a tutorial system of education has been instituted, and the wonder is, in this age, that any gentleman should fail to pass an examination. There cannot be a question, in my mind at any rate, that these things are good, but evils attend "tutorial education," because in its name "cramming" has been insidiously introduced. "Cramming" may launch a man on the sea of practice, but no sooner is he there than he will detest the system which "got him through." For in the actual work of his profession he feels his feebleness, and has to struggle to conceal his weakness rather than to show his knowledge. He becomes that most weak of mortals—the man who thinks he cannot make a mistake, and that everybody is wrong but himself. He makes conceit a substitute for knowledge. Picture to yourselves a gentleman stuffed with a mass of supposed mental food, which disturbs his digestion, and which he is glad to get rid of the moment his triumphant back is turned on Lincoln's-inn, Pall-mall, or Blackfriars! Surely this is not your notion of perfection! The teacher who can claim to write "Eduxi" on his escutcheon is the man to be admired. The "crammer" writes "Perduxi," and does honour neither to himself nor to his profession.

There is one other subject I wish to mention. I have noticed that gentlemen commencing the study of medicine are apt to glide away into a special line of study. I will grant you all that indulgence which the innocent simplicity of youth demands; but it is my duty to ask you not to consider yourselves chemists, anatomists, surgeons, and so forth, in the first year of your studies. Do not, I beg of you, allow yourselves to drift into a special study to the neglect of other branches. Every teacher in this school who has a special department in his charge will second my warning, and assert that no one has a right to practise a specialism, unless he has given attention to the all-round study of his profession. A student has predilections like anyone else, but he has also duties, and he ought in the study of medicine to foster his aversions rather than his predilections. Men predisposed to study as to disease take infection readily; those who are not predisposed to particular lines of study should cultivate the exciting causes thereof. Do not, gentlemen, in the early years of your career persuade yourselves that Providence has intended you to be "throat men," or "aurists," or "kidney men," or "brain men," or as fit to become even stranger excrescences than these terms imply. In the ordinary practice of the profession there is too much of this specialising; and specialism flourishes, in the majority of instances, because it pays. Be this as it may, the student of medicine has no right to specialise. You, gentlemen, who join us to-day, take not only my view and that of your other teachers, whose experience is far greater and more valuable, but the opinion of the gentlemen who have held, or now hold, the resident posts in this hospital. It is urged that a student cannot master all the subjects of study: this is true only to a certain extent; and the fact remains that the vast majority of you will be expected to have a general, and not a special, knowledge of medicine and surgery. To some of you may be given the chance of cultivating a particular subject, but, unless you have previously cultivated a general knowledge of medicine, I say, without hesitation, that you are not fit to be let loose to practise a specialty.

I have but little to add in conclusion. Let me ask you to make the best use of your time while students here, so that you may go forth into the struggle of life capable of acquiring for yourselves that intellectual supremacy to which all professional men should aspire. I need not tell you that the worldly rewards of our body are not great; but, whether we attain wealth and honours or not, we should all remember that in our hands is the honour of the healing art, and that it is our duty to keep it worthy of that immortality to which the mythical teachings of the ancients raised it. This you can do by a constant observance of the rules which regulate the conduct of gentlemen, and by a perseverance in study to the end of your career. The study of medicine is as grand as any under the sun, and when your minds are more matured you will find a solace for many cares if you will but pursue that study. Gentlemen, I wish you all success in the profession you have adopted.

ABSTRACT OF

INTRODUCTORY ADDRESS

DELIVERED AT THE OPENING OF THE WESTMINSTER HOSPITAL MEDICAL SCHOOL.

By CHARLES MACNAMARA, F.R.C.S. Eng., F.C.U.,
Surgeon to the Hospital.

Mr. Macnamara commenced his address by stating that his object would be to give from his experience some practical advice, first, to students commencing their studies in the Westminster Medical School, as to their duties, and curriculum; and, secondly, to the students who, having passed their examinations, were about to enter on general or consultative practice, or some branch of the public service. He dwelt upon what appeared to him the advantages of small over large London medical schools as at present constituted, arguing that in the former, in consequence of the limited number of pupils, they were brought under the personal influence and control of the medical staff, constituted, as a rule, of men whose future depended upon their own exertions, and who were consequently anxious to devote a considerable portion of their time to students; and under existing circumstances be held this to be no small advantage, because, in his opinion, although lectures and book-work were indispensable, they were by no means the only elements essential to the education of young men fresh from school. A man's career in life was frequently influenced by the habits and associations he formed during the early period of his residence in London, and consequently, the benefit likely to arise from an intimate acquaintance with the professors and tutors under whom he studied was very great.

The lecturer lamented the want of colleges in the metropolis, such as those existing in our older universities, in which the medical students (numbering not less than 2000) could be brought under salutary discipline, and in which the various subjects which they have to study could be efficiently taught—the tutorial system of instruction being employed in place of that which exists at the present time. He proceeded to urge strongly the members of the profession throughout the country to move in this matter, insisting on the fact that it was well within their power to raise funds to build three or four medical colleges in this city, which would be self-supporting, and so to withdraw the

students from the baneful influences attending their residence in London lodging-houses. He believed that not only would the students derive great benefit from a college life, as compared with that which they now had to lead, but that in several instances the patients in our hospitals would derive advantage from the removal of medical schools from their immediate neighbourhood. Our hospitals had, as a rule, never been intended by those who founded, supported, or planned them, to have dissecting-rooms, museums, and such like buildings attached to them.

Mr. Macnamara advised the students to throw all their energies into the work for which they had come to London, which is to learn how they might most effectually cure and alleviate disease; and with this object in view they should seize every opportunity of studying the treatment of the patients in the wards and out-patient department of the hospital. In comparison to this, the other subjects they had to work at were of small importance, and he thought that it was in consequence of men slighting their studies at the patients' bedside that many of them became subsequently sceptical as to the efficacy of the rational treatment of disease, which, although it was mainly empirical, was none the less satisfactory in its results. Some of our examining bodies had often overlooked this fact, and, in a commendable effort to improve the scientific attainments of our students, had probably led many young men to attach a greater importance to these subjects than to the practice of their profession. This tendency was perhaps the stronger, because it was unquestionably easier for an examiner to satisfy himself as to a student's knowledge regarding science, than it is to ascertain his capabilities to practise medicine and surgery.

After giving the students advice regarding the method to adopt in their studies, Mr. Macnamara proceeded to consider the question as to the line of practice they might advantageously follow after passing their qualifying examinations. In the first place, he advised those whose career in life had not already been marked out for them, to consult the professors under whom they had studied regarding their capabilities to follow any particular line of practice: he was convinced that much disappointment, and many a false start in life, would be avoided if young men would follow this rule. He advised those who wished to settle in England to work as assistants, in anticipation of subsequently succeeding to a partnership in a general practice, either in the country or in London—the latter was preferable for some reasons; one of which was, that in many cases general practitioners in town had been able to dissociate themselves from the system of dispensing their own drugs—an example which it was most desirable to follow, for until a change in this respect was effected, members of the profession generally could hardly assume the social position they were entitled to occupy. Nevertheless, with its disadvantages, he believed general practice afforded the majority of well-educated medical men a very fair opening, and that it was in most cases their own fault if they failed to profit by it.

The lecturer said that, in his opinion, unless a man has independent means, it is not advisable for him to strive for a consultative practice in London, however desirable the prospect might appear to those who had not gone through the toil and long weary years of waiting necessary to insure success; they would find, if they were fortunate enough to reach the heightof their ambition, (and how few ever do so!) that the prize was hardly what they expected. At any rate, he was certain that, in consequence of the multiplicity of hospitals in London, young men were apt to take several appointments, spending far too much of their time and energies in public duties, and so failing to engage in original research, during those years of their life when they are best adapted for work of this kind, and of thus building for themselves a solid foundation upon which their future reputation might securely rest.

Speaking next of the public services, Mr. Macnamara observed during a long and successful career in the Bengal Medical Department, his vocation as a surgeon had brought him into intimate acquaintance with native gentlemen and also with their female relations—for a medical man, after he had established a reputation in India, was treated with the same confidence by Hindoo families as by his own countrymen and women, and so medical practitioners, being the only European gentlemen allowed to visit native ladies, became perhaps better acquainted with the existing state of feeling among the people of Bengal than any other Englishmen. He said that it was absurd to talk about the necessity for sending out lady-doctors to India because medical men were not admitted to attend native females. From his experience the condition of public opinion among the upper and middle classes in Bengal was far from satisfactory. Many natives admitted the benefits conferred by our rule, but they deplored the disorganised state of society in Bengal: the old families had almost disappeared, the sons and husbands of the educated and rising generation were largely addicted to drunkenness and vice of every kind; and the more thoughtful men and the vast majority of women (whose influence for good or evil was infinitely greater than most people supposed) contrasted this state of things with times when there was less security to life and property, less law, taxation, and education, but when the greatest slur which could attach itself to a man's name was that of being an undutiful son. Our system of education had broken down all faith in religion, and the outcome of a purely secular training had developed gross materialism and rank socialism; and hence the necessity for suppressing the outspoken sentiments of the vernacular press, which, nevertheless, faithfully gave utterance to opinions he had heard over and over again for some years past among all classes of natives, and which he dreaded would one day break out into a revolt, in comparison with which the Mutiny would be considered as a mere brawl. Nevertheless, so long as we hold India, and the changes necessary for the reorganisation of the medical department are carried out in the judicious spirit advocated by Lord Northbrook as far back as 1873, there is no country where a young medical man in Government employ could succeed with greater certainty; but there, as in this part of the world, time and downright hard work could alone insure success.

Mr. Macnamara was not disposed to advise students to enter the British (Army) Medical Service under existing circumstances. He said there was an impression that the Commander-in-Chief having sanctioned the scheme for the departmental system, was averse to any alterations in its principles; and so the report just issued by Lord Cranbrook's Committee deals with matters of detail rather than with the fundamental questions upon which many persons believe the future prospects of the Service depend. Its ranks, however, are to be filled up, for if the scheme of the Committee is carried into effect, while retaining the spirit of competitive examinations, selection for admission into the department without examination will be permitted, through the nomination of candidates by the "medical teaching bodies;" if these authorities, therefore, make a judicious use of this privilege, they may do much to improve the condition of the Service. Mr. Macnamara entertained a better idea of the advantages offered to young medical men entering the Royal Navy for a limited period, and as a stepping-stone to general practice: but he counselled students absolutely to decline competitive examinations for admission into any of the public services, and thus to induce the Government altogether to abandon that injurious system.

In conclusion, he asserted his conviction that it was a man's own fault if he did not succeed in the medical profession: the advantages it offered to its members were second to none of the other professions, and its position was constantly improving by means of the hard work performed by its individual members, and the high moral character they maintained throughout the country.

ABSTRACT OF

INTRODUCTORY ADDRESS

DELIVERED AT THE OPENING OF ST. GEORGE'S HOSPITAL MEDICAL SCHOOL.

By T. T. WHIPHAM, M.A., M.B., F.R.C.P.,
Physician to the Hospital.

The opening address was given by Dr. Whipham, who alluded briefly to the loss which the School had sustained by the death of Dr. Noad, F.R.S., who had been connected with it in the capacity of Lecturer on Chemistry for upwards of a quarter of a century. Dr. Noad died shortly before the commencement of the past medical year. Further, he expressed the deep regret felt by himself and his colleagues at the death of two most promising students—Harry Douglas Mackay, and James Thomason Hay.

The attention of the audience was then called to the changes which had occurred in the Hospital staff during the past twelve months. Mr. Henry Lee had resigned his post of Surgeon and had been promoted to the rank of Consulting Surgeon. But amid the regrets felt by all connected with the institution at the loss of Mr. Henry Lee's services in an active capacity, one source of consolation was to be found in the election of Mr. E. C. Stirling as Assistant-Surgeon.

The lecturer then proceeded to a discussion of the advantages or disadvantages which must result from the prevalence of specialism. He showed that to a certain extent specialism must exist; that it was an offspring of the great law of division of labour; and he briefly traced its origin in the vegetable and animal kingdoms, pointing out the advantages derived by the human race from the cultivation of certain substances existing in vegetables, and illustrating the assistance man derives by the education of the dog to the performance of special duties, as shown by Darwin. But while congratulating man on the marvellous modifications which have been effected in the works of nature by his instrumentality for his own profit and pleasure, it is well to bear in mind certain disadvantages resulting from a system which affects creatures beneath him in the social scale, and also increases man's own responsibility. For instance, he has rendered many species of the canine race entirely dependent upon him for their existence. True, the hound and setter have resulted from a prolonged system of cultivation and selection; but the greyhound is equally the offspring of these processes, and in this species the sense of smell is so ill-developed that the animal, in its ordinary condition of life, would, in all probability, be unable to hunt its prey. Without, however, contesting man's right to convert to his own use all creatures under his dominion, the argument may be employed against man's treatment of himself.

Education in its proper sense includes the cultivation both of mind and body, and any system which tends to develope one at the expense of the other is faulty. The point for consideration is, then, whether man's efforts at the development to the greatest possible degree of his own brain has been attended with success. Has he in his own case, as in his cultivation of the lower animals, fallen into the error of so prosecuting his mental culture that some one or more of its attributes have been brought prominently forward, while others of equal importance have, perforce, remained in the background. In other words, is the tendency of modern education in the medical profession directed unduly to the encouragement of specialties? A doubt was expressed whether even in the case of the lower animals the cultivation of one special attribute is judicious, and whether it would not have been better for the animal itself, and at the same time quite as advantageous to man, if he had, as far as possible, encouraged in the same individual the development of all its more useful instincts. In man's case, however, no such doubt can exist—his education should be as comprehensive as possible. He is destined to be, not an advocate of any one line of thought or action, but a citizen of the world—to become, like the working-bee, a labourer for the common weal in the great hive of humanity. The human intellect is finite; and knowledge is now so extensive that it is beyond the power of one individual to master a tithe of it. Man in consequence must be to a great extent a specialist—he must be content to devote himself to a few subjects, and to aim at rendering his knowledge of them as perfect as may be. But is man justified in still further limiting his sphere of usefulness by adopting a specialty in the profession of his choice? Deprecating any intention to pass judgment on those members of the medical or other professions who have devoted many years of patient toil to the careful study of special branches, the lecturer raised the question as to whether the public is better served by the existence of professors of specialties. He considered that the answer of the laity would be in the affirmative; and for this reason: that they would argue that a man who devotes his whole time to one subject must of necessity know more about it than others; and therefore the public seek the specialists in their need. But the public fail to appreciate the fact that no one portion of the animal economy can be properly studied without an accurate knowledge of the whole, and it is through ignorance of this that they nowadays lean so much towards specialism.

With regard to the medical profession, it was contended that subdivision into special branches was perhaps more excusable than in any other, by reason of the many and important collateral sciences which bear upon it. But it was strongly urged that a man to become a specialist ought in the first place to render his knowledge of the body as a whole as complete as possible, before attempting to limit his attention to any one part of it, more especially in the earlier part of his career.

The practice of introducing special departments into hospital schools was defended as tending to facilitate the student's labours, to economise his time, and, among other things, to familiarise him with minor points of difference which occur in various diseases, and which, when grouped together, materially aid diagnosis or suggest treatment. It was further argued that men who profess medicine or surgery generally have contributed as much, or perhaps more, to the advance of science than those who have adopted specialties. Finally, it was argued that as the practice of a specialty should be the result of an accurate knowledge of the whole, this thorough knowledge could only be attained by the most gifted; that men who possess extraordinary abilities are few in number; and therefore specialists should be confined to those few. At the same time the condemnation of those who adopted specialism simply as a means of pecuniary gain cannot be too severe, as being degrading alike to the profession and to the individual.

ABSTRACT OF

INTRODUCTORY LECTURE

DELIVERED AT THE OPENING OF ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.

By EDWARD NETTLESHIP, F.R.C.S.,
Ophthalmic Surgeon to the Hospital.

THE lecture was devoted to specialism in medicine as illustrated by ophthalmic surgery. Three stages might be recognised in medical specialism. The first, or empirical stage, based on the need for special dexterity in certain operations; the second, or encyclopædic, in which the practice of eye-surgery was joined with general surgery, and the special branches of practice were in the hands of the best surgeons of the day, who were but seldom specialists (sixteenth, seventeenth, and eighteenth centuries). The continued action of the causes which produced this stage have led, in the last half-century, to a great increase of specialism and specialists; the progress of knowledge and multiplication of resources having made it impossible for any but men of the highest ability to cultivate thoroughly the whole field of modern medicine (third stage). However much we may regret this modern subdivision of labour as fostering narrow habits and exclusive views, and as tending to an over-estimate of the importance of trivial complaints, we must accept it as an essential condition for most of us if we wish to attempt thorough work.

Some points in regard to the future of specialism were then touched upon, and some of its weak points mentioned. Attention was called to the parallel institutions of special hospitals and special departments at general hospitals. The special departments, having arisen to meet the needs of medical education, will increase in importance. But the lecturer thought that the usefulness of the special hospitals would slowly change its ground, and in the end be lessened; they will remain as centres for the highest special work, where those who are in charge of the special departments may work side by side with mutual advantage. If the special and general hospitals could co-operate, medical education and scientific work would both gain; and though the number of medical workers need not be reduced, any tendency to excessive competition for hospital patients would be checked. Mr. Nettleship next inquired how a special branch of practice should be taken up. The longer a man can keep his hold on a wide field of practice, the better for his after-value as a specialist, provided he do not endanger the first object of specialism, thorough adeptness in its intricacies. The earlier a man becomes a pure specialist, the greater the risk that he will lose in breadth of knowledge and judgment what he gains by concentration. The need for specialists, more than for others, of general medical culture, whether by means of reading, of the medical societies, or of co-operation with colleagues, was strongly

insisted upon, in order that the mind might be kept open though the sphere of industry was narrow. It was held that the work of the medical man contained more humanising influences than the everyday work of almost any other occupation, and that general culture, however attractive, was on this account less imperative for ordinary medical men and ordinary specialists, than the need of trying to keep up in some degree with the march of their own profession. Pluralism in medical appointments was for specialists one of the most effectual checks to isolation and narrowness, always provided that the whole strength be not taken up in the mere routine of the work. And, as Mr. Nettleship here pointed out, although specialism will certainly increase, yet there are many degrees of specialism, and it by no means follows, in the case, at any rate, of the less intricate special branches, that a man who acquires reputation for some one class of maladies need relinquish the charge of other cases. Routine was an enemy to be very carefully guarded against, and one to whose attacks the specialist is particularly open, because his work is very limited in area, and his responsibility (compared to that of the general physician and surgeon) light. Another morbid tendency of specialism was to rely too much on local treatment, and especially to drift into the needless employment of strong local remedies needing skilful use, when weaker ones applied by the patient would do as well. Mr. Nettleship deprecated the performance of serious and delicate operations on the eye by those whose opportunities of treating eye cases and of habitually handling the eye were few and far between. Though eye-operations often looked easy, were soon over, and involved no risk to life, the margin allowable for harmless error in their performance was very narrow. But it was the duty of all students who could possibly afford the time to learn the use of the ophthalmoscope, and of other special aids to diagnosis, the use of which could never lead to anything but good for the patient. Such instruments of research were, however, whether employed for the elucidation of general or of merely local disease, always to be used in general practice as accessories to, not as substitutes for, the more ordinary means of diagnosis. In regard to the more difficult parts of the special subjects, students who are only able to give a short time to their study should aim less at knowing how to cure a particular case than at learning how to distinguish serious from trivial cases; cases which they may, when in general practice, safely treat, from those which they ought unhesitatingly and at once to transfer to an expert.

The rest of the lecture was taken up by some remarks on teaching—the impossibility for students of getting too much clinical and demonstrational teaching; and the very sparing use they should make of such teaching as has no other object than success in examinations. Examinations were the means, not the end; and no man should go in for the higher examinations unless he found he could do so without risking the thoroughness of his hospital clinical work.

ABSTRACT OF

INTRODUCTORY ADDRESS

DELIVERED AT THE OPENING OF THE MIDDLESEX HOSPITAL MEDICAL SCHOOL.

By ARTHUR W. EDIS, M.D., M.R.C.P., M.R.C.S.,
Assistant Obstetric Physician to the Hospital.

THE first portion of the lecture was occupied in describing the aims of medicine, the objects and method of education, and other matters interesting to the student more especially. The medical journals having to a great extent anticipated the advantages of the Introductory Lectures of bygone times, Dr. Edis thought it needless to recapitulate these, but passed on to the consideration of matter equally important to the medical student.

The fundamental principle of sanitary method being the discrimination of disease, it followed that the fundamental principle of sanitary practice was the discrimination of condition under which disease prevailed. Taking midwifery in its more comprehensive sense as comprising all human knowledge relating to the reproduction of the species, Dr. Edis lamented that "of all medical studies that have been objects of scientific research or of practical inquiry, none has met with a more chilling indifference, none has been treated with more unmerited contempt, than midwifery."

Two circumstances had contributed more than any other to depreciate the study of midwifery. One was the imagined facility with which it might be practised, and the other the want of any distinct obstetric board or centre of education.

In the College of Surgeons the spirit of Sir Anthony Carlisle still seemed to rule, who said that the midwifery of the country might be undertaken by the wives of the general practitioners. The Council not only ignored the subject *in toto*, but made the practice of it a disqualification for its honours, although the diploma granted by them confers the right to practise every branch of the profession. The College of Physicians alone had had the grace to accord an honourable place to obstetrics, and was doing the further public service of correcting, to a certain extent, the evil wrought by the College of Surgeons.

The triumph of modern surgery being its conservatism, that of medicine its preventive aspect, the aim of the practitioner should be to place midwifery on a corresponding footing.

Dr. Edis then considered the question of preventive midwifery. It could not be doubted that many valuable lives might be saved and much suffering averted if midwifery only received the attention it deserved at the hands of the Medical Council as well as of the medical student. During the year 1876 no less than 4142 mothers died from the accidents and diseases incidental to childbirth, besides 1034 who died from various diseases after child-bearing.

A few of the conditions likely to be anticipated, if only the medical attendant were allowed to exercise supervision over the pregnant woman, were then briefly sketched out—such as retroversion of the gravid uterus, miscarriages, extra-uterine gestation, placenta prævia, induction of labour in place of Cæsarian section, eclampsia, external manipulation for the detection of transverse presentations and twin pregnancy, the avoidance of powerless labour, and the diminution of the number of still-born children, the lessening of cases of puerperal fever, the early detection of puerperal mania, and other similar conditions.

The question of Government caring nothing for the education and registration of midwives—although some 687,000 of the poorer classes were annually dependent for help in their time of trial upon this (too often) ignorant, drunken, and incapable class, the self-dubbed midwife, a number of whom are a scandal and a reproach to any civilised community—was briefly discussed.

The scant opportunities the student possessed of studying diseases of women were then alluded to: only 155 beds, out of a total of 4280 in our eleven metropolitan hospitals, were available for diseases of women—a proportion of one bed for every 12,000 of the female population of London.

The large amount of infant mortality—146 in the 1000 of children under one year of age, making a total of 130,000 annually—was commented on, and the importance of studying children's diseases insisted on. A few words of advice and exhortation to the students generally concluded the address.

Few could look back without some regrets when they considered there was so much to do, so little done; and even after a lifetime devoted to the study of medicine, they would be forced, reluctantly it might be, to admit, with the Persian philosopher, that the little they knew was nothing; what they did not know was immense. Let it not be one of their vain regrets in the days to come—

> "Oh! if in after-life we could but gather
> The very refuse of our youthful hours."

A RARE NEUROSIS OF THE EXTREMITIES.—In the *American Journal of Med. Sciences*, July 7, Dr. Weir Mitchell has published an interesting article, for which our want of space prevents our doing more than draw attention to it. It is entitled "On a Rare Vaso-motor Neurosis of the Extremities, and on the Maladies with which it may be confounded." It relates to a very painful burning affection which attacks certain limited regions of the foot and sometimes the hand, after the occurrence of constitutional disease, as low fever, or after prolonged physical exertion. It is attended with flushing of the part, and is very intractable. Dr. Mitchell believes that the affection belongs to an unrecognised type of spinal or cerebro-spinal disorder. It is almost confined to the male sex. Cases are related, and others quoted, of affections more or less resembling this one.

ORIGINAL LECTURES.

LECTURES ON SYPHILIS OF THE LARYNX.

DELIVERED AT THE HOSPITAL FOR DISEASES OF THE THROAT AND CHEST, LONDON.

By W. MACNEILL WHISTLER, M.D., M.R.C.P.,
Physician to the Hospital; Honorary Physician to the National Training School for Music, etc.

Lecture I.

THE EARLY MANIFESTATIONS OF SYPHILIS IN THE LARYNX.

(*Concluded from page* 374.)

I will now read to you the clinical histories of a few cases which have come under my care here. These will illustrate these various types of laryngeal mucous patches, and point out to you the ordinary course of these affections, together with the treatment adopted.

Case 1.—Opalescent mucous patches of the epiglottis, appearing six months and a half after infection. J. B., aged twenty-nine, a clerk, applied at this clinique, October 31, 1874, for sore throat and hoarseness. He contracted a chancre six months previously, followed some time afterwards by eruptions about the body, on the trunk and legs, and a sore throat. When he came to me the eruption was gone, but there were a few stains remaining about the legs. His palate and fauces were covered with mucous patches. These were oval, slightly raised above the surface, of a dull grey colour. The mucous membrane of the fauces was dusky red. On examining the larynx, I found increased redness of the epiglottis and of the arytænoids. The redness was more intense in some parts than in others, and tortuous vessels were seen running over the surface. The vocal cords were a little dull and pinkish, and their approximation was defective. This condition did not differ from one of ordinary catarrh of the larynx. He was put upon a mercurial treatment. Nearly a month afterwards (November 25) his voice was more husky and he complained of a slight cough. The laryngoscopic appearances were now quite different. The epiglottis was swollen, its edges were rounded instead of being sharp and crisp. Its surfaces, both upper and under, were deep red, and the redness was diffuse. No small vessels were seen on it. On the upper surface, quite near to the free edge, were three mucous patches, two on the right side and one in the centre. Each of these was oval, about the size of a large pin's head, slightly raised, opalescent-looking, covered with secretion, which, when brushed off, left a bleeding surface; in fact, they were the image in miniature of those in the pharynx. The mercurial treatment was kept up, with occasional intermissions when the gums were tender. The patches on the epiglottis were touched with a solution of nitrate of silver. They did not disappear until January 15—viz., after nearly eight weeks' treatment. The peculiar redness and swelling of the epiglottis persisted, and it was not until April (three months later) that it resumed its normal appearance. There were constant crops of mucous patches of the tongue and fauces during all this time, but there never was any return of them in the larynx.

Case 2.—The following case was shown to me by my colleague Dr. Semple :—E. S., aged twenty-four, a servant-girl, came to his clinique on account of soreness of the throat and deafness of eleven weeks' duration. The morbid signs in the pharynx were diffuse dusky erythema and œdema of the soft palate and fauces. This surface was covered with opalescent mucous patches. The history that she gave was as follows :—She had been ill for a year. During this time she had constant eruptions on the vulva and its vicinity, together with rashes on the skin and a sore throat. She knew nothing of the primary lesion. The laryngoscopic appearances were these—swelling and diffuse deep redness of the epiglottis. There were three papules on its upper surface and free edge, oval, grey, and covered with secretion. Her voice was unaffected.

Case 3.—*Mucous erosion* of the vocal cord and *mucous papule* of the ventricular band. J. F., aged twenty-five, a painter, applied November 20, 1875. Three months before this he had had a chancre. For two months he had been suffering with a sore throat, sores in the mouth, and spots on the skin. When he came to me he complained of some pain in swallowing, but not enough to cause him much inconvenience. He sought relief on account of his voice, which was very much affected. He had been very hoarse for some weeks; he had no cough. On examining his mouth and throat I found mucous patches on the tip of the tongue and on the tonsils. The right tonsil was very much swollen. The laryngoscopic appearances were these : uniform deep redness of the epiglottis and ventricular bands; the vocal cords were reddish-white : on the right cord there was a small erosion, having the following character—a network of small vessels forming a bright red zone close to the vocal process, and in the centre of this a slightly raised, flat, grey, ulcerated spot; there was another mucous patch at the posterior part of the left ventricular band just above the cord, which was more raised, grey in colour, with no surrounding red zone. He had at the same time a squamous eruption on the chin, neck, and body, slight alopecia, and headache. The posterior cervical glands were enlarged. Mercury was administered internally, and nitrate of silver applied to the patches in the pharynx and larynx. The right tonsil was removed. The mercurial treatment was kept up until January 1, with weekly applications of the nitrate of silver. At this date—that is, after six weeks' treatment—the mucous patches of the larynx were healed, and there remained only a slight redness of the vocal cords. There were still some patches on the sides of the tongue and on the tonsils. The squamous syphilide was gone. His headaches were cured and his voice was fairly good. The mercury was kept up for another fortnight, and then discontinued on account of slight ptyalism. Zinc sprays to his larynx were added to the treatment. The mercury was renewed again in the early part of February, and continued till the middle of March, when he was discharged cured of all lesions. He remained under treatment four months.

Case 4.—Annie J., aged twenty-six, a labourer's wife, applied September 18, 1875. The primary sore passed unnoticed. She had been ill for five months. She had suffered much with headache and night-sweats, and had been losing her hair. She was very weak, and for six weeks her throat had been sore. She had also had a rash on her skin. At this visit she complained of pain in swallowing. Her voice was very husky. On looking at her throat I found mucous patches of the soft palate and tonsils. The laryngoscope showed increased redness of the vocal cords, with a mucous patch at the anterior third of the right one. This was about the size of a small canary-seed, oval, slightly raised, greyish-red, with a denuded surface. She was put upon a mercurial treatment, but the case was lost sight of after a fortnight.

Case 5.—*Hypertrophic or papillary mucous patch* on the front of the left arytænoid in the earliest stage of the disease. J. B., a servant-girl, aged twenty-three, applied February 17, 1875. She said she had never noticed any chancre, and did not know when she contracted the disease. She had had a sore throat for one month. She complained of headaches. Her hair was falling, and she suffered much from night-sweats. She had a squamous eruption on the neck, chin, papular and papulo-squamous syphilides on the neck, chest, and back. There were the remains of a roseola on the sides, and papular syphilides covering the thighs and legs, and mucous patches of the vulva. There was indolent enlargement of the inguinal glands, and also of the posterior cervical chain. She had mucous patches on the lips and on the right tonsil. The laryngoscope showed the following condition :—A general slight dusky redness of the whole larynx, excepting the vocal cords, which were quite white. This redness was not diffuse. It was especially marked on the epiglottis, on the ventricular bands, and over the arytænoids. There was swelling of the ventricular bands and of the arytænoids, especially the right one. At this examination the appearances in the larynx did not differ from those of an ordinary catarrh. If I had never seen this case again I might have added it to the list of those where, the patient being covered, as it were, from head to foot with eruptions, the larynx presented no specific lesion to account for a husky voice. A week afterwards she came again, and then I found one small papillary mucous patch on the front of the left arytænoid—a true mucous papule. It was raised to the extent of about a line and a half above the surface. It was round in form, and surmounted by a grey superficial ulcerated surface. A mercurial treatment was instituted, and nitrate of silver

applied locally. The girl ceased to attend almost immediately afterwards.

The following case is another illustration of the same type of mucous patch:—

Case 6.—Mucous papule on the inter-arytænoid fold five months after infection. J. L., aged twenty-three, a porter, applied to me here on April 28, 1877, on account of pain in swallowing of two months' standing. He said he had contracted a chancre three months previously, and one month after that he had an eruption on the skin. On looking at his throat, I found mucous patches of the soft palate and fauces. The larynx was not affected. The eruption on the skin was gone. Blue pill was ordered for him in small doses three times daily. Soon after this I lost sight of this case until May 16 (nearly three weeks), during which time he had been taking iodide of potassium in twelve-grain doses three times daily. I now found him much worse. He was in more pain, and very hoarse; and on looking at his larynx I found deep redness of the vocal cords. The blue pill was renewed, and after ten days it was changed for liquor hydrarg. perch. a drachm and a half three times daily. The mucous patches of the pharynx were touched twice a week with dilute acid nitrate of mercury, one part in ten. By June 6 the pharyngeal lesions were fading, but the laryngitis persisted. At this date—five months after infection, and after nearly six weeks' treatment—I found a mucous papule on the right side of the inter-arytænoid fold on its anterior surface. This was almost the counterpart of the one in the case I have just read—a grey, distinctly raised, round papule, with a secreting surface. Mercurial frictions were substituted for the perchloride of mercury. At the end of a week his gums were tender, and the frictions were discontinued, to be renewed again on the 20th. At the end of the month the laryngeal mucous patch had disappeared, and he was much relieved in every way. The treatment was continued a short time longer, and then he ceased to attend. This case was under treatment for two months. There are a few noteworthy points in it—the development of the laryngeal affection during the treatment; the inefficacy of iodide of potassium, even in large doses, at this stage, compared with the rapid amendment under treatment by mercurial inunctions.

The next two cases illustrate the form taken by opalescent mucous patches when situated upon the posterior surface of the arytænoids.

Case 7.—M. D., aged forty-two, a carman, came to see me here on February 23, 1875, for a slight sore throat. His tonsils were covered with mucous patches, and there was dusky erythema of the fauces. He said he had never noticed any chancre, but that six weeks previously he had had night-sweats and an eruption on the trunk and upper extremities, for which he was treated by mercury at the Hospital for Diseases of the Skin, Blackfriars; and he said that he "took pills until his gums were sore." All that I found remaining of the eruption was a slight staining of the trunk and arms. The inguinal and posterior cervical glands were enlarged. The larynx was not affected. The treatment prescribed for him was blue pill in small and repeated doses. After a fortnight's treatment, on March 8 I examined his larynx, and found increased redness over the arytænoids and inter-arytænoid fold, and an opalescent mucous patch on the posterior surface of each arytænoid. These were very slightly raised, broad, covering the base of the arytænoids, and extending outwards over the ary-epiglottic folds on each side. Their colour was dull grey, and their arrangement was symmetrical. The patient had no pain in the larynx nor cough. The pills were continued, and a solution of sulphate of copper was applied to the larynx twice a week. The laryngeal and pharyngeal mucous patches were very persistent; after five weeks' treatment they were fading. Then he caught cold, and had an acute laryngeal attack, with œdema of the arytænoids. His larynx was acutely inflamed, and he was in much pain and very hoarse. Vapour of benzoin was added to the treatment, and the acute symptoms subsided in a week. From this time he improved rapidly, and after undergoing one more month's treatment he was discharged cured.

The next case of this kind, which is still under treatment, I will show you this evening. In this the laryngeal symptoms commenced ten months after the date of the chancre.

Case 8.—Wm. G., aged twenty-five, a porter, applied here on May 4 last with the following symptoms:—Hoarseness to a very marked degree, and a slight sore throat. He said that in June, 1877, eleven months before the date of his presenting himself here, he had three chancres on the prepuce and glans penis, which were treated by topical remedies, and for which he also took medicine. These were followed, according to his statement, by no eruptions. In January last, six months after the chancres, he began to have a sore throat, from which he had been suffering nearly ever since, and for which he had been undergoing treatment. His hoarseness had existed for one month when he came to me. His actual condition when I examined him was as follows:—He had mucous patches on the anterior pillar of the fauces, on the right side. No eruptions on the skin. The inguinal glands were somewhat enlarged. He was thin and pale. The laryngoscopic appearances were as follows:—There was deep diffuse redness of the whole mucous membrane. The vocal cords were swollen, especially the left one. They were deep red and excoriated, and their surface was covered with elongated, raised, grey papules. These were arranged in lines, and from this disposition the vocal cords had a mottled look. Their free edges were fringed with similar patches. These were very prominent on the left cord at the anterior commissure, and materially interfered with the approximation of the cords in phonation, so that during this act there was a wide gap left between them. The arytænoids were deep red and swollen, and on the posterior surface of each one there were symmetrical, broad, grey patches. Mercurial inunctions were ordered for him, and topical applications to the larynx of a solution of nitrate of silver; one drachm of the salt to an ounce of water. Under this treatment he has got very much better. The larynx, though still congested, is paler. When you examine him you will see that there is still some swelling of the arytænoids, especially on the right side, but the mucous patches that were on them have disappeared. There is a swollen prominent mucous papule at the posterior part of the right cord, opposite to the vocal process. This is deep red, with uneven edges, a flattened summit, and an excoriated secreting surface. This is the only papule remaining upon the vocal cords. His voice is clearer; he has no pain. Having no other history to aid us than the ulcers on the genital organs, followed by a sore throat six months afterwards, the diagnosis in this case was based upon the unmistakable character of the pharnygeal mucous patches, and the similarity of the lesions in the larynx. If any verification of this were needed, we have it in the improvement under mercurial frictions in a very short space of time. As an interesting point to which I have referred this evening, I would call your attention to the comparatively slight subjective symptoms compared with the actual pathological condition of the larynx. Here there was intense congestion of the whole mucous membrane, deep redness and swelling, with an eruption on the vocal cords and on the arytænoids. Yet all that the man complained of was roughness of voice, and a sense of heat in the windpipe.

Case 9.—Another case which I will show you this evening is that of W. B., a labourer, aged twenty-seven, who applied to me at this hospital on September 22, 1877, suffering from a sore throat and extreme hoarseness. He said that he had had a chancre two years before. He was not aware of having had any other since that time. He had never noticed any general manifestations of syphilis until two months previous to his coming here, about one year and ten months after contracting the chancre spoken of by him. It is more than probable that he had had a second chancre which had escaped his notice, and that the date of infection was at a much later period than that mentioned by him. Be this as it may, he first noticed eruptions on his skin, about the same time a sore throat, and very soon after these he was troubled with a cough and loss of voice. His actual condition on presenting himself at the clinique was as follows. He had a papular syphilide on the chest and back, and mucous patches of the pharynx. These were very symmetrically arranged, covering the velum, the tonsils, and the uvula. The mucous membrane upon which they were studded was of a dusky redness. The sides of his tongue were covered with them as well, and (what is rather rare to find) there were a good many over the base of the tongue as far back as the glosso-epiglottic folds. The laryngoscope showed diffuse redness of the laryngeal mucous membrane. There was swelling and a fleshy look of the epiglottis, and redness of the left

vocal cord, which was spotted with small erosions. A mercurial treatment was instituted, and a solution of nitrate of silver applied to the patches. The lesions were very persistent, and did not yield until after four months' continued treatment. In this interval the inflammation of the larynx extended; mucous patches formed on the epiglottis, and the left vocal cord became thickened and ulcerated. The chief symptoms were tenderness over the thyroid, deep-seated pain in the throat, and a troublesome cough. After January he improved steadily, and by March he was very much relieved. Then he had another severe relapse. Mercurial frictions were substituted for blue pill, which he had been taking, and he rapidly improved. The frictions were commenced on March 13, together with inhalations of vapour of benzoin. By the 30th, in a little more than a fortnight, the mucous patches on the epiglottis were gone. There remained still some swelling and deep redness of the vocal cords, with erosion of the left one. From this date he has been improving, and though he has had relapses, at various times, of mucous patches of the tongue, there has been no return of them in the larynx. You will find, this evening, congestion of the epiglottis and ventricular bands, with some thickening of the vocal cords and roughness of their surfaces. This is most marked at their posterior part.

With the description of these cases I will now conclude this evening's lecture, as I fear I have already trespassed very long upon your patience. I must plead, as my excuse for entering upon detailed descriptions, the importance of these early indications of laryngeal syphilis. Though comparatively trivial in their symptoms, they may, if unrecognised and neglected, be the forerunners of grave disturbance, eventuating in serious alterations of structure, leading not only to permanent impairment of voice, but also to painful and dangerous interference with respiration.

These later manifestations of syphilis in the larynx will be the subjects of my next lectures.

ORIGINAL COMMUNICATIONS.

THE STRUCTURE AND FUNCTIONS OF THE NERVOUS SYSTEM.

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THE ENCEPHALON.

(*Continued from page* 348.)

The principal anatomical changes of tubercular meningitis usually take place within the area of distribution of the Sylvian artery; and in this disease also unilateral convulsions are much more frequent than general convulsions. The convulsion is usually confined to one limb, or to the side of the face, and either temporary or permanent paralysis always occurs after the convulsion. If the paralysis is permanent, no matter what may be the nature of the lesion which has caused it, it may be presumed that the structure of the cortex at the part affected is permanently destroyed; while if it is only temporary, the loss of functional activity is, as a rule, merely an expression of exhaustion after the excess of activity indicated by the convulsion.

Fig. 8.

The monoplegias caused by a destroying lesion of one of the motor centres are always accompanied by late muscular rigidity, giving rise to various deformities. Fig. 8 is a representation of a contracted hand from a girl aged ten years, who is suffering from unilateral convulsions. The contracted hand simply shows that the pyramidal fibres which connect the part of the cord which presides over the movements of the hand and the cortex of the opposite hemisphere are interrupted somewhere in their course; and that the portions of the fibres which are below the point of interruption have undergone descending sclerosis. But the facts that the original injury which caused the monoplegia was attended with strong convulsions, and that partial epilepsy has since become established, show that the seat of the lesion was in the cortex—in all probability in the area of distribution of the posterior twig of the ascending frontal branch of the left Sylvian artery.

Lesions of the cortex, however, give rise to general epileptic convulsions with loss of consciousness. And when the affection is situated in the motor area the attack is preceded by an *aura*. The aura may consist of muscular tremor or twitching, or tonic spasm. The extremities are affected most frequently, then the muscles of the face, the orbicularis palpebrarum and other muscles. Sometimes the seizure is ushered in by paresis or even complete paralysis of an extremity; but these cases are rare. The epileptic attack may be preceded by a sensory aura—as a disagreeable smell, flashes of light, and various sounds and voices—and one feels inclined to believe at first that in these cases the lesion is situated in the posterior or sensory area of the cortex; but the balance of the evidence is opposed to this idea, since lesions of this area, so far as at present known, do not cause epileptic convulsions. Epileptic convulsions, however, are caused by lesions of the anterior cortical area, and the attacks are then characterised by early loss of consciousness, and by the absence of an aura; and in some cases the attack may consist of temporary loss of consciousness without convulsions. Syphilitic tumours are not unusual in the anterior cortical region, and they are always attended with considerable psychical disturbance, succeeded by a somnolent condition ending in coma.

The most noticeable features of the structure of the cortex may be briefly described. The most commonly distributed form of structure is what Meynert has called the "five-laminated type" of the cortex. The external layer consists mainly of neuroglia and a layer of delicate nerve-tubes, along with a few scattered nerve-cells which are small and without any distinct processes. On comparing the next three layers with one another the most prominent characteristics are that the cells increase progressively in size from without inwards, so that the cells of the fourth are four times the size of the second layer; and while the cells of the second layer are possessed of few processes without definite connexions, the processes become more numerous in the cells of the internal layers, until the cells of the fourth layer present numerous processes with very definite connexions. If there is any truth in the principles already enunciated, the external layers with small cells, having few processes and indefinite connexions, will be found to be in relation with the centripetal fibres; while the internal layer with large cells, having numerous processes and definite connexions, will be found in relation with the centrifugal fibres. In the crests of the fundamental convolutions, bundles of fibres may be seen to proceed from the medullary substance of the hemisphere, to pass between the cells of the internal layers of the cortex, and, after running outwards parallel to one another, these fibres are lost amongst the cells of the second layer, but no definite connexions have been traced between the fibres and the cells. This mode of termination reminds one of the fibres of the sensory nerves in the posterior columns of the cord; and it may be presumed that these cortical bundles represent the terminations of the centripetal fibres, and probably also of the intercentral fibres which connect certain points of the one with corresponding points in the other hemisphere. It may be noticed in passing that neither the part of the cortex which folds to form the sulci, nor the accessory convolutions, receive any of these fibres.

The relationship which theoretical considerations would lead us to expect to find between the large-branched cells of the fourth layer and centrifugal fibres, leads us to speak of one of the most interesting features of the structure of the cortex, and to which our attention has recently been drawn by the observations of Betz and Mezierjewski. In the posterior area of the cortex the cells of the fourth layer are pyramidal in form, just as they are in the other areas, with their bases turned inwards towards the medullary substance;

but their basal processes are directed laterally so as to connect adjacent cells, and none of the processes appear to be directed inwards to connect the cells with any of the fibres of the medullary substance. In the anterior area the disposition of these cells is somewhat similar, but a distinct basal process has been observed which is directed towards the medullary substance of the convolution, and which afterwards becomes surrounded by a medulla, and continuous with one of the fibres of the white substance. But, in the convolutions of the middle area, Betz has observed cells which are two or three times the size of the larger pyramidal cells of the other areas, and he has consequently

Fig. 9.

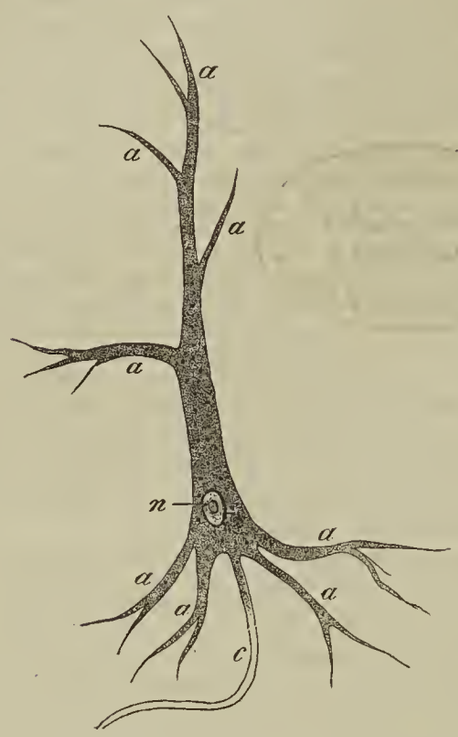

Fig. 9.—Pyramidal Giant-Cell. *n*, nucleus. *a*, *a*, *a*, branched processes. *c*, unbranched basal process.

called them *giant-cells*. Each of these giant-cells possesses a distinct process which is directed inwards, and is continuous with the axis-cylinder of one of the fibres of the white substance. It is unnecessary to give a minute description of these cells; it will suffice to say that they are in every respect analogous to the motor cells of the anterior horns of the cord. The giant-cells are not uniformly distributed even to the convolutions of the central area, but are disposed in groups. These groups were found by Betz in the dog, in the convolutions surrounding the sulcus of Rolando, and corresponded with the motor centres of Fritsch and Hitzig. There can be little doubt, therefore, that the pyramidal fibres of the cord terminate in these cells, or, to speak more correctly, take their origin in them. And the reason that the application of a faradic current of medium intensity to one of these points is followed by various muscular contractions, is that the current is conducted through the cortex to the ends of the pyramidal fibres; and when these are stimulated, the impression is conveyed to the motor cells of the cord, and muscular contraction ensues just as readily and directly as stimulation of an afferent nerve causes reflex action. There is no reason to believe, therefore, that the so-called motor centres are more excitable to galvanism than any other part of the cortex; in short, these points are not motor centres at all, but mere outlets of centrifugal or motor currents.

If now it be true that the centrifugal fibres take origin from the basal processes of the large pyramidal cells, and that the centripetal fibres terminate amongst the small cells of the first and second layers of the cortex without forming any definite connexion with them, we may expect to find that the centripetal will pass in a much more diffused manner through the cortex than the centrifugal currents, just as it is found that the afferent pass in a more diffused manner than the efferent currents through the grey matter of the cord. Hence it need not be expected that the sensory inlets can be localised so definitely in the cortex as the motor outlets. Dr. Ferrier's experiments appear to prove the contrary; but with all my admiration for the ingenuity of this experimenter, I cannot accept his interpretation of the facts. The muscular contractions which followed the application of the faradic current to the angular gyrus and the superior temporo-sphenoidal convolution indicate that these convolutions contain motor outlets which are in close connexion with the centripetal impressions received through the optic and acoustic nerves; but they do not show that the convolutions are centres of vision and of hearing. And I would adduce Goltz's experiments on dogs as the reply to Ferrier's inferences from the results obtained by destruction of these convolutions. But the strongest objection, to my mind, against Ferrier's views arises from the fact that while the results of the experimental investigation of the middle or motor area of the cortex have received the amplest verification from pathological observation, in no instance that I know of has the idea of localised sensory centres been confirmed by the phenomena of disease. As we have already seen, the posterior third of the internal capsule consists of a bundle of fibres which, on being interrupted, causes hemianæsthesia of the opposite side of the body; while the middle third consists of a bundle of fibres which, on being interrupted, causes hemiplegia of the opposite side of the body. But neither the sensory nor the motor paralysis of the opposite side of the body is complete. The muscles which are bilaterally associated in their action, as those of the trunk, may be slightly weakened on the opposite side, but by no means paralysed. When the sensory tract is interrupted, all forms of sensibility are affected; but the special senses, whose functions are fused into one sensation, as the senses of vision and hearing, are connected with both hemispheres, so that these are not entirely suppressed, but only weakened, on the opposite side. In the case of vision, therefore, interruption of the posterior fibres of the internal capsule will give rise to crossed amblyopia, and not to complete blindness of the opposite side. But as the motor tract ascends towards the cortex it separates into distinct bundles, which are distributed to various points in the convolutions of the middle area. The bundle of fibres which proceeds to each of these points co-ordinates the muscular movements of distinct groups of muscles, so that when this part of the cortex becomes the subject of a localised disease it causes either convulsions or paralysis of localised groups of muscles. But this is not all. A localised lesion in the white substance may also interrupt the course of these separate bundles of fibres, and thus give rise either to partial convulsions or to monoplegia. Is there a similar differentiation of the centripetal fibres in their course from the posterior part of the internal capsule to their termination in the convolutions of the posterior area? The evidence obtained from the records of disease is entirely opposed to such a supposition. Limited lesions of every description have been observed in the cortex and white substance of the occipital and temporo-sphenoidal lobes; but these have never been found associated with localised lesions of any form of sensibility. It may therefore be fairly inferred that the posterior fibres do not separate into distinct bundles to terminate in physiologically and anatomically isolated centres; and if we subsequently find it convenient to speak of "sensory centres," the phrase must be understood only to imply a diffused and indefinite localisation.

Four only out of the five layers of the cortex have been considered, and we must now glance for a few moments at some of the peculiarities of the fifth layer. The cells of this layer are of medium size, spindle-shaped, and, for the most part, bipolar. Their long diameters run parallel to the layers of the cortex, and they are associated with the system of fibres which connects different convolutions of the same hemisphere with one another, and which therefore may be called the *intra-hemispherical* system of fibres. The fibres of this system are also called the *longitudinal* or *collateral* fibres. To this system belong the looped fibres which connect the fundamental with the accessory convolutions, and the great axial commissure which connects the occipital and temporo-sphenoidal with the frontal and parietal lobes. The latter system of fibres passes from behind forwards between the cortex of the island of Reil and the lenticular nucleus, and cuts off the internal layer of fusiform cells from the other layers of the cortex. The fusiform cells also become more abundant at this point, constituting the lamina of grey substance called the *claustrum*, which is situated to the

outside of the external capsule of the lenticular nucleus, and which is separated from the grey matter of the cortex of the island by the fibres of the great axial commissure. The amygdaloid nucleus, which is a small round mass of grey matter connected with the inferior part of the claustrum, and which lies in front of the anterior extremity of the descending horn of the lateral ventricle, is composed of fusiform cells, and also belongs to the intra-hemispherical system of fibres. The fibres of the gyrus fornicatus and the uncinate fasciculus also belong to the intra-hemispherical system, but their course need not be accurately described here. The fibres of the corpus callosum and those of the anterior commissure form an *inter-hemispherical* system, which are also called transverse commissural fibres. This system consists of commissural fibres between corresponding and identical regions of the opposite sides of the cortex. These commissural fibres join the bundles of ascending fibres, and pass along with them to the crests of the fundamental convolutions, so that by their means these convolutions are bilaterally associated.

These, then, are the leading traits of the structure of the brain, and of its functions also, considered objectively; but the functions of the brain have a subjective aspect which has hitherto been only tacitly referred to, but which must now be more explicitly considered. The functions of the brain, subjectively considered, embrace all mental states and operations. Excitation of the cells and fibres of the cortex appears to be the physical correlative of all psychical activity; and in order to connect definite processes in the former with certain states of consciousness, it is necessary to possess a classification of mental phenomena. "It would be the greatest benefit to mental science," says Max Müller, "if all such words as perception, intuition, remembering, ideas, conception, thought, cognition, senses, mind, intellect, reason, soul, spirit, etc., could for a time be struck out of our philosophical dictionaries, and not be admitted again till they had undergone a thorough purification." This passage expresses a state of mind which has been felt by almost everyone who has seriously engaged in psychological study; and Mr. Herbert Spencer, whose great works have formed an era in philosophy and psychology, has, with his usual breadth of treatment, adopted a classification which does in a great measure avoid the use of these words, except indeed where the use of them admits of accurate definition. We shall avail ourselves of this classification in our future remarks.

(To be continued.)

HARVEY AND THE SPANISH ANATOMISTS.

By GEORGE GASKOIN,

Knight Commander of the Royal Order of Isabela la Catolica; Surgeon to the British Hospital for Diseases of the Skin.

In the early part of the seventeenth century, subsequent to the publication by Harvey of the well-known treatises on the circulation of the blood (that is to say, dating from the year 1628), there arose contestations on the subject in every country in Europe—in Spain, as elsewhere; but these seem to have turned on physiological views and structural data; and in the course of these debates, as led by his convictions, his rivalries, or his interests, each disputant took his side. No voice was heard in those early days, or none that rose clear and strong, to assert a priority of discovery.

If we revert to the middle of the past century, in the works of Father Feyjoo we may find something said upon the subject. The learned father was then no less esteemed in natural science, at least among the laity, than was Cervantes in literature, though, being a physician but by courtesy, his last word was not authoritative with the medical profession. In an early work the gifted Benedictine expressed himself in favour of Francisco la Reyna, the farrier of Zamora, as being the first discoverer and exponent of the systemic circulation. In a subsequent publication, however, he retracts this opinion, and it is now Cæsalpinus on whom he bestows the palm.

It is clear, however, that the question had not been fathomed in all its depths; only, indeed, during the last forty years, or a little more, has it been boldly brought under discussion. One has to state, however, that previously to this there was no formally written history of medicine in Spain; no collection of texts from which to found a creed upon the subject. It was indeed with the work of Hernandez Morejon(a) that it was first brought into prominence, a noble monument of native medical literature, though not without a strong national flavour and tone. In this the inspiration of La Reyna is authenticated, and everything else approved which is any way favourable to the conviction that Harvey's pretensions are unsound. The evidence is clearly *ex parte*, but it must be admitted to be strong, and one-half of what is said by Morejon might well claim a laboured reply. It may be asserted, however, that this thoroughness or one-sidedness on the part of the author has rendered his pages somewhat less attractive and his argument rather confused, a fault which is corrected in the pages of Chinchilla,(b) who, writing at a date but little subsequent to the other, has treated the matter with more delicacy and discernment, and yet not abating one jot from the ground that Morejon(c) had taken up. The same view is supported by Sámano, and I believe by the profession generally. There may be, indeed, some few refined spirits in Spain, well conversant with the merits of Harvey, who take a more just measure of the subject; but I fear greatly that the idea which is generally entertained of him in the Peninsula is very much such as was expressed by our Prime Minister for the time being, when he condescended to speak of a defunct predecessor as a "vast appropriation clause." "No Spaniard," says Morejon, "can hear of the pretensions of Harvey without 'sardonic laughter.'" Under a more charitable point of view, they see in him an adapter or "conveyer," very much like Le Sage, who took his "Gil Blas" and "Guzman d'Alfaranche" from Spain, and by a process of cleansing and embellishment gave them vogue in France and Europe. This intensity of feeling on the part of the Spaniards may come in part from the extreme lack of sympathy with which they have been treated both as to the present and their past in medicine—a neglect in its degree unhandsome and unreasonable, the causes of which are to be sought for outside of science. Thus cramped in a narrow circle, they are prone to repay injustice with injustice, distaste perchance by distaste. Thus prejudice responds to prejudice. They no longer aim at recognition, they hug themselves in fixed persuasions. It is thus we must account for a vein of exaggeration, not foreign perhaps to the native character, nor yet so alien to human nature but that we have frequent examples of it at home.

The question on the part of Spain takes very much this shape: Do any Spanish writers describe the general circulation as well as the pulmonary—that is, before the time of Harvey? Was it an opinion acceptable to physicians and entertained by them, or at least by a portion of them? Was the idea of the circular motion of the blood commonly entertained among the people and familiar to their understandings, spoken of from the pulpit, used in the market-place and in common discourse? Was it or not formally taught? And where is the contrary doctrine formally taught and enunciated, or doctrines incompatible with it?

If it be asserted that one part of an author's writings contradicts another, and that among the Spaniards there is no one of them in whom you will not find some loophole for criticism—not one of them all of a piece and perfect—and that however collectively they may be equal, nay, superior to Harvey, individually he outweighs them: to this it may be replied, that even Harvey is certainly not without error and defects, and that coming so very late in the day, and benefiting by the progress of the age, there should not be found in him a cause why the merits of preceding anatomists should be buried in oblivion. With all this it appears to me that Harvey has destroyed sophisms which none of the Spaniards have touched. In any desire I may cherish to cast a light upon the subject, I confess I cannot embrace the ideas nor follow the method of the Spaniards. My manner of dealing with it must be my own, and in doing so I shall endeavour to be as little discordant as possible with the spirit of the hour, and, while I endeavour to interest, shall use such brevity as the case allows.

I will begin, then, by quoting an author who lived in the last half of the sixteenth century. Juan Calvo, of Valencia, a well-known surgeon and anatomist, translator of the

(a) Hernandez Morejon, "Historia Bibliografica de la Medicina Española." Madrid, 1842-50.

(b) Chinchilla, "Añales de la Medicina Española." Valencia, A.D. 1841-46.

(c) Mariano Gonzalez de Sámano, "Compendio Historico de la Medicina Española." Barcelona, 1850.

works of Guy de Chauliac into Spanish, author of other works, and holding a chair of anatomy in that city for many years. He is here treating of the vital faculty.

"The proper action of this faculty," he says, "is to engender the arterial blood. This arterial blood is made out of the venous blood which, through the vena cava, finds its entrance to the heart. The left ventricle is where the operation takes place, though, sooth to say, even in the right ventricle the preparation for it is already commenced; and so from this point it goes on changing little by little from venous to arterial. Between the venous and arterial blood there is a notable difference. The venous blood is somewhat coarse and black, as carrying with it other humours that are gross; the arterial is finer, thinner, and also of a much higher colour. And we call it arterial because through the arteries it goes from the heart to all and every part of the body, just as the venous returns by the veins (*porque va desde el corazon a todas partes del cuerpo por las arterias asì como la venal vuelve por las venas*)—all which is highly necessary in order for the restoration of the substance of the natural heat which every moment we live serves to expend."

The Spaniards do not give this passage the prominence I have bestowed on it here, relying on other evidence as sufficient. I take it from the text of Chinchilla.(d) His predecessor, Morejon, does not mention it at all. It will be observed that in the text a reason is given for the return of the blood to the heart, which was held to be the fountain of vital or animal heat.

In a following page he is more particular as to the pulmonary circulation, but also less happy, inferior somewhat to Columbus and Arantius; and yet we remark progress, perchance a compromise, certainly not a rest in old barren notions and ideas.

"The vital spirit," he says, "is engendered *principally* in the left side of the heart. The efficient cause is the proper temperament of the heart; the material cause is the external air that we breathe; for this, descending by the trachea, reaches to the lungs; and the heart in dilating attracts it through the pulmonary vein (venous artery), and here the air, *having been already prepared in the lungs*, is once again altered by the concocting virtue of the heart, and it is thus the vital spirit is engendered, after which, conjointly with the arterial blood, it is expedited by means of the heart to every part of the body."

The Harveian notion that the cavities of the heart receive as a bag, and not an empty bellows, is here not upheld. The Spaniards generally believed that the heart and vessels attract in dilating, and in doing so draw the blood on; a conception which rather helps than discountenances the idea of an onward current. The description of the blood being altered or prepared in the lungs occurs in earlier writers than Calvo. Of course there was an inadequate idea of chemical change and combination which could not but lead to much bad reasoning and hesitating conclusions. As to the vital spirit, they had already found that it partook of the nature of fire, it was indeed as nearly as possible an equivalent for oxygen, or an excellent substitute for it.

These passages are taken from the work of Calvo (*primera y segunda parte de la "Cirurgia Universal y Particular"*), first and second part of Surgery. The first edition was published in Seville, A.D. 1580, and was followed by some half-dozen other editions, a demand for the book continuing up to the beginning of the eighteenth century. The above extracts are made from the second edition, Barcelona, A.D. 1591, and collated with the third, as found in the pages of Chinchilla, vol. ii., art. "Juan Calvo."

Returning to the subject of the general circulation. It is not laid down anywhere as a syllogism or clear proposition. Its importance is nowhere vindicated; but, nevertheless, there are many shades of thought and expression that betray it. It must not be forgotten that Galen's account of the continuous circulation from arteries into veins is such as, taken alone, would have given him a good title to be considered as perfectly acquainted with the subject; but this is spoilt by one of his strange fancies and inventions, which in itself is so opposed to the conception of the general circulation as to make it probable, as Portal has expressed it, that he was not altogether clear about its course. The Galenic doctrine was preponderant in Spain. The Spaniards knew that the veins and arteries were continuous; they knew all about small, minute, and capillary veins, and those beyond the field of vision. They knew that the blood was sent with violence from the heart. I believe I have seen passages which express a rapid current in the minute radicles or capillaries, but I cannot lay my hand on such passages. The great impediment with them to understanding the general circulation was certainly a function of digestion which was attributed to the veins. I do not read anywhere of a double current, of which some writers, who are enlisted on the side of Harvey, make so much. A well-known author and eminent physician, Luis Lobera de Avila (A.D. 1542), in writing of these points in physiology, makes use of the word "*transit*," it passes—"*Deinde per venam transit sanguis nutrimentalis et per arteriam sanguis spiritualis; deinde sanguis arteriæ exit cum saltu, venæ tamen non.*" This certainly gives me an idea of continuous flow; but Montaña of Monserrat (A.D. 1550) is more explicit when he speaks of the diseases of the veins, their oppilations or obstructions: "The worst effect of it is," he says, "in its preventing the blood going forward" (*ir adelante*). The expression is quite unmistakable. With the contents of the miseraics there could be no doubt about the matter. They go upward to the liver, carrying the chyle from vessels that are small to those of larger size, and from these to others that are larger still, and so on till there is reached the sanguineous mass—that is, they convey from the periphery to a centre; but Laguna, the great anatomist, says that in company with these miseraics there go other vesscls whose function simply it is to return the blood from the intestines or the coats of the intestines, and these also extend upwards in the same way to the liver.

The well-known writer Valdes de la Plata is quoted by the Spaniards in support of their view. He is the author of a "History of Man" in the year 1545. This author distinguishes the artery very well from the vein; but seems to insist that the artery too is worthy of the name of vein, and he says of the aorta that it looks like a vein, it is hollow, and carries the blood and all the four humours. It lifts or conveys the blood from one vein to another, and the veins or vessels *help each other amazingly*. They are called veins from the word *vias*, being passages for the blood, which runs through them like a river by which the whole body is irrigated. I do not think he leaves no uncertainty behind, but his testimony is generally in favour of a systemic circulation.

But I would ask, where do we find the doctrine of a venous current descending from the liver and right side of the heart towards the periphery or surface of the body? And if there were such a current there must be a fountain or starting-place for it; but nothing like this, and nothing to give any warrant for it, have I found in these Spanish authors. Even the contrary appears; for as we come near to the liver and the heart we find the evidence increased and the testimony made very plain that there is an upward current from below the diaphragm through the vena cava to the heart. Thus, the great Laguna (A.D. 1535), nearly a century before Harvey, is found to express himself in these words—"*Vena igitur cava quam ipsi jecori adnatam in totum corpus sanguinem derivare diximus, ab hepate prolapsa sursum quidem per septum transversum ad cor*," etc. The blood, which is drawn from the whole body, is carried onwards to the heart. In describing the interchange and mutual good offices which occur between several organs, he says, "*Sanguinem mittit hepar, ut commutatione minime penitenda a corde per arterias recipiat.*" He notices how the heart accepts the blood from the venæ cavæ with the thorough intention to pay it back again—"*illum sanguinem accipit mutuo.*" And so handed over (*transeunto*) from right to left ventricle, it is sent to percolate the body. The arteries are spread out like the trunk of some vast tree, and along these the blood is sent with a rush (*sanguinem ruent*).

(d) Chinchilla, vol. ii., art. "Juan Calvo."

DIAPHRAGMATIC HERNIA AFTER A STAB.

By CHARLES J. EGAN, A.B., M.R.C.S.E.,
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THE following case, which lately came under my care, seems interesting and instructive, inasmuch as all the physical signs and symptoms present during the short time that the man was under observation pointed to the existence of pneumothorax.

W. A., a German, aged forty-three years, was admitted to Grey's Hospital, King William's Town, June 19, 1878, suffering from a wound in the side produced by the stab of an assegai by a Kaffir. I saw him three hours after the receipt of the injury. The wound was situated in the left side, about two inches external to, and one inch below, the nipple, and a good deal of hæmorrhage had taken place from it. He was in a very collapsed state; skin pale and damp; pulse 148; respirations 48 per minute. There was no cough, no spitting or vomiting of blood. Every time he moved, blood welled up from the wound; but while he remained quiet, lying down, no hæmorrhage took place. I made a very slight examination of the chest, as he could not be moved on account of the hæmorrhage. I found the upper part of the left side below the clavicle dull on percussion, and with scarcely perceptible respiratory murmur. The lower part of the left side was perfectly clear and resonant on percussion, and no respiratory murmur could be heard, but occasionally, when he made any motion of the body, a slight gurgling sound was present. I considered the case to be one of pneumothorax produced by a wound of the lung. The wound was dressed with tincture of benzoin on lint, and a mixture containing secale cornutum administered.

The man died twenty hours after admission, having taken no solid nourishment while in hospital; but he managed to swallow some of the medicine, and small quantities of fluids to allay his thirst (of which he complained very much). He would not believe that he was seriously injured, and when asked to make a deposition before the magistrate, as being *in articulo mortis*, declined to do so.

I made a post-mortem examination twelve hours after death. On opening the thorax the left lung was found to be compressed into the upper part of the chest, but there was no wound of it; the right lung was normal; the heart was somewhat displaced towards the right side. It was found that the assegai had passed down between the lung and the ribs, through the diaphragm, into the spleen. Nearly the whole of the stomach and part of the transverse colon had passed through the wound in the diaphragm into the cavity of the thorax, forming a diaphragmatic hernia, and thus producing the resonance of the lower part of the chest and the other physical signs of pneumothorax. There was a large quantity of blood in the abdominal cavity, derived from the wound in the spleen. The point of the assegai had entered nearly two inches into its substance. The wound in the diaphragm was about two inches in length. There was also some extravasated blood in the thoracic cavity.

There are two interesting points in this case—one, how the lung escaped injury; and second, its similitude to a case of pneumothorax. When I examined the case during life I had not the slightest idea what was the real cause of the tympanitic state of the left side of the thorax. The weak and collapsed state of the man, and the increase of the hæmorrhage when he tried to sit up, prevented any very careful examination of the chest; but I dare say that, had the man lived a little longer, the true nature of the case might have been diagnosed by symptoms referable to the stomach, and symptoms of strangulated hernia.

King William's Town, South Africa.

Libraries for Hospital Patients.—In 1862, Dr. Ernest Godard, formerly an interne of the Paris Hospital, died at Jerusalem, a victim to his devotion to science. In his will, he charged his friend Dr. Passant with the foundation of libraries for the use of the patients in three of the hospitals. His wishes have been so well carried out by his executor, and the disposition has so well responded to a real want, that his two brothers, MM. Camille and Adolphe Godard, of Bordeaux, have appealed again to the devotion and friendship of Dr. Passant, and have commissioned him to supply a library for the new Hotel-Dieu similar to those of the Charité, Necker, and Midi hospitals—a sufficient income for its maintenance having been deposited with the Assistance Publique. Much is it to be desired that the example of this generous family should find imitators, so that all the hospitals of Paris might be provided with such a beneficent institution for their patients.—*Gaz. des Hop.*, September 24. [We heartily echo the wish for our London hospitals, so that the hours of suffering and the tedium of convalescence may undergo some alleviation.]

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

ST. PETER'S HOSPITAL.

RECURRENT STONE IN BLADDER—LITHOTRITY—GOOD RESULT.

(Under the care of Mr. TEEVAN.)

Thos. H., a clerk, aged twenty-two, was admitted into the hospital on May 20, 1878. For the following notes of the case we are indebted to Mr. Bullock, the House-Surgeon.

History.—One year ago the patient was in the hospital for an oxalate of lime calculus, of which he was completely cured by lithotrity in four sittings. The particulars of the case are to be found at page 333 of the *Medical Times and Gazette* for September 22, 1877. For some time after the operation the patient remained perfectly well, and resumed his occupation. Four months ago he began to experience some frequency in micturition, and the act was accompanied by a tickling at the end of the penis. This sensation was before long changed into one of pain at that spot and in the perineum. Occasionally, after walking, or riding in an omnibus, a few drops of blood would pass when he made water.

Present Condition.—Patient is pale, thin, and depressed. The act of micturition is painful and frequent, and often accompanied by defæcation. When quiet, he is tolerably comfortable, and can hold his water, which is loaded with muco-pus, for an hour and a half; passes a little blood from time to time.

Treatment.—Patient was put on a mixture of henbane and potass, and ordered to take large quantities of milk.

May 22.—3 p.m.: As the prescnce of a stone in the bladder had already been determined when the patient came to the hospital as an out-patient on May 16, Mr. Teevan passed a strong flat-bladed lithotrite, and grasped the calculus, which was an inch and a quarter in diameter, the man being under the influence of gas and ether administered by Mr. Knott. No sooner had the lithotrite been screwed up, than the patient passed his water, and commenced to struggle, so that the instrument had to be immediately withdrawn. 5 p.m.: Feels comfortable. 6 p.m.: Passed a few small pieces of stone; urine slightly tinged with blood; pulse 84; temperature 99·2°.

23rd.—Slept well last night; feels comfortable.

26th.—Rest rather disturbed last night by frequency of passing water, which was more painful than usual. Temperature 98°.

29th.—To day Mr. Teevan passed a lithotrite whilst the patient was under ether, but he struggled so that the instrument had to be withdrawn.

30th.—Urine very thick. Says he feels something come to the neck of the bladder and cause a stoppage whilst urinating, which is very painful.

June 3.—As the patient took anæsthetics so badly, Mr. Teevan crushed several pieces of stone without their aid.

5th.—Passed several fragments yesterday. Complains of having to pass water every half-hour, and pain attending the act. Much muco-pus, but no blood in urine. Lithotrity again to-day without any anæsthetic.

7th.—Has passed some *débris*; a little blood in water.

8th.—Mr. Teevan crushed some pieces without any anæsthetic.

9th.—More *débris* passed.

12th.—Complains of difficulty in making water and of being unable to empty the bladder. Lithotrity without ether. Urine, specific gravity 1016, acid, no albumen. In the evening passed many pieces of stone with much relief.

15th.—10 a.m.: Complains of feverish symptoms, the result of having exposed himself to a draught. Has pains all over him; skin hot and dry; tongue moist and clean. Pulse 110; temperature 100·2°. No appetite; feels chilly and sick; has frontal headache; bowels open; urine clear, with much less mucous deposit than usual on standing. 5 p.m.: Temperature 103.6°; pulse 115. Feels easier; complains chiefly of rheumatic pains about head and neck; has taken food fairly.

16th.—2 a.m: Temperature 101°. 6 a.m.: Temperature 99°.

*

9 a.m.: Pulse 100. 10 a.m.: Pulse 96; temperature 99°; sick. 11 a.m.: Has had some bilious vomiting; complains of pain in epigastrium; none over loins or hypogastrium. 6 p.m.: No more vomiting. Pulse 105; temperature 102°. 10 p.m.: Pulse 100; temperature 102·3°. No vomiting, but much flatulence.

17th.—9 a.m.: Feels much better this morning. Pulse 94; temperature 99·6°. Passes plenty of urine, specific gravity 1020, slightly acid. 2 p.m.: Temperature 101·6°; pulse 100.

18th.—6 a.m.: Temperature 100·2°. 10 a.m.: Temperature 99·6°; pulse 90. Feels better; takes food well. Tongue clean; bowels open. 10 p.m.: Temperature 101°.

19th.—6 a.m.: Temperature 99·8°. Lithotrity without anæsthetic at 3 p.m.

20th.—Has passed much grit. Temperature 99·8°. Holds water for an hour and a half.

21st.—Much irritability at neck of bladder. Makes water every half-hour. Some small pieces passed this morning.

22nd.—Pulse 84; temperature 98·2°. Cannot hold water for more than half an hour, when it is passed in small quantities. Mr. Teevan crushed several fragments without ether. The urethra and neck of bladder were intensely sensitive, and the passage of the lithotrite caused great pain.

23rd.—Temperature 98·6°; pulse 90. Some large pieces have come away, causing much pain. Urine has been tinged with blood.

24th.—Temperature 99·2°. Some grit has come away. Urine nearly clear; feels fairly comfortable.

26th.—Some more pieces of stone were broken up to-day, the patient being under chloroform.

27th.—Pulse 80; temperature 99·2°. Good appetite; holds water for one hour.

29th.—Passed a large fragment after its being for some time impacted just inside the meatus externus.

30th.—Much better; retains urine for two hours.

July 1.—Lithotrity without any anæsthetic.

3rd.—Holds water for three hours: only called up twice at night.

5th.—Several pieces were crushed to-day.

6th.—Has passed some *débris*; much improved; walks about ward each day for a little. Water almost clear. Experiences scarcely any annoyance.

8th.—Had an omnibus ride to-day; felt slight pain at tip of penis. Mr. Teevan crushed two pieces which were very hard and proved to be oxalate of lime.

11th.—A few very hard fragments were pulverised to-day.

12th.—Has passed a few dark, sharp-edged pieces. Feels in all respects quite well. Returned home.

August 12.—Is quite well; has returned to business. Urine clear, acid, specific gravity 1015. Holds his water all night and for four hours in the day.

October 1.—Remains quite well.

Remarks by Mr. Teevan.—The case was a very troublesome one to deal with, and one which most surgeons would have relegated to lithotomy. The patient had an excessively sensitive urethra, and took anæsthetics so badly that the treatment had to be carried on without their aid. The condition of the urinary canal necessitated very short sittings of about one minute only, so that very little could be accomplished at them, thus demanding numerous crushings. However, notwithstanding the obstacles present in the case, lithotrity had successfully accomplished her mission and cured the patient. The calculus was composed of oxalate of lime with a thick phosphatic covering.

LIVERPOOL NORTHERN HOSPITAL.

NOTES OF TWO CASES OF ABSCESS BURSTING INTO THE LUNG.

(Under the care of Dr. CATON).

Case 1.—Dysentery—Hepatic Abscess perforating the Diaphragm—Recovery.

J. W., seamen, aged thirty-eight, was admitted into the Northern Hospital on July 18, 1877. Patient is pale and emaciated. He has suffered from dysentery for some weeks, and now passes eight or ten loose slimy stools per day. He has much tenesmus. Liver dulness considerably increased upwards; tenderness on pressure, and some degree of pain referred to the liver; pain increased if he lies on the right side. He has no cough or dyspnœa. Throughout his illness he has been free from chest symptoms. Temperature 98·4°. Milk diet was ordered, a mixture of ipecacuanha, bismuth and morphia, and morphia suppositories.

July 21.—Pain in region of liver is worse. To-day a severe and sudden attack of dyspnœa came on, with much coughing, and patient expectorated about four ounces of pus, after which the breathing became easier. Coarse râles heard in the right lung; no friction. Pulse now and during the following six days varied from 100 to 110; temperature from 98·4° to 101·6°. No material change was made in the treatment. A firm broad flannel bandage was applied round the lower part of the thorax. The patient was told to lie as still as possible in bed, and to avoid violent coughing as far as he could, in order to diminish the risk of breaking down the adhesions believed to have formed between the liver, diaphragm, and lung.

During the week succeeding July 26 his condition gradually improved.

28th.—Liver dulness has diminished. There is now but little pain unless he attempts to turn on the right side. A small amount of pus still expectorated. Temperature, morning 99°, evening 101·6°; pulse 107. Complains of weakness.

30th.—A cutting pain complained of below the angle of the right scapula. Friction heard at the right base. Mustard poultices applied. Temperature 99°.

31st.—Friction louder. Temperature 99·4°. Cough ceasing.

August 2.—Friction becoming indistinct. Pain only felt on coughing or taking a deep breath.

3rd.—Friction almost inaudible. Still some degree of dysenteric diarrhœa, but in every other respect patient is improving rapidly.

14th.—Powder of ipecacuanha gr. x. and opium gr. j. given twice daily. The diarrhœa now subsided, and the patient was allowed to get up. His diet was increased; he gained flesh and strength rapidly, and he was discharged cured on September 6.

Case 2.—Axillary Abscess perforating the Thoracic Wall—Recovery.

Annie L., aged eight, was admitted into the Liverpool Children's Infirmary, suffering from severe cough.

Previous History.—A fortnight before the patient's admission a painful swelling appeared in the left axilla, and subsequently increased to the size of a small orange. It was believed to be an abscess, and poultices were applied, but it showed no disposition to point outwardly. The child at this time was in good general health, had no signs of chest disease, and was perfectly free from cough. About three days prior to admission she began to complain of pain in the left side of the chest when taking a long breath, and a slight cough appeared. Next day a sudden attack of dyspnœa occurred, followed by severe coughing; a quantity of yellow frothy fluid was expectorated.

On admission, I found a soft fluctuating tumour about the size of a small orange in the left axilla. The swelling could be seen and felt to contract coincidently with forcible inspiration, and to expand with forcible expiration; and when the child coughed, a strong impulse was transmitted to the hand. When the stethoscope was applied to the tumour, a bubbling, gurgling, sound of extraordinary loudness was heard coinciding with the respiratory movements. The left lung, especially at its upper part, was full of coarse râles. No friction was discoverable. The child coughed occasionally, bringing up a frothy yellow fluid, which the microscope showed to be pus. Her strength and appetite continued good, and she had no fever. The diagnosis seemed clear: an axillary abscess had pointed towards the pleura; inflammation, adhesion, and perforation of the two pleuræ followed, and the pus had found its way into the lungs. The treatment adopted was very simple. Danger of two kinds threatened—the adhesions might yield, and allow air and pus to enter the pleural cavity; also, the violent rush of air into the sac of the abscess during coughing was likely to produce general emphysema. It was evident that the sac must be emptied, and its communication with the air-passage closed as soon as possible. Placing the hand over the abscess, I slowly and gradually pressed out all the air and pus it contained into the lung, causing in the process violent coughing and some embarrassment of respiration. Probably two or three teaspoonfuls of pus were expectorated

at the time. A firm and suitably shaped pad was then placed over the abscess so as to keep its walls in apposition, and this was carefully secured in its place by a bandage. Rest, a simple milk diet, and a gentle expectorant were ordered. Two days later, on removing the pad, only a small amount of air entered the sac during coughing, and but slight bubbling could be heard. The expectoration had diminished. Four days later no evidence of a cavity could be found on removing the pad, and the râles had almost disappeared from the lung; no friction was heard at any time. In a few days the child was perfectly well.

Remarks.—Cases of hepatic abscess discharging by way of the air-passages are by no means rare. During the last twenty-five years a considerable number have been recorded in the journals. Next to a direct outlet through the abdominal walls this appears to be the safest direction the escaping pus can take; still, it is attended by great risk: the adhesions frequently give way, and the contents of the abscess are poured into the pleural or peritoneal cavity. I have recently had a case in which an abscess, situated in the posterior part of the liver, pointed towards the diaphragm; adhesions were found, and the matter had burrowed through the diaphragm, so far as to set up adhesive inflammation between the two layers of the pleura, when, unhappily, the lymph gluing together the liver and diaphragm gave way, and a quart of pus was poured into the peritoneal cavity, causing speedy death. The risk may perhaps be somewhat diminished by making the patient wear a firm broad binder round the waist, and by enjoining the most absolute rest. If the abscess can be diagnosed sufficiently early, there can be no doubt that its contents should be removed by aspiration. The second case narrated is one of great rarity. I have been unable to find a parallel to it in the journals.

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Medical Times and Gazette.

SATURDAY, OCTOBER 5, 1878.

THE INTRODUCTORIES.

Again, as has for so many years been our custom in the first week of October, we open our columns to the Introductory Addresses delivered on the occasion of the opening of the winter session of the Medical Schools, giving this year one of the lectures *in extenso*, and abstracts of some others. And we are far from grudging the demand thus made on our space. We admit that there is much truth in the statement, made by Dr. Edis in his Introductory Address, that "the medical journals have to a great extent anticipated the advantages of the introductory lecture of bygone times," as the information, the advice, and the warnings given by the orators at the yearly reopening of the schools, and which still form almost always some part of the introductory addresses, are now to be found in our "Students' Number," and in that of other medical journals; and the advice therein contained may be always at hand, to be consulted and pondered over. It is true, moreover, that the wide publicity now given by the daily journals to the "Introductories" tempts those who deliver them to speak to the public rather than to the student. Still, when the old intention of the "Introductory" is almost or quite ignored, and the temptation to address the public rather than the student masters the lecturer, no little good may arise thereout; for the laity may learn more of the wide-spreading aims and possibilities of medicine, and of the difficulties that surround both the science and art of medicine, than they possibly could in any other way. While, on the other hand, we agree with Dr. Pearson Irvine in holding that a single half-hour, or, for that matter, a short hour, is far from badly spent "if it can make the first-year's man believe that his teachers are in earnest for his welfare; if it can give hints which may guide and encourage him; if, in fact, it can make teachers and students and their friends not only acquainted with one another, but full of trust in one another." We are glad, therefore, that the number of schools at which the *conversazione* has taken the place of the introductory lecture has not this year increased. The former is a very pleasant reunion of the old students, supporters, and friends of a school, but it cannot fulfil the primary intention of the latter.

Dr. Pearson Irvine, who delivered the introductory lecture at the Charing-cross Hospital Medical School, addressed himself directly and almost entirely to the students. He admitted that they might feel discouraged by the difficulties of the study of the profession they had chosen, by the extent of the curriculum, by the variety and number of the subjects included in it, and by the "dry," facts-laden character of some of them. But he encouraged his hearers to believe that, if they worked well and rightly, they would find some difficulties more apparent than real, and those that were real of the greatest advantage to them; that the mastering of even dry subjects would be a pleasure; and that "the charms of the study of medicine really lie in its difficulties" and its uncertainties. The curriculum of study is very extensive, and does include subjects a knowledge of which may appear useless to the practising medical man; but, the lecturer pointed out, the public nowadays expect a medical man to know all branches of science having the least bearing on medicine, and success and promotion sometimes depend as much on such side-knowledge as on practical knowledge of the art of healing. Dr. Irvine gave a good and true description of the theory of education held, and attempted to be carried out, by the teachers at his and other medical schools. "Let each student have the chance of being taught, and not crammed; make him use his powers, and teach him how to use them. He must store up a vast number of facts: make the labour lighter by showing how such storage must be of value in actual life. In a word, don't make him a mere machine, but an educated gentleman, capable of further education by his own unaided efforts both in the study and practice of his profession."

Mr. Macnamara's lecture, at the Westminster Hospital, was also a true and valuable students' introductory address. From out of the fulness of his own long, wide, and varied experience, in India and England, he drew advice for the first-year's students as to their duties and the curriculum of study; and for the men who had just obtained their

qualifications, and who were about to engage in private practice or in some one of the public services. He strongly advised those whose career in life had not been already marked out for them, to consult the teachers under whom they had studied as to the line of practice most suited to their several capacities. In this way he felt assured that many a false start in life would be avoided; and he recommended them, if they selected private practice in England as their future career, to work for a time as assistants, "in anticipation of subsequently succeeding to a partnership." (The partnership part of the business, we should say, must be taken *cum grano*.) As to the public services, he did not feel inclined to recommend men to enter the British Army Medical Service under existing circumstances; and he thinks better of the advantages offered to young medical men by entering the Royal Naval Medical Service for a limited period, and as a stepping-stone to general practice. And of the Indian Medical Service he has a still higher opinion, and believes that, "so long as we hold India, and the changes necessary for the reorganisation of the Medical Department are carried out in the judicious spirit advocated by Lord Northbrook, as far back as 1873, there is no country where a young medical man in Government employ can succeed with greater certainty; though there, as in this part of the world, time and downright hard work can alone insure success." Mr. Macnamara has a dislike to competitive examinations for entrance into these services, and counselled the students "to absolutely decline competitive examinations for admission into any of the public services, and thus to induce the Government altogether to abandon that injurious system."

It will be seen from the abstract we elsewhere give of Mr. Macnamara's address, that it contains some very interesting information, acquired through his intimate acquaintance with native opinion in India. He ridicules the idea that women-doctors are needed there because medical men are not admitted to attend native females; and asserts that "a medical man, after he has established a reputation in India, is treated with the same confidence by Hindoo families as by his own countrymen and women." He draws a very unsatisfactory and startling picture of the disorganised state of society in Bengal, and of the condition of public opinion among the upper and middle class there, in consequence of the breaking-up of all faith in the old religion, and as the outcome of a purely secular training. With reference to the education of our medical students, Mr. Macnamara deplores the absence of colleges such as exist in the old universities for medical students. We agree with him to a great extent in this matter, and would gladly see the formation of two or three great colleges, in which medical students could have education and discipline as well as instruction, and with which the smaller hospitals might be connected as clinical schools only.

Several of the lecturers spoke of specialism in practice; and Dr. Whipham, at St. George's, and Mr. Nettleship, at St. Thomas's Hospitals, chose it for their chief subject, dwelling at some length on the possible and too frequent dangers and evils attendant on practice as specialists, as well as on its advantages when rightly carried out; but the outcome and "moral" of both addresses is that a man must be a thoroughly educated physician and surgeon before he is a specialist. Mr. Nettleship considers that special hospitals will gradually, and rightly, give way before the special departments of the general hospitals, that their usefulness will in future slowly change its ground, and at length become much lessened." We are glad to see that the *Times* refers to this subject, and speaks of "so-called special hospitals" as exceedingly objectionable institutions. "Even in their best forms," it says, "they do mischief by depriving the general hospitals, to which the schools of medicine are attached, of much valuable material for teaching; and in their worst forms, of which we in London are by no means without examples, they are simply a machinery for enabling charlatans to prey upon the credulity of the public." The heads of the medical profession should, the *Times* says, control the growth and multiplication of such special hospitals. But the heads of the profession have very little, if any, power in the matter. Might not the daily press give us real and practical help by refusing to help to keep such institutions before the credulous public?

Dr. Edis, at the Middlesex Hospital, dwelt chiefly on Obstetric Medicine; and, following the example of Dr. Barnes in his address to the British Medical Association last year, lamented that "of all medical studies that have been objects of scientific research or of practical inquiry, none has met with a more chilling indifference, none has been treated with more unmerited contempt, than midwifery." He considered the subject of "preventive midwifery," and sketched out the many and great benefits that might follow were highly educated obstetricians allowed to exercise a constant supervision over pregnant women; and he considers that midwifery, taken in its more comprehensive sense, "comprises all human knowledge relating to the reproduction of the human species." This midwifery in a comprehensive sense is generally represented by the term gynæcology, we suppose; and it seems that Dr. Edis suggests that all the diseases and disorders of women and children should or may come under the care, curative and preventive, of gynæcologists. But we take leave to say that there is such a thing as the over-meddlesome and mechanical treatment of the diseases of women, and that gynæcology is more than suspected of some of the worst vices of specialism. Of these taints it must be purged before women and girls can be more constantly and confidingly placed under the supervision of gynæcologists than heretofore. There is, however, no doubt very much to be learnt yet about both the treatment and prevention of disease in pregnant and parturient women; and we trust to see the mortality in and after childbirth greatly lessened. We also entirely agree with Dr. Edis in desiring to provide the medical student with much more practical education in the diseases of women and children.

We have not space for any further notice of the Introductory Lectures of this year; but we think it will be generally and readily allowed that, in spirit and execution, they more than justify the practice of giving Introductory Addresses.

THE ARMY MEDICAL DEPARTMENT.

In our issue of September 28 we published the summary of the Recommendations of the Committee on the Army Medical Department; and no one who is at all acquainted with the history of that Department during the last few years, and with the questions that have vexed Army Medical Officers, can have failed to be struck by the fact that those Recommendations contain no reference whatever to the great question of the Regimental *versus* the Unified Staff system. Not one word is said in that part of the Report as to the possibility or the desirability of any restoration, in even a partial or modified form, of the regimental system. Elsewhere in the Report, however, this silence in the Summary of Recommendations is accounted for. Appendix A gives the "Reasons assigned (in reports received by the Committee) for the reluctance of candidates to come forward for the Army Medical Department"; and here the subject of "Abolition of the Regimental System" is dealt with under the following headings, viz.:—"Generally"; "Professional Inconvenience"; "Transitional Annoyance"; "Messing"; and "Advantages"; and it will be found that

the opinions expressed vary considerably, and that even some Army Medical Officers speak very strongly in favour of the unification system; though it must be observed that these officers are senior men, not Surgeons. In the first part of their Report the Committee also make some observations on the abolition of the regimental system; not, indeed, with any idea of discussing the relative advantages of the unified staff system and of the regimental system, for they say, "we look upon that question as having passed beyond the stage of argument, and as not being within the scope of our inquiry." But they hope that their observations on the subject "may reconcile medical officers to the unified staff system." It will be well therefore to place these "observations," or the pith of them, before our readers. In Paragraph 68 of the Report it is stated that, "with the regimental system in force, reliefs were impracticable with any fairness"; and in explanation of this statement, the paragraph proceeds to say: "The time of an infantry regiment at home is twelve years, of a cavalry regiment about twenty-four. In India the unified staff system is universal, and more than two-fifths of the Department are required to serve there. As a result, with the medical officers fixed in their regiments at home, the reliefs fall almost exclusively on the comparatively small body of staff medical officers serving at home. It follows that these can only look for a very short period (in some cases only fifteen months) of home service before having again to proceed abroad. On the other hand, it might easily, and often did, happen that the regimental surgeons had very little occupation, while the neighbouring staff officers were overwhelmed with work." In Paragraph 69 it is admitted that the change may have deprived the former regimental medical officers of certain social advantages; but, it is observed, "the incidence of foreign duty now falls equally throughout the Department, and the Director-General has it in his power to turn the strength of the Service wherever it may be most needed." The Committee point out also that the regimental system had its disadvantages, and that the evidence in Appendix A shows that the advantages of the unified staff system are at least partially recognised by the Medical Officers of the Army. Among the positive gains by it are—the saving of mess and band subscriptions; an annual increase of allowance, according to the relative rank to the extent of £36 10s. for the Colonel, of £18 5s. for the Lieutenant-Colonel, of £27 7s. 6d. for the Major, of £22 16s. 3d. for the Captain, of £13 13s. 9d. in the case of the Lieutenant; and "by ceasing to be regimental officers," and being attached to station-hospitals, "medical officers have been relieved from the expense of providing their cases of capital instruments, valued at about £30." The Committee, however, feel that "in some respects the social losses to regimental medical officers might be made up"; and hence the "Recommendation" (No. 16) "that at certain large stations medical institutes be formed." Each institute might be established, it is suggested, "to act as a club, a library, and a scientific resort; Government might provide the building with fuel and light. It might also make a limited annual grant towards the formation of a station library of medical and scientific books, microscopes, etc." The Committee believe that the advantages offered by such an institute for social reunion and professional study would be highly appreciated by medical officers.

We think that the recommendation to Government to form such institutes, supplying them with medical and scientific books and periodicals, and with microscopes, and adding, we would suggest, a small laboratory, is an excellent one. The Government ought to give willingly and freely such aids and inducements to medical officers to keep up their professional and scientific knowledge; and we have no doubt whatever that such help would be highly appreciated. But that it would make up "the social losses" to regimental officers we must say we altogether disbelieve. With a regiment the military surgeon had a home, and brother officers who were comrades, daily companions, and often intimate and long-tried and trusted friends, whose society and companionship were all the more pleasant, useful, and valuable to him, inasmuch as they, though attached to the same regimental and central bond of union, had different professional duties and studies, wider social interests and ties, and were more men of the world; and communion and intercourse with them was therefore all the more refreshing, refitting, and improving. We cannot believe that the medical institute will in any way or degree "make up for" the loss of all this. It will get the nickname of "Rhubarb Hall," or "Colchicum Club," or some like title, and be carefully avoided by nearly every combatant officer. The suggestion also made by the Committee, that, at smaller stations, "it may be a subject deserving of consideration, whether officers of the several departments might not be encouraged to combine for messing and social purposes—Government affording facilities," has a more promising and auspicious appearance. Some of the discomforts and annoyances arising out of the want of a mess might at any rate be done away with by such an arrangement.

Unless some real and effective effort is made by Government to make up for the social losses entailed by the unified staff system, we greatly doubt whether they will ever succeed in attracting a sufficient number of the most eligible and desirable candidates; for it must be remembered that it is the younger members of the Department, the Surgeons, who suffer most by the change, and most keenly feel it. And we more than suspect that the Committee also have grave doubts as to the success of their Recommendations; for their Report recommends a reduction of the numbers of the executive ranks, and contains many pregnant suggestions of still further reductions, and of wider and more frequent employment of civil practitioners in the medical treatment of soldiers. The paragraphs of the Report containing these suggestions may easily be overlooked, as they are not alluded to in the Recommendations, but they ought to be carefully studied by all who think of entering her Majesty's Medical Service; and we shall therefore bring them to the surface, and comment on them in a future article.

THE FUTURE OF MEDICAL EDUCATION IN ENGLAND.

Before our brethren engaged in medical education have fairly commenced their winter's labours, we would fain invite them to the consideration of a scheme which is laden with consequences deeply affecting them as well as all who are likely to become teachers or learners of our profession. The lost Medical Bill we need not here describe; but in consequence of its failing to pass, the plan of medical education and examination devised under the Conjoint Scheme, as it applies to England, now much more likely to be adopted, demands unusual consideration. An essential part of the lost Bill was that Conjoint Boards should be established in each of the three great divisions of the United Kingdom. To this, as is well known, the Scottish Universities and licensing bodies have a deep-rooted antipathy; they have no wish to be disfranchised. And how any new scheme would work so as to include the University of St. Andrews is hard to see, except essential modifications were made in any of those yet proposed. Moreover, in Scotland the system of medical education has always been more complete than it is in England. In all Scottish schools a full four years' attendance on classes, lectures, dissections, and practical work has been demanded; whilst

in England the whole collegiate course is set down at three years, and the remaining period may be passed almost anywhere. Still further, the Scottish system implies examination in all the subjects laid down in the curriculum. Practically, the English system lays down as necessary attendance on many classes, but examinations on few. If a man knows something about anatomy and surgery he may, as a rule command a qualification to practise here. We had good hopes that this system was a thing of the past—that if it was thought desirable that a man should attend certain classes, it was also surely desirable that he should be examined on the subjects taught there; but in the scheme now before us this is not the case. Anyone connected with medical education, and acquainted with the nature of the medical student, will know what this means. The subject on which he has not to be examined is voted a bore; and if present in body at lecture, his mind is too often engaged in studying the daily or weekly newspapers, having a sound nap after luncheon, or in other *divertissement* well known to the class.

We are no advocates for, or believers in, the virtues of universal examination—that birthright of the enlightened followers of Brougham: rather the contrary; but we do hold that, if only as a corrective, examination and instruction should go hand in hand. What do we say? Examination is but a mode, whilst it is also a test of instruction. However, we are wandering far from the scheme which now concerns us, and which, should it ever see the light in a formal shape, will not be found so very much different from one we denounced some years ago. Of the regulations relating to medical education, the first will commend itself to all—namely, that the candidate shall have passed a preliminary examination before entering on his medical curriculum; but prior to that, it is said that a candidate for a university degree shall conform to the course of his university. In the case of the University of London this means that one who has passed an entrance examination, or who has graduated in Arts elsewhere, must begin by passing the matriculation examination of that University, of going back through all classes again if such precautions have not been taken, or of giving up all idea of attaining to the degrees of that University. It has been roundly asserted that this is done simply to keep up the nominal value of the degrees of M.B. and M.D. Lond., for the rule is in marked contrast to those enforced for the M.A. or any similar degree granted by that body. Nevertheless, the regulation seems to stand thus in the proposed Conjoint Scheme. Surely it might be urged that a Master or Bachelor of Arts of any other university than that of London might well demand that his degree be held as an equivalent to that of the London University matriculation.

As regards professional education under the proposed Scheme, this is limited to forty-five months, during which, as already noticed, three winter and two summer sessions have to be passed at one or more of the recognised medical schools, but one winter and one summer sessions may be passed in one or more of the following ways:—

First. Attending the practice of a hospital, infirmary, or other institution recognised as affording satisfactory opportunities for professional study. Second. Receiving instruction as the pupil of a legally qualified practitioner having opportunities of imparting a practical knowledge of medicine, surgery, or midwifery. Third. Attending lectures on any of the required subjects of professional study at a recognised place of instruction.

The effect of such rules on medical teachers cannot well be over-estimated, but this is still more the case with regard to the student himself. As it concerns the teacher, the scheme may well, as we shall presently see, break up his class to such an extent that it will no longer be worth while carrying it on. But the *professeur libre*, or grinder, who considers only what is likely to be most useful for securing a pass, will have full swing. *Per contra*, the student will have full opportunities of indulging in that most pernicious of all employments—acting as an unqualified assistant. For, unfortunately, it is not specified during what portion of the forty-five months the abstention from a school may occur.

Perhaps here it will be well to turn to another portion of the proposed Scheme which relates to examinations. These, says this document, are to be three in number, and the subjects of the first examination are "Chemistry, Materia Medica, Medical Botany and Pharmacy, and Osteology." This examination may be passed merely on producing satisfactory evidence of having been registered as a medical student, provided it is passed within twelve months of such registration or before commencing attendance at a recognised medical school. If not, then certificates will be required of the candidate's having attended—1. A course of Chemistry (length not stated); 2. A course of Materia Medica (do.); and 3. A course of lectures on Botany (do). Besides these, there seem to be two compulsory courses, one of Practical Chemistry, and one of Practical Pharmacy. We have long contended for the extrusion of Chemistry, Physics, and Botany from the regular medical curriculum, but, as it seems to us, this proposed half-hearted measure will do good to nobody. It will to a great extent break up existing arrangements, and substitute nothing for them.

But in Scotland there are professors, and those professors will, if we mistake not, strongly object to seeing themselves and their incomes thus calmly obliterated if the English scheme is to be there adopted. If not, where goes the uniformity?

THE WEEK.

TOPICS OF THE DAY.

The study of sanitary science is becoming more and more a prominent feature of the present age, and with the ever increasing density of our population the necessity for widespread education in this direction will be at once apparent. Following the annual Congress of the Sanitary Institute of Great Britain, the Social Science Association announces its annual meeting for the 23rd inst. at Cheltenham. Lord Norton, K.C.M.G., the President, will deliver the inaugural address, and Mr. W. H. Michael, Q.C., F.C.S., is the selected president for the Health Section, in which department the regulation of house-building and the improvement of the sanitary condition of existing buildings will be discussed. In other departments the economic principles which should regulate the borrowing powers of local corporations will be considered; and the improvement of street architecture with due regard to economy will also engage the attention of a fifth section. The proceedings will extend over a period of eight days, and a large attendance is expected.

It is difficult to understand the want of action on the part of the Metropolitan Board of Works, which has called forth remonstrance from the parish of St. Luke's. It will be remembered that under the powers acquired by the Artisans and Labourers' Dwellings Act the Board contemplated the clearing away of about seven acres and a half of dwelling-houses for the purpose of building improved houses. About 5000 poor persons were accordingly ejected; but although many months have now elapsed, no steps have been taken to begin the improvement, and the remonstrances of the Vestry have only resulted in a promise that the matter should have the Board's attention. Under these circumstances, a meeting was last week held in the parish, and the following resolution was unanimously adopted:—"That this meeting views with alarm the action of the Metropolitan

Board of Works, by reason of the constant demolition of the homes of the people, and not providing them with suitable ones, according to their promise eighteen months ago; and we particularly draw the attention of the Board to the vast amount of ground now vacant, which they could, if so disposed, utilise for the purpose at once." Several of the speakers strongly condemned the manner in which the Artisans and Labourers' Dwellings Act was being put into operation, and it was suggested that an effort should be made next session to amend the objectionable clauses of the Act. It must be remembered, however, that the Metropolitan Board of Works has no power of itself to build houses or find a lodging for poor persons evicted from their dwellings in the carrying out of street improvements. The Artisans and Labourers' Dwellings Act requires the local authorities to reserve some cleared land for dwellings for the working classes, and to keep it free till some other persons buy it to build upon. But other than working-class tenements cannot be erected upon such reserved land.

The Local Government Board has recently published a statistical return which shows the amounts expended during the past year on the metropolitan union infirmaries and the hospitals and asylums under the management of the Metropolitan Asylums Board. The total cost set down for an aggregate of 3,494,669 days' maintenance during the year is £325,738, being a total cost per head per annum of £34 0s. 5d. The lowest is at the Metropolitan District Asylum at Leavesden, where the cost per head was £20 18s. 4d.; and the highest at the Metropolitan District Small-pox Asylum at Homerton, where it reached the sum of £129 1s. 7d. The highest cost at the union workhouse infirmaries was at Greenwich, with a total of £68 9s. 1d. per head per annum; and the lowest was at the City of London—namely, £27 5s. 9d. The establishments under the care of the Metropolitan Asylums Board show the following results: —Homerton Small-pox Asylum: 24,968 days' maintenance; total cost, £8830; £129 1s. 7d. per head per annum. Stockwell Small-pox Hospital: 38,860 days' maintenance; total cost, £10,199; per head, £109 18s. 10d. Homerton Fever Hospital: 54,959 days' maintenance; total cost, £14,771; per head, £96 2s. 1d. Stockwell Fever Hospital: 27,610 days' maintenance; total cost, £7125; per head, £94 3s. 8d. Hampstead Asylum and Small-pox Hospital: 117,192 days' maintenance; total cost, £15,023; per head, £46 15s. 9d. Caterham District Asylum: 723,715 days' maintenance; total cost, £45,548; per head, £22 19s. 5d. Leavesden District Asylum: 743,039 days' maintenance; total cost, £42,583; per head, £20 18s. 4d.

The Exeter Town Council have been seriously considering the sanitary condition of that city, and at a meeting held last week some important steps were decided on. The waterworks, of which the Council have recently acquired possession, draw their supply from the river, and above the point at which the supply is taken several towns discharge their sewage into it. The Council have therefore decided, under the Rivers' Pollution Acts, to call on these towns to abstain from this proceeding for the future. The Earl of Devon has recently complained of the offence caused to towns on the river below Exeter by the discharge of the sewage of that city into the stream, and the Council have therefore decided to instruct their surveyor to visit several works with the view of adopting the most efficient system for disposing of sewage. Comments having been made on the great infant mortality in the city, the Council, after hearing reports of their medical officer, decided to enforce the Infant Life Protection Act, and to take every step in their power to secure the application of the provisions of the Contagious Diseases Acts to Exeter.

A deed of agreement has recently been signed between the Sittingbourne Local Board, the Milton Improvement Commissioners, and the Board of Guardians for the Milton Union, to combine for the purpose of erecting a hospital for the isolation of infectious diseases for the parish of Sittingbourne and Milton, and the union rural sanitary district, which comprises eighteen parishes. Mr. George Smeed, of Gore Court, has given a site, nearly two acres in extent. This is a step in the right direction which other districts will do well to imitate.

An appeal is made by Mr. Pauli, the British Consul at Cadiz, for subscriptions in aid of funds he is raising for the purpose of establishing a hospital in that city, the necessity of which for foreigners, and especially for British seamen, has long been acknowledged by the foreign residents of Cadiz and its neighbourhood. The utter helplessness and misery of an English invalid in the Spanish Hospital, from various causes, are pointed out by Mr. Pauli, who has already started a small hospital where British sailors will be looked after by an English doctor and English-speaking nurses, and receive the comfort, attention, and diet so necessary for their recovery. The Lady Herbert of Lea, and Mr. John Hall, of New London-street, E.C., have consented to receive subscriptions for the Cadiz Hospital Fund.

The report of the Water Examiners on the metropolitan water-supply for the month of August last, recently published, shows that the state of the water in the Thames and Lea was satisfactory during nearly the whole of the period. Dr. Frankland remarks that the water delivered by seven out of the eight companies supplying the Inner Circle was efficiently filtered before delivery, and its quality was also in other respects better than during the months of June and July. The water supplied by the Kent and Colne Valley Companies, and by the Tottenham Local Board of Health, was bright, and of its usual excellent quality.

All latest accounts agree in considering that the epidemic of yellow fever in the Southern States of America is decreasing. On the 29th ult. the deaths at New Orleans were returned as fifty-two, at Memphis thirty-two, and at Vicksburg nine. The total mortality to the 17th ult. was calculated to be over 5600. Three of the Howard Medical Corps had succumbed to the disease; and, according to a despatch of the 12th ult. from Washington, published by the *Times*, two of the physicians and one of the nurses sent from that city to the assistance of the sufferers at Memphis had been sent back by the Howard Association because they had never had the fever. Dr. Pease, one of the physicians who returned, states that the horrors of the pestilence are beyond description. The wealthy have almost entirely fled from Memphis, leaving the poor to shift as they best can for existence. The provision stores are all closed, and the only way to obtain supplies from them is to break them open. This is frequently done. Even the drug stores are all closed with the exception of three, and it is difficult to get medicine even when medical assistance has been procured. No vehicles are seen in the streets except the dead-carts and the doctors' buggies, with an occasional hearse bearing the remains of some well-to-do citizen. At night the streets are lit up with the fires that blaze before every house where there is a corpse. Persons taken sick in the street crawl into unoccupied tenements, and their bodies are only discovered by the smell of their decomposition. Many are found dead in the public parks, or under fences. Corpses accumulate for want of adequate burial force, and trenches are then dug in which long rows of coffins are deposited side by side, and one row on top of another. Dr. Pease states that the smell of the city, like that of a huge charnel-house, can be detected at a distance

of three miles. There is a great deficiency of competent nurses, and out of 1100 employed, Dr. Langstaff informed Dr. Pease that only about seventy-five were really effective.

Last week the subscription portrait of Mr. Robert Ceely was formally presented to the governors of the Bucks Infirmary, to be hung in the institution amongst other honoured benefactors. This is a most fitting tribute of respect to a gentleman who, it is well known in the county, has been unceasing in his endeavours to insure the success and usefulness of the Bucks Infirmary.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

At a special meeting of the College, held on Wednesday, October 2, a letter from the Lords Justices of Ireland, enclosing the copy of a draft charter as settled by the law officers of the Crown, was read. The draft charter, having been read, was unanimously approved by the College. The charter includes the following provisions, long wished for by the College, viz.:—1. The right of voting for President, Fellows, and officers by ballot, a majority of votes to decide the question. 2. The institution of a grade of Members intermediate between the Fellows and Licentiates. 3. The right of appointing additional examiners besides the Censors of the College. 4. The power to accept the resignation of any Fellow, Member, or Licentiate. The proposed charter also provides that the existing licentiates may become members of the College without fee or examination, if they comply with the rules laid down by the College to regulate the election of members.

THE ROYAL ALBERT ASYLUM FOR IDIOTS.

Much good work continues to be done by the Royal Albert Asylum for the education and training of idiots and imbeciles belonging to the northern counties of England. The institution is situated at Lancaster; and according to the report of Dr. George Shuttleworth, the Medical Superintendent, during the past year, ending September last, 246 boys and 127 girls were under training in the institution. Of this number twenty patients were discharged and eleven died. The discharges were chiefly those of patients whose friends desired to have them at home, or who were for some reason found unsuitable for further residence in the Asylum. The number of deaths was swelled by the mortality arising from an epidemic of scarlatina which attacked fifty-five of the inmates, and produced five deaths, four directly from the fever, and one from induced debility. The inclusive mortality from all causes was equivalent to an annual death-rate of 3·6 per cent. on the average number resident, or 3 per cent. on the aggregate number under training. This result must be considered satisfactory when, as Dr. Shuttleworth observes, it must be remembered that idiocy is almost invariably associated with a feeble or defective bodily organisation, and that, however excellent the sanitary arrangements of an idiot institution may be, a comparatively large mortality is inevitable. The Royal Albert Asylum is a fine building, apparently under excellent management, and the northern counties are to be congratulated upon having founded such a useful institution.

THE WANT OF PUBLIC AID TO LIVERPOOL HOSPITALS.

The annual report of the three Liverpool charities—the Royal Infirmary, Lunatic Asylum, and Lock Hospital—for the year 1877 cannot be regarded as satisfactory. At the commencement of the year under notice the funds showed a deficit of £422; at the conclusion of that period the liabilities were £5131. The report states that the ordinary receipts on which the Committee can depend have always been greatly below the amount annually required to carry on the three institutions, and have had to be supplemented each year by the amount received from legacies and donations. These latter naturally vary from year to year, but hitherto, either from the one source or the other, sufficient has been received to prevent the charities getting very considerably into debt; during the past year, however, these sources of revenue have considerably fallen off, whilst the number of patients has increased, and the Committee express their anxiety at the very serious debt which now appears against the charities, and which, if not relieved by increased support, will necessitate either the selling out of a large amount of the investments, or the closing of some of the wards. No doubt the great depression of trade during the year 1877 may have had something to do with the decrease in the support awarded to these Liverpool charities, but it is to be hoped that when the inhabitants of that wealthy city are made aware of their necessities, the necessary contributions will be forthcoming to obviate either of the alternatives which the Committee are compelled to submit in their last annual report.

PRECAUTIONS AGAINST THE INTRODUCTION OF YELLOW FEVER INTO IRELAND.

A circular letter on this subject has been addressed by the Local Government Board for Ireland to certain of the various sanitary authorities in that country. After stating the arrangements recognised, and the provisions made by the Public Health (Ireland) Act, 1878, for the prevention of the spread of infectious diseases, the letter goes on to say:—"As stated in the Local Government Board's circular of September 11, 1873, the object is not only to prevent the introduction of dangerous infectious disease, and its spread when introduced, but to provide promptly and humanely for the treatment of patients arriving in ships. For this purpose, the cordon of port nuisance districts, which encircles all the coast of Ireland, appears well designed, for in every case there is at the command of the port nuisance authority a well-ordered hospital for the reception of cases of contagious disease, situate at the workhouse of the union. In harbours so frequented as Dublin, Belfast, Cork, Limerick, Waterford, and Londonderry, there are, or ought to be, available against the introduction of any formidable epidemic special hospitals, called intercepting hospitals, for the reception of patients from ships arriving infected with dangerous contagious disease, of whatever character it may be. In 1873, when the port nuisance districts were prescribed, the threatened invasion was that of cholera; but although the cholera has not since arrived, intercepting hospitals, wherever they were provided, were equally available against the importation of small-pox and every kind of fever. The present subject of alarm is the yellow fever, which has prevailed so severely in some of the southern districts of the United States, and is lately reported as having broken out at New Orleans. It may not reach any part of Europe, but the Local Government Board take this opportunity of reminding the port nuisance authorities round Ireland, that should such danger from those sources threaten any part of the coast, the responsibility of protecting her Majesty's subjects in Ireland from so serious a disaster will rest with these authorities, and that every preparation should be made to meet the possible contingency.'"

VACANT CHAIRS IN ABERDEEN.

We understand that there are at present in Aberdeen two vacant chairs in the Medical Faculty; these are the chairs of Materia Medica and of Natural History, the latter also belonging to the Faculty of Arts. The incumbents of these, Professors Harvey and Nicol, after many years' faithful service, have determined to retire. As to their likely successors, there

can be but little hesitation in one instance at least. Dr. Davidson has for many years been Dr. Harvey's right-hand man, and has done his full share of the work of the chair. But, even apart from any claim that this might be thought to give him, it would be difficult to find one more thoroughly and completely qualified for the post. Such a successor to Professor Nicol will be harder to find; and yet one would think, with all the votaries of Natural Sciences now prominent among us, that a post which offers at least a moderate competence, a good position, and a fair amount of spare time would be eagerly sought after by men worthy of the post.

FROM ABROAD.

Sublingual Ulceration in Pertussis.

Dr. Delthil having forwarded a paper to the Académie de Médecine, it was referred to a committee, and at a recent meeting of the Academy (*Bulletin*, No. 28, September 17), Prof. Henri Roger, of the Hopital des Enfants, read an able and conclusive report upon the subject. He founds the remarks he makes upon it upon his prolonged hospital and extensive civil practice, pertussis prevailing epidemically every year in Paris, and severely so in 1877-78, so that the field of observation has been ample enough.

That it is not an essential phenomenon of pertussis, as maintained by some observers, is shown by the fact that it is not always present. In fact, its frequency is very variable, being dependent on the violence of the paroxysms and on the disposition of the teeth in the first dentition. When these two conditions are united it is almost always met with, while when they both are wanting it too is absent. Still, as a general statement, Prof. Roger agrees with Dr. Delthil that sublingual ulceration is met with in about one-half the total number of cases of pertussis. Another proof that it is not an essential phenomenon is that it does not appear at a fixed epoch at the commencement. It is rarely observed before the third week (comprising the period of incubation), and in most cases several days later. If the habitual duration of the two stages of pertussis be considered, we can understand why the ulceration does not appear, save exceptionally, before the third week. Although it is difficult, even in private practice, to learn exactly the date of an infection, Prof. Roger is in possession of a sufficient number of precise facts to enable him to state that the mean duration of incubation is generally six or seven days—although he has in some cases known it to be as short as three or four days, and as long as ten or twelve. Then a period of at least ten or fifteen days passes before the cough, at first common, becomes spasmodic, and then quite paroxysmal—before the attacks are exhibited by expiratory jerks, with impulsion of the tongue against the lower teeth. It is only during this full nervous period that the frænal ulcer is developed. The time of its appearance, so far from being fixed and early, is necessarily slow and variable—always following, and never preceding, the paroxysmal stage.

As to the mechanism of its production, there is no preceding vesicle or pustule present, as represented by some writers. Prior to the ulcer appearing, Prof. Roger has often observed at the frænum, and especially at its lower insertion, a somewhat vivid redness, and then an erosion, or a linear division of the mucous membrane, with an appearance of granulations. At the point of section of the frænum there is sometimes seen a transverse depression, and sometimes a kind of pimple (*bouton*), or a yellow or white patch, often of a pearly aspect, two or three millimetres in size. At other times there is a small, median, oval ulcer, with irregular edges, and a pale or reddish-grey base. The lesion may remain in this state, while in other cases it may extend some millimetres beyond each side of the frænum, becoming also deeper, as if burrowing under the tongue. The ulcer is generally covered with a whitish or greyish exudation, not diphtheritic in its appearance, but resembling the exudations which cover the irregular ulcerations mechanically produced inside the cheeks and lips by the projection of irregular teeth or their fragments. The origin of the ulcer is purely mechanical: the tongue being in its hyperæmic state thrust forwards during the paroxysms of coughing, the frænum is easily cut by the sharp lower incisors—the lesion prevailing in a precise ratio with the severity of the cough. The ulceration occurs more readily in infants of ten or twelve months than in older children, because in the latter, when the first dentition is completed, the tongue is supported on the entire range of teeth, and is much less liable to injury than when it is only projected against the incisors, which are sometimes divided on their edges into points as sharp as needles, lacerating the tongue, and dividing the frænum like a knife. When the disposition of the teeth is anomalous, other parts of the tongue may be lacerated; and, on the other hand, when the frænum is short, so as to prevent its protrusion, no ulceration at all will be observed. So, in infants attacked by pertussis before dentition, no ulceration is ever observed; nor is it met with in the pertussis of adults, in whom the edges of the teeth are much less sharp, and who do not project their tongues during the paroxysms.

As to the semeiotic value of the ulceration, it is not without its importance, inasmuch as the cough of pertussis is the only one that is violent enough to propel the tongue against the teeth. Prof. Roger has never met with it in any other affection, and wherever its presence is positively proved, pertussis may be diagnosed. Of course, in the great majority of cases, the paroxysms themselves have sufficiently declared the nature of the disease before the ulceration has made its appearance. But still there are certain cases in which the cough, not having as yet assumed a sufficiently special character, the practitioner may hesitate at deciding whether he has to do with a paroxysmal bronchitis or with the true paroxysms of pertussis. He should then examine the tongue (which is not always an easy matter, and requires both care and patience in very young infants), and if he finds this lesion of the frænum, and at the same time a prominence of the corresponding teeth, he may rest assured as to the nature of the case. Sometimes it is an observant mother who first draws attention to the lesion in question.

Ignored Syphilis.

Dr. Fournier, in a lecture delivered at the St. Louis (*Gaz. des Hop.*, August 8), observed that the great frequency of cases of *syphilis ignoré*, and the practical importance of its study, induced him to bring it before his class.

A patient presents himself with what, after careful examination, appears to be a syphilitic affection, but on interrogating him, and cross-questioning him in every way, he stoutly denies ever having had the pox. Still, confident in the objective signs observed, specific remedies are administered, and in a few days the lesion, which had been menacing, and even progressing rapidly, is almost cured. The result renders the accuracy of the diagnosis certain. The patient has had syphilis without knowing it, furnishing an example of *syphilis ignoré*. At first sight this appellation seems contrary to common sense, for so complex a disease, characterised by such multiple symptoms, can scarcely be supposed to pursue its course unperceived. And yet not only may this be so, but it frequently is so. In fact, the profession has ceased to take the denial of the patients into account, and treats their cases solely from the aspect they present. At St. Louis *syphilis ignoré* is of such constant occurrence, that during five months of the present year, in Dr. Fournier's service alone, there have been twenty-eight persons the subjects of syphilis without being aware of it, and that when only counting tertiary syphilides and the most obvious cases. As is always the case there, the treatment has confirmed the diagnosis.

These cases are much more commonly met with among the common people than in the well-to-do classes, which is but a natural result of the differences in situation, education, and the care taken of the person. The aristocracy and mercantile classes are pretty well informed on the matter of syphilis by means of reading and conversation, and even by the advertisements in the newspapers. They keep a sharp look-out, and on the slightest alarm have the time and money to get themselves at once treated. It is quite different with the lower classes, whom the absence of education, carelessness, indigence, and their daily toil, expose much more easily to the occurrence of *syphilis ignoré*. It is also incomparably more frequent in women. A man is much more conversant with syphilis; he knows from his

youth that this is his enemy, and he is often acquainted with it before being exposed to its dangers, "were it only by the classic visit to the Musée Dupuytren, which some fathers of families consider it a duty to make their sons pay on quitting school." Thus forewarned, men have much less chance of failing to recognise syphilis. But women live in complete ignorance of these things, to which they are utter strangers. How many honest women there are, and even mothers of families, who do not even suspect the existence of this disease! But this very ignorance, if they become the subjects of it, exposes them all the more to a non-recognition of their enemy. Of the twenty-eight cases above alluded to, twenty-two were women and six men.

Thus syphilis may remain ignored, and this may be explained by numerous reasons, the principal of which are —1. That a certain number of cases of syphilis fail to be recognised because they have a non-venereal origin. In the eyes of most people the idea of syphilis is necessarily connected with an impure sexual intercourse; and when the disease is in any other part than the genitals, it is firmly believed to be due to something else. Little notice is taken of it, and it is allowed to run on until serious tertiary symptoms enforce the diagnosis. There are, in fact, many causes of non-venereal origin of syphilis, as contact with syphilitic children; domestic contagion, from the use of a pipe, spoon, etc.; professional contagion, as with doctors and midwives; contagion by surgical instruments or by certain operations, such as Eustachian catheterism, the use of the bistoury, the speculum, serre-fins, etc.; contagion by vaccination, etc. Any of these forms of syphilis may remain ignored, even by those whose very occupations ought to prevent their overlooking them. "In fact, doctors and midwives are often surprised in this manner. I knew a midwife who had a syphilide on her finger without being aware of its nature; and one of my fellow-students, now a very distinguished physician, had on his finger a well-characterised syphilitic lesion for more than six months, which he regarded as an anatomical tubercle. If practitioners allow themselves to be deceived in this way, how much more are people of the world liable to overlook an attack of syphilis!" 2. Syphilis may remain ignored because its symptoms have been overlooked or its nature has not been demonstrated. The symptoms of syphilis, in fact, are not always so evident or special even that the practitioner can pronounce at once upon them. A well-marked case of syphilis, with chancre, bubo, roseola, alopecia, cephalalgia, articular pains, iritis, etc., may still be mistaken for another affection. The chancre, especially if superficial, may be overlooked, or mistaken for some trifling hurt, even in men, and especially in women when it is placed on the cervix uteri. Bubo, in its nature indolent, is generally ignored; and the syphilides, being unattended with pruritus, do not give rise to pain or itching. Roseola is almost always overlooked by the patient until it has been pointed out to him; and so on with the various other symptoms, which, when not overlooked, are attributed to various causes; so that, in fact, the syphilitic patient with the most perfect faith may easily believe that he is not the subject of syphilis. 3. Syphilis is the more liable to be ignored when the original symptoms are benign and the secondary ones have scarcely existed. A long silence follows this period, which has only been characterised by a more or less ephemeral roseola and a few patches in the throat; then, ten or fifteen years afterwards, some grave accident supervenes, which leads to the discovery of the diathesis. 4. In women syphilis is the more likely to remain ignored, since all that is possible is done to hide the nature of the disease from them. The husband or the lover entreats the surgeon to treat his victim without revealing to her the cause of her malady; and amidst this "true conspiracy of silence" she becomes cured of her *syphilis ignoré*.

The practical conclusion is, that there exists a certain number of cases of syphilis, the diagnosis of which must be arrived at exclusively from the character of the lesion under observation, in spite of the silence of their history and the denials of the patients. Whenever the practitioner finds himself in the presence of such a case, in which all antecedent is denied, he should submit the patient to a second and even a third scrupulous examination, comparing the signs present with those which might be furnished by other diseases. But, having convinced himself that the lesion is syphilitic, he should institute its specific treatment in spite of the denial and even the most earnest protests of the patient. The experience of his predecessors and daily clinical teaching establish his right and duty. "The science of the physician," in the words of Ricord, "is above the assertions of the patient." The doctor affirms and the patient denies; but there is infinitely most chance that the former will be found right.

REVIEWS.

Sanitary Examinations of Water, Air, and Food: a Handbook for the Medical Officer of Health. With Illustrations. By Cornelius B. Fox, M.D., M.R.C.P., Medical Officer of Health of East, Central, and South Essex; etc. London: J. and A. Churchill. 1878. Pp. 508.

Of the three sections into which this volume is divided, the first one, which treats of the sanitary examination of water, may be regarded as a revised and enlarged third edition of the same author's *brochure* on "Water Analysis." But as the changes and additions in this section are both numerous and important, and as the other two sections—those on the Sanitary Examination of Air and Food—are entirely new, the volume may altogether be looked upon as a perfectly new treatise on the very important subjects of water, air, and food in their various sanitary aspects and relations.

The work is intended primarily as a handbook for medical officers of health, and for any others who may be actually engaged in sanitary investigations. To all such it must prove especially valuable, from its exhaustive enumeration and detailed description of the newest and most approved methods of procedure in sanitary examinations. Its value in this respect as a practical manual is also greatly enhanced by the practical hints and cautions which the author's experience enables him to incorporate with the description and comparison of the various processes.

But the subjects of the volume are scarcely of less interest to the medical practitioner than to the officer of health. At any time, and especially in our own time when preventive medicine is beginning to receive some of the attention it deserves, the subjects of water, air, and food—so important in relation to the prevention, causation, and propagation of disease—demand the studious consideration of everyone who is called upon to deal with disease at all. For if the general practitioner is to know anything of sanitary science, he ought surely to make the study of these three ever present and ever operative agencies of health and disease a matter of primary consideration. And though the ordinary medical practitioner cannot be expected to conduct the more technical or tedious investigations devolving on the medical officer of health, yet some acquaintance with the facts and processes discussed in the volume before us will often enable the medical attendant to direct attention betimes to suspected sources of contamination, and thus to avert much trouble and suffering.

On account of the fact mentioned above, little need be said regarding Section I., on the sanitary examination of water. After pointing out the difficulty in giving a definition of what constitutes a wholesome water, Dr. Fox proceeds to discuss in order the methods for the determination of the character and quantity of the various impurities to which water is liable. Towards the end of the section there are a few chapters containing useful practical directions regarding the collection of samples, the avoidance of likely mistakes, and the final formation of an opinion and the preparation of a report on the samples submitted to analysis.

Section II., which deals with the sanitary examination of Air, is divided into four parts. The First Part mentions in detail the different kinds of impurities found in atmospheric air, while in the Second Part we have a description of the physical and chemical means employed for the detection and estimation of the amount of the most important of these impurities. These different processes are arranged in two groups—the first, called the direct method, which has for its object the actual detection of the impurities; and the second, an indirect method, in which the purity of air is estimated by the amount of ozone and other purifying agents which have not been used up by the organic impurities. This last method, however, is still too uncertain and unsatisfactory to be of real practical service. In the Third Part we have a sketch of the relation between certain meteorological variations in the condition of the air and

states of health and disease. This portion of the volume must prove quite as interesting to the general practitioner as to the sanitary official. The Fourth Part describes the methods of estimating the different conditions of the atmosphere in respect of temperature, moisture, electrical state, etc. This portion is, therefore, a compendium of meteorology, so far as the medical officer of health requires to employ that science, and as such will no doubt prove very useful.

Section III.—the shortest one of the three—deals with the sanitary examination of food. In successive chapters we have details regarding the inspection and examination of meat, poultry, fish, fruit, corn, flour, bread, and milk: the normal or healthy, and the diseased or adulterated, conditions of each article being compared and contrasted.

In the execution of his task the author has wisely adopted a style as free from technicalities as possible, so that one who possesses only the average chemical knowledge of a qualified medical practitioner may, by the aid of the handbook, instruct himself in the methods of sanitary examination. We think that the author has now and then gone rather out of his way, in writing a practical manual, to enforce his own opinions and to criticise and condemn those of others. But from what we have said it will be evident that the work is likely to prove a most useful one, especially to medical officers of health. The printing and general get-up of the volume are excellent.

Typhus et Fièvre Typhoïde. Par le Dr. Masse, Officier de la Légion d'Honneur, etc. Paris, 1878. G. Masson, Éditeur.

Typhus and Typhoid Fevers. By Dr. Masse, Officer of the Legion of Honour, etc. Paris, 1878. G. Masson, Publisher.

This work consists of two essays which have received a silver medal from the French Académie de Médecine. The first essay gives a detailed account of an epidemic of typhus which was observed at the Hôpital du Dey at Algiers in 1868, and which partly coincided with, and partly followed, a severe famine among the Arabs to which thousands of them succumbed. The subject of typhus is not one in which we now take very great interest in England, as the disease is happily rare; hence we need not discuss Dr. Masse's descriptions of its phases as observed by himself. The great point of importance which he brings out is, that famine alone is inadequate to produce typhus. Thousands of starved Arabs died in their villages or encampments, but typhus did not appear because there was no overcrowding. Again, the disease did not break out in the hospitals or the forts at Algiers into which the sufferers from the famine were admitted until the demand for room was greater than the supply; and of two forts, one of which was overcrowded, and the other not so, the former was attacked, and the latter not.

The difficulty with which typhus transmits itself where the hygienic conditions are good is shown by the almost absolute immunity enjoyed by the civil population of Algiers. The type of fever, however, does not appear to have been, for typhus, a very severe one, for out of 311 persons attacked by it 263 recovered, and 48, or 19 per cent., died.

The second essay describes an epidemic of typhoid fever which occurred at the military hospital at Vincennes in 1874—that is to say, since the Franco-Prussian War. We note the date particularly, because in his essay Dr. Masse expressly refers to several hygienic errors to which the French soldiers, and most of all the recruits or conscripts, were exposed at that time, and which, as they doubtless existed before the war, must have reacted most injuriously on the *physique*, if not the *morale*, of the troops in that campaign. In the first place, the soldiers at the Fort of Vincennes, 4500 in number—which, being the largest, we may take as the type of the Paris forts which suffered from typhoid fever—were badly fed. The soup was often uneatable, and the haricot beans were too hard to boil, while the meat was not always of the best quality. Secondly, the men—if such they can be called, many of whom were scarcely full grown—were forced to work excessively hard. Thus they rose, to take a concrete example, at 5 a.m., and, after roll-call, worked till 9. At 9.30 soup was, as they say, "served," and *immediately afterwards* the arms had to be cleaned and drill gone through until 1 p.m., when there was a theoretical lecture until 2. At 3 came work and drill until 5; from 5 to 6 p.m. soup-drinking; at 6 school until 7; at 9 roll-call and bed—all preparations for the next day having previously to be made! Besides bad food and excessive work, the recruits were, Dr. Masse thinks, too closely packed in their dormitories, which, as we can personally testify, are in some French barracks, if not in all, sitting-rooms as well. Part of the drinking-water supplied to the fort was so rich in nitrites, nitrates, and organic matter as to be totally unfit for use; and, lastly, "the latrines used by the men were detestable. They communicated with the soil of the *fossé*, into which the liquid part of the dejections passed by infiltration, so that the ground emitted a smell which reached into some of the neighbouring rooms." The *fossé* had also lately been cleaned out, and its contents were not removed from the fort. The picture here presented is scarcely favourable to French military hygiene, and we naturally feel that young soldiers under such conditions would neither be likely to develope into strong and healthy men who would give a good account of any enemy they might march against, or to resist the invasion of an infectious disease. At any rate, Dr. Masse, who was on the spot, attributes the extent of the epidemic to the enfeebled condition of the men, and probably with good reason.

As to the actual exciting cause of the epidemic the evidence is less clear. The first case appeared on July 25, at the Fort of Vincennes; on July 27 there were four more cases sent into the hospital from the same place. On the 28th a case came from Fort Charenton, one from the bastion of the marines, and five from the Fort of Vincennes. On July 29 there was a case at Fort Nogent, the civil population of Nogent having for some time suffered from typhoid fever, with several deaths. Hence the original source of the disease may have been at Nogent, though the sanitary state of Fort Vincennes must have largely aided in spreading the contagion. Dr. Masse, however, believes in the spontaneous origin of typhoid fever under certain, at present ill defined, conditions, and perhaps others (*pace* Professor Tyndall) may agree with him. A striking proof of the existence of *some* relation between the state of Fort Vincennes and the epidemic is afforded by the fact that when the whole garrison was marched out and encamped on the plateau of Gravelle the number of new cases at once decreased, and the severity of the disease, as evidenced by the diminished number of deaths, was quickly affected.

Dr. Masse gives an excellent account of the main features of the epidemic, with details of interesting cases, and tables of the daily changes in the numbers of admissions, deaths, discharges, etc., as well as some meteorological observations taken at the hospital at Vincennes in 1873-74, which may be usefully studied in connexion with the epidemic.

Although we may not agree with some of his ideas about the treatment of the particular disease, typhoid fever, we can heartily appreciate the sound and rational advice which he offers to the French military authorities, with a view to diminish sickness among the troops. "You ought to give the soldiers amusement, to make the burden of their monotonous life easier. Don't cram them with knowledge; they will assimilate better if they learn more slowly. Give them more liberty. Take them to the gymnasium, and let them practise fencing, boxing, and other manly sports." Those who have seen French recruits (conscripts, remember!) moping in their barracks, will agree with us that the Minister of War should carry out Dr. Masse's suggestions, if they ever come to his notice.

Molestias Venereas e Syphiliticas, etc. Seguida de uma Summula, Pathologica e Therapeutica, e de um formulario pelo J. A. Marques. Terceira edição. Lisboa, 1878.

Venereal and Syphilitic Diseases. An Exegesis or Summary, Descriptive, Pathological, and Therapeutical, of all and every Doctrine in relation to them. By Dr. J. A. Marques. Third edition. Lisbon. Pp. 712.

This third edition of a work which for the last ten years has served in the Peninsula as principal exponent of European doctrine in respect to these diseases, has undergone considerable increase in bulk, as a consequence of increased activity during that period in the cultivation of syphilographical science.

There is no modern doctrine that arises out of this which

is not here discussed, and those among our talented contemporaries who have been prominent in these studies will certainly not complain of a want of indulgent mention: especially is this true of such as adorn these islands. We shall also find a conscientious and intelligent analysis of debates at the Pathological Society of a previous year, where praise in some respects, it is true, is mingled with dispraise. Nor are the German and French syphilographers less amply represented. No pains have been spared to make the summary complete and highly serviceable as an advanced text-book on the subject. In a general view, and in the language of the hour, the author may be accounted a dualist. He does not dispute the *chancre mixte*, or twofold chancre of Lee.

There is little peculiarity or eccentricity in the author's views, even when he is inclined to assist us with his personal experience; he would rather seem to aim at a blending of lights and classical performance. The style is weighty and axiomatic, though methodical; and we are assisted by a good index.

Dr. Marques considers the benefit of mercury as too strongly confirmed to be called in question. He approves of its long continuance in small doses; such he believes to operate as an excitant of assimilative processes, appealing to the result of experiments by Liégeois, and the American Keyes. The author adheres to the view of the West Indian production of syphilis.

In conclusion, we may congratulate him on the termination of a very complete and laborious scheme, which cannot but be a great boon to the wide-spread Lusitanian people.

NEW INVENTIONS AND IMPROVEMENTS.

GRIFFITHS' PATENT WHITE.

We have not been able to open our columns to any notice of the Paris Exhibition, but among the chemical exhibits in the British Section there is one product which does almost command, as well as deserve, special notice in a medical journal on account of its importance from a sanitary point of view. It is well known that attempts have long and earnestly been made to find a white paint the manufacture and use of which would not carry with them the danger of lead-poisoning. Several chemical products have been tried, but have failed because none of them nearly equalled lead carbonate in "body" or covering power, and all were more costly. Mr. T. Griffiths, of Liverpool, has, however, succeeded in producing a preparation which, having for its basis a sulphide or oxysulphide of zinc, is far superior in every respect to the lead carbonate. Neither in manufacture nor in employment does it in any way injuriously affect the workmen; it is a very pure, fine, beautiful white; it is unaffected by gaseous emanations, by heat, or by damp; its covering power is 20 per cent. greater than that of white lead; it is much less expensive to make; and it has no chemical or galvanic action on iron or other metals. These qualities are all of such great importance, that we are not surprised to learn that the new white is already manufactured in very large quantities, and that its value was recognised by papers being read on its excellencies, negative and positive, by Dr. T. L. Phipson, F.C.S., and Professor Lutschaunig, at the International Congress of Hygiene lately held in Paris. The proprietors of the "patent white" are Messrs. Griffiths, Fletcher, and Berdoe, of the "Silicate Paint Company," of Cannon-street, London, and Seel-street, Liverpool. They prepare also a pure sulphide of zinc, which is very fine and pure, and, it is suggested, may be employed for therapeutical purposes in place of oxide of zinc; and they will be glad to supply samples of it free of charge, in order that its value for such purposes may be fairly and well tested. The same Company manufacture an *enamel paint*, which appears to be well deserving of attention. It is non-absorbent, impervious to water, and assimilates perfectly with colour. It is easily applied with a brush, like ordinary paints, dries quickly on wood, stone, or metal, and produces a smooth, hard, brilliant, enamel-like surface; and is likely, we should think, to be very useful for the walls of hospitals, barracks, and other like buildings. We may add that we are informed that the Silicate Paint Company have been awarded, very deservedly, a medal at the Paris Exhibition for their own paints and productions, and a silver medal for "Griffiths' Patent White."

OBITUARY.

JOHN HILTON, F.R.C.S., F.R.S.

This well-known metropolitan surgeon died, on September 14, after a short illness, at his residence, Hedingham House, Clapham, in the seventy-fourth year of his age. He received his preliminary education at the Grammar School, Chelmsford, and in France; and then commenced his professional studies at Guy's Hospital. There he early became a distinguished student, and at the age of twenty-one was appointed Demonstrator of Anatomy; and he has been heard to say, when endeavouring to account for the large proportion of rejections, of late, at the primary examinations at the Royal College of Surgeons, that it was the custom in his time for "the Demonstrator of Anatomy to attend regularly in the dissecting-room at 8 a.m.; instead of, as now, at 11 or 12, coming down in a neatly appointed brougham, and wearing lavender kid gloves." Mr. Hilton became a member of the College on May 22, 1827; and when the new Charter was granted he was elected one of the Honorary Fellows of the College. He was early appointed one of the Assistant-Surgeons to Guy's Hospital, and a Lecturer in the Medical School. In 1854 he was elected a member of the Council of the College of Surgeons, and was at the time of his death the senior member. In 1859 he was appointed Professor of Human Anatomy and Surgery, and when filling that office delivered his well-known lectures on "Pain, and the Influence of Physiological and Mechanical Rest in the Treatment of Surgical Diseases." These lectures were much valued, and when published as a separate work ran rapidly through three editions. In 1865 he was appointed a member of the Court of Examiners of the College; also an Examiner in Surgery at the University of London; and at both those institutions he had the reputation of being painstaking and just in the performance of his duties. In 1867 he was elected President of the College of Surgeons, and Hunterian Orator. He also held the high and honourable office of Surgeon-Extraordinary to her Majesty the Queen. Mr. Hilton had been an able and valuable contributor to the advancement of surgical science by papers in the *Transactions of the Royal Medical and Chirurgical Society* and in *Guy's Hospital Reports*, as well as by his published works. He has left a wife and several children.

ROBERT WILLIS, M.D. Edin., L.R.C.P. Lond., M.R.C.S. Eng., etc.

Many old member of the profession, and especially those who were years ago frequenters of the library of the Royal College of Surgeons of England, will regret to hear of the death of the first librarian of that valuable collection, which event took place on the 21st ult. at his residence, Barnes, Surrey, in the eightieth year of his age.

Dr. Willis was born in or near Edinburgh, where, after a sound preliminary education, he commenced the study of his profession, and graduated M.D. of that University, soon after which he came to London, and we believe attended some lectures at St. Bartholomew's Hospital. In February, 1823, he was admitted a member of the London College of Surgeons. He then commenced the practice of his profession at Storey's-gate, Westminster, and whilst waiting for patients took to writing for the journals, and compiling and translating some standard works. But patients coming in slowly, he was recommended by Abernethy to apply for the appointment, about to be created, of Librarian to the Royal College of Surgeons—a far more congenial pursuit to Dr. Willis than practice.

The formation of the library was commenced in 1801, at which time and in succeeding years presentations and bequests of books, often in considerable numbers, were made to the College, aided by special grants from the Council; and in 1828, when the library contained nearly 11,000 volumes, Dr. Willis was appointed librarian. He at once commenced to arrange the books, and to compile a catalogue, and the library was thrown open to the members of the College; while all persons engaged in the pursuit of natural science were also freely admitted.

Whilst holding this appointment, Dr. Willis still continued his writings for the press, and translations of standard works, his first being an English version of Rayer's large work on

Diseases of the Skin; and it is said that there are in existence some books and pamphlets which, though bearing the names of other gentlemen as the authors of them, were really written by Dr. Willis. He published also "Urinary Diseases and their Treatment"; followed by "Treatment of Stone in the Bladder by Medical and Mechanical Means," as suggested to him by his friend Dr. Arnott; "Elements of Physiology, after the German of Professor Wagner, with Copious Notes"; and then, in conjunction with Dr. Marx of Göttingen, a small and interesting work on the "Decrease of Disease by the Progress of Civilisation."

During this period he became the editor of the *London Medical Gazette*, an appointment he did not long hold, as, for reasons to which we need not more fully allude here, official pressure was brought to bear on him, compelling him to vacate the editorial chair, or resign his appointment as librarian. He for some time resided in Dover-street, Piccadilly, and worked hard for a practice, as well as with his pen, as his official income was quite inadequate for the increasing wants of an increasing family, although much aided by his literary labours. Hard work began, however, to tell on his hitherto strong constitution, and he suffered seriously from hæmoptysis. The Council of the College, on his convalescence, reduced his daily hours of attendance at the library; but he still continued too ill for much work. He endeavoured to get the Council to permit an arrangement by which he would be relieved from the library work for a year; after which he proposed to resign, hoping by that time to have succeeded to a fair practice when untrammeled by official duties. His request, however, could not be granted; and soon after, in June, 1845, he resigned the appointment.

Dr. Willis, when able to resume his pen, edited for the Sydenham Society "The Works of William Harvey, translated from the Latin," adding a well known and valued life of the author; and later on he published the following works:—"On the Special Function of the Sudoriparous and Lymphatic Systems, their Vital Import, etc."; "Nathan the Wise," a dramatic poem from the German of G. E. Lessing; "Benedict de Spinoza: his Life, Works, and Influence on European Opinion"; and many papers in the medical and general journals.

His practice in Dover-street, notwithstanding his income was increased by three or four pupils paying £150 per annum, still not increasing satisfactorily, he removed to Barnes, where, in conjunction with, we believe, his son-in-law, he continued to practise until his deccase on Saturday, the 21st of last month. Only a few weeks ago he might have been seen hard at work in the former scene of his usefulness—the library of the Royal College of Surgeons—where he was completing a new and enlarged edition of his "Life of Harvey." On the occasion in question he was looking rather fatigued, and a very old friend there invited him to take a glass of sherry; but he declined the offer, saying that for long he had been almost a teetotaler, and adding that "by temperance in all things there was nothing to prevent a man living a hundred years," and that he himself meant to be a centenarian. Dr. Willis was a member of many learned and scientific societies both at home and abroad.

Sanitary Supervision.—Paris is troubled by some of the same sanitary questions as we in London are. A report of the Committee of Inspection as to the sanitary condition of dwelling-houses in Paris, to the Prefect of the Seine, of their work done during the last eight years, shows that the average yearly visits to houses or dwellings has been 3168, as against only 2812 for the period covered in their previous report. Except upon a complaint from a tenant of a house, or at the request of the Prefecture of Police or of a medical man, the Committee have no right of inspection. The Committee had hitherto received some useful information as to the insanitary condition of houses from the office of public relief and the medical attendants of the poor, but this the former had ceased to supply; and whilst regretting the fact, they request that the furnishing of such information may be made compulsory. They also call attention to the danger which arises from the sleeping of so many workmen in one room, known as a *chambrée*; and the Prefecture of Police, aware of the practice, has applied to the Municipal Council of Paris to grant a sum of £800 for the appointment of several inspectors of furnished rooms, to aid the Committee in their work.

MEDICAL NEWS.

Apothecaries' Hall, London.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, September 26:—

Baker, William Blockley, Staunton, Gloucestershire.
Bullock, Joseph Ernest, 54, Berners-street, W.
Costerton, Donald Sinclair, Kemerton, Gloucestershire.
Hopkins, William Freeman, Birmingham.
Roberts, William Arthur Ormsby, Carnarvon.
Sutton, Francis William, Richmond-terrace, Clapham-road.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Astley, John Dugdale, St. Bartholomew's Hospital.
Duncan, Wm. Archdeckne, St. Thomas's Hospital.
Watson, Frank Spencer, Charing-cross Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to all new Appointments that take place.

Leeson, J. Rudd, M.B.—A Demonstrator of Anatomy at St. Thomas's Hospital.

BIRTHS.

Bate.—On September 25, at 2, Northumberland Houses, Hackney, the wife of George Paddock Bate, M.D., of a daughter.

Crombie.—On September 29, at Hawley Lodge, Brighton, the wife of John M. Crombie, M.D., of a daughter.

Fletcher.—On September 27, at Earl Soham, near Framlingham, Suffolk, the wife of George Fletcher, M.D., of a son.

Fraser.—On September 21, at 37, Melville-street, Edinburgh, the wife of Thomas R. Fraser, M.D., F.R.S., of a son.

Keen.—On September 26, at 2, Royal-avenue, Chelsea, the wife of Wm. Keen, of a daughter.

Lucey.—On October 1, at Ben Rhydding, Wharfedale, the wife of Wm. Cubitt Lucey, M.D., C.M., of a son.

Moore.—On September 23, at 16, Llanion-terrace, Pembroke Dock, South Wales, the wife of Fleet-Surgeon George Moore, M.D., R.N., H.M.S. *Euryalus*, of a daughter.

Pletts.—On September 24, at Ryde, Isle of Wight, the wife of J. Menham Pletts, M.D., of a daughter.

MARRIAGES.

Bott—Alderson.—On September 26, at St. Mary's, Lambeth, Henry Bott, M.R.C.S.E., L.R.C.P. Lond., of Brentford, eldest son of Henry Bott, of Bourne, Lincolnshire, to Eleanor, third daughter of Joseph Alderson, of Westminster-bridge-road.

Chalk—Bennett.—On September 18, at Linton, Cambs., William Edward, only son of William P. Chalk, of Chilford Hall, to Fanny, younger daughter of Frederick Bennett, M.R.C.S., of Linton, Cambs.

Rossiter—Rawlinson.—On September 25, at Taunton, George Frederick Rossiter, M.B., of Cairo Lodge, Weston-super-Mare, to Elizabeth Jane, youngest daughter of William Rawlinson, Esq., of Hillside, Taunton.

DEATHS.

Borthwick, Alexander, M.D., at George-street, Dumfries, on September 29.

Branwell, Richard, M.R.C.S., F.R.M.S., at 19, Montpelier-place, Brighton, on September 23.

Bushell, Robert William, elder son of S. W. Bushell, M.D., H.B.M.'s Legation, Peking, at Chefoo, on July 27, in his 3rd year.

Galt, John, F.R.C.S. Eng., Ashton-under-Lyne, on September 27, aged 68.

Menzies, Robert, L.R.C.S.I., Surgeon-Major A.M.D., at sea, between Cyprus and Malta, on September 20, in his 48th year.

Watson, James, M.D., F.R.S.E., of 13, Circus, Bath, and formerly of the Bengal Medical Service, at Langley House, near Slough, on September 27, aged 83.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Derbyshire General Infirmary.—House-Surgeon. Candidates must be members of the Royal College of Surgeons of London, Dublin, Edinburgh, or Glasgow, and unmarried. Applications, stating age, accompanied by diplomas and testimonials, to the Secretary, not later than October 12.

Lancaster Union.—Medical Officer of the Southern District of the Union. Applications, with testimonials, to J. Grant, Clerk, from whom further information may be obtained.

Royal Albert Edward Infirmary and Dispensary, Wigan.—Senior House-Surgeon. Applications, with testimonials, to the Secretary, on or before November 1.

Wonford House Hospital for the Insane, near Exeter.—Resident Medical Superintendent, who will also act as Secretary. Candidates must be registered both in medicine and in surgery, and have had experience in the care and treatment of the insane. Age not less than thirty. Salary £350 per annum, with board, lodging, washing, and attendance. Testimonials of this year's date (not more than six) to the Committee of Management, Wonford House, Exeter, on or before October 19, endorsed M. S.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population in computed according to the census of 1871.

RESIGNATIONS.

Axminster Union.—The Lyme Regis District is vacant; area 4540; population 3559; salary £58 10s. per annum.

Blything Union.—Mr. R. V. Gorham has resigned the Fourth District; area 17,147; population 4414; salary £85 per annum.

Brentford Union.—Mr. F. Davies has resigned the Sixth District; area 3120; population 5531; salary £75 per annum.

Bromyard Union.—Mr. C. J. Connon has resigned the Cradley District; area 5869; population 1853; salary £50 per annum.

APPOINTMENTS.

Bath Union.—John Maunsell, M.D. Queen's Univ. Ire., L.R.C.S. Edin., to the Second District.

Belper Union.—Theophilus L. Roberts, M.R.C.S. Eng., L.R.C.P. Edin., to the Alfreton District.

Cranbrook Union.—Leslie M. Earle, B.M. and M.C. Univ. Edin., to the Hawkhurst District.

Saffron Walden.—James W. Knights, F.C S., as Analyst for the Borough.

Ticehurst Union.—Charles Vipan, M.R.C.S. Eng., to the Hurst-green District.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN SEPTEMBER, 1878.—The following are the returns (by Dr. Meymott Tidy) of the Society of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, etc.	Nitrogen: As Nitrates, etc.	Ammonia.		Hardness. (Clarke's Scale.	
				Saline.	Organic.	Before Boiling.	After Boiling.
Thames Water Companies.	Grs.	Grs.	Grs.	Grs.	Grs.	Degs.	Degs.
Grand Junction ...	19·80	0·089	0·105	0·000	0·011	13·7	3·3
West Middlesex...	19·00	0·089	0·105	0·000	0·010	13·7	3·0
Southwark and Vauxhall ...	18·40	0·103	0·105	0·000	0·011	13·7	3·3
Chelsea	16·80	0·042	0·129	0·000	0·009	13·2	3·0
Lambeth	20·80	0·096	0·126	0·000	0·010	14·3	3·7
Other Companies.							
Kent	29·90	0·001	0·435	0·000	0·001	20·6	6·5
New River ...	19·30	0·057	0·150	0·000	0·007	14·3	3·3
East London ...	17·90	0·053	0·075	0·000	0·007	13·2	3·3

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases but the following, when it was slightly turbid—namely, in that of the Lambeth Company.

UNIVERSITY COLLEGE, LONDON.—The Examiners for the Medical Entrance Exhibitions have recommended Mr. C. M. McShane, Mr. W. C. C. Wilkinson, and Mr. E. R. St. Clair Corbin, for the three exhibitions, of the respective values of £30, £20, and £10 per annum, tenable for two years.

REFUSING TO SUPPLY A SANITARY INSPECTOR.—At Levensholme the wife of a milk dealer has been fined £10, with the alternative of two months' imprisonment, for refusing to supply the sanitary inspector with a sample of milk, when it was demanded for the purpose of analysis. The defendant's husband had been four times previously convicted.

PRESENTATION.—On the occasion of Mr. Arthur Orwin lately resigning the post of Resident Surgeon to the Guest Hospital, Dudley (an office he had held for over four years), the honorary medical staff presented him with a handsomely bound copy of Heath's "Operative Surgery"; the Secretary, Matron, and nurses with a massive dining-room timepiece; and personal friends in the district with a gold lever watch and a photographic album. Each *souvenir* bore an appropriate inscription. Such recognition of service is alike gratifying to all parties.

SWEATING IN PHTHISIS.—Dr. Cérenville, Senior Physician of the Lausanne Hospital, states that from frequent use of the sulphate of atropia (one milligramme as a dose given in the evening) in the sweating of phthisis, he can corroborate the good opinions of its efficacy published by Drs. Fraentzel and Williamson. He generally finds that the first dose diminishes the sweating, while after the second or third dose it becomes arrested.—*Révue Médicale*, September 23. Prof. Germain Sée prescribes five grammes of tannic acid and one gramme of alcoholic extract to be made into forty pills, of which eight are to be taken daily. Prof. Potain prescribes from six to eight grammes of the phosphate of lime daily.—*Union Méd.*, September 24.

THE Prizes gained by the students of the Liverpool Royal Infirmary School of Medicine were distributed on the 1st inst. by the Mayor of the town, in the large theatre of the Medical Institution. The attendance was large. The introductory address was delivered by George Shearer, M.D., F.L.S., Lecturer on Botany. The following is a list of the successful students:—*Winter Session*: Lyon Jones Scholarship, A. Barron and R. Honeyburne. Second year's subjects—advanced Anatomy and Physiology, R. Honeyburne (Torr gold medal), D. Collingwood (bronze medal), F. J. Laimbeer and W. Renner (honorary certificates); first year's subjects—elementary Anatomy, Physiology, and Chemistry, A. Barron (Bligh gold medal), J. W. Ellis (bronze medal), J. G. Brown and J. Maughan (honorary certificates.) *Summer Session*: Junior subjects—Botany, Materia Medica, and Practical Chemistry, C. L. Brewer (bronze medal); Comparative Anatomy, W. T. Clegg (prize), C. L. Brewer (certificate.) Histological Prizes—R. Honeyburne and F. J. Laimbeer. Clinical Prizes—Medical, J. Baxter; Surgical, W. T. Clegg. In the evening the usual dinner was held at the Adelphi Hotel, under the presidency of Dr. W. Carter, Lecturer on Materia Medica and Chairman of the School, and was attended by about ninety members of the profession resident in the town and neighbourhood.

TREATMENT OF WOUNDS BY SALT.—M. Houze, in a paper read at the French Association, stated that he had met with great success in treating wounds with abundant purulent discharge and purulent collections by means of a saturated solution of salt. He attributes its beneficial effects to its antiseptic action and to the density of the solution. If we place some pus and a solution of chloride of sodium in a test-glass, the pus soon appears at the surface of the mixture. M. Cabello, of Madrid, stated that he had employed sea-water in the treatment of atonic ulcers with good effect. M. Rochard, on the other hand, stated that he had found that the little ulcers sometimes forming on the feet of sailors become transformed into chronic sores when the feet are exposed to the action of sea-water, so that men having such ulcers are obliged to be exempted from service. M. Lecadre has often seen sea-water employed with benefit in the treatment of wounds.—*Rév. Scientifique*, August 31.

ICE IN DIPHTHERIA.—Dr. Bleynie, of Limoges, in answer to doubts which have been expressed concerning the efficacy of his mode of treatment, which we noticed in a recent number (page 367), says that if it has failed in the hands of others this has arisen from defective administration. It is necessary (1) to bear in mind the danger of the disease which, if not arrested, will go on to fatal croup. 2. The treatment must be vigorously pursued, and the punctuality of its execution assured. 3. A fragment of ice should be introduced into the mouth every ten minutes, without any interruption, day and night, for its introduction does not awaken young children. The fragment should be swallowed when nearly melted. 4. No relaxation in the administration should be allowed until after the disappearance of the false membranes. During the first day, when such relaxation seems advisable, the ice should be given every half-hour, and every two hours for the two following days. 5. The state of the throat should be watched for some days after, and on the slightest reappearance of the deposit the ice should be resorted to again. 6. Aliments and wine to be given from the beginning. 7. The bed to be placed in an open room which is kept well ventilated. 8. Carbolic acid water to be sprinkled about.—*Rév. Méd.*, September 23.

THE THERAPEUTICAL ACTION OF DIGITALIS.—Professor Teissier, of Lyons, in a communication to the French Association, observed that notwithstanding that so much has been written on the subject, great uncertainty exists as to the employment of this remedy in heart disease. While some reserve its use for mitral lesions, others make it out to be the remedy *par excellence* in affections of the aorta. Under the influence of M. Bouillaud, it used to be regarded as exclusively sedative, while more recently it is said by stimulating the nerves of the heart to increase arterial tension—Prof. Gubler declaring that it is not the "opium," but the "cinchona" of the heart. After a clinical experience of thirty-five years, Prof. Teissier has come to the conclusion that there are few affections of the heart in which it is not a suitable medicine, and that it becomes in turn sedative or stimulant, according to the condition of

the heart. He does not regard either hypertrophy or aortic affections as contraindicating its employment; and as to the diseases of the right side of the heart, they can but benefit by a remedy which both increases the *vis a tergo* and increases the nervous circulation. Prof. Gubler observed that digitalis is truly a tonic of the heart, although its tonic action may be only indirect. The cases in which it succeeds best are those where the cardiac disorders are most considerable, the increased energy being accompanied by debility of the organ. Everyone is aware that, as regards force, there is a great difference between the impulse of the heart and the arterial pulse, all having seen cases wherein, while the heart beats violently, the pulse remains small and feeble. It is in such cases that tonic action is advantageous, digitalis proving useful when the cardiac action is the dominant feature. The true contraindications are found in the fundamental feebleness of the heart and irregularities of rhythm—what may be termed cardioplegia. Prof. Gubler considers that sphygmographic tracings are highly deceptive, the positions of the instrument with relation to the artery entirely changing their character.—*Rév. Scientifique*,

THE RECENT INQUEST AT STEEVENS' HOSPITAL, DUBLIN.—A police case, which arose out of the disorderly proceedings at the conclusion of the inquest noticed in last week's *Medical Times and Gazette*, and which, by the way, took place at Steevens' Hospital, was heard and decided in the Southern Divisional Police-court, Dublin, on Thursday, September 26. Mr. Richard Hayes, M.B., appeared before the presiding magistrate to answer the summons of Mr. Callan, M.P., "for having, on the 19th day of September inst., between the hours of 8 and 9 p.m., at Steevens' Hospital, Dublin, been one of a riotous and disorderly party who assaulted the complainant contrary to the form of the statute in that case made and provided." Both plaintiff and defendant were represented by eminent counsel. After a good deal of evidence had been tendered, the magistrate said that, in his opinion, there was no case against Mr. Hayes. "There had been, no doubt, a great deal of confusion and excitement that evening, but Mr. Callan was certainly labouring under a mistake as to the assault upon him." He concluded his judgment by saying, "There is not, in my opinion, a shadow of proof—good, bad, or indifferent—that there was a riot, or anything approaching a riot. It is completely shown to demonstration that, whoever assaulted Mr. Callan, it certainly was not Dr. Hayes."

SPONTANEOUS FRACTURE OF BOTH THIGHS.—Dr. Nedopil, clinical assistant of Prof. Billroth, relates (*Wien. Med. Woch.*, July 20) the following very remarkable case. A Privat-beamte, aged thirty-two, a strong and healthy-looking man, was admitted to the Clinic. With the exception of a hard syphilitic ulcer, which showed itself in 1868, and an exanthem which followed it about two years afterwards, he has always remained in good health. He was not subjected to any complete anti-syphilitic treatment. Some years ago he married, and has two healthy children. On July 6, 1876, while walking on even ground, he fell down; and, on being raised, the left femur was found to be broken just below its middle. For six or eight weeks prior to the accident he had complained, after much walking or standing, of dull pains in the bones, especially during the evening, which, however, did not prevent his sleep. The patient felt sure that the limb was already broken when he fell. He was treated at his own house, the cure being completed in about ten weeks, with about three centimetres shortening of the limb. On May 6, 1877, he came to the Clinic, having since March been tormented with the same kind of pains, only much more intense, in the right limb as those which had preceded the fracture of the left. Iodide of potassium and baths were prescribed. On July 6 (exactly one year after his former accident), having tripped on getting out of the bath, a fracture occurred at just above the middle of the right femur. He recovered in about the same time, and, when seen in September, there was scarcely one centimetre difference between the limbs, and he was able to walk perfectly when the pains had left him. In February, 1878, however, these returned severely in the limb last broken. Baths and the Haller iodine water were prescribed, and last June he was much better, of very healthy appearance, and able to walk well by aid of a stick. Dr. Nedopil is of opinion that the accidents have arisen from a diseased state of the bone, due to the syphilis which he contracted about nine years ago.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. John Drysdale, Port Chalmers.—Received with thanks.

A Student, Dr. Williams, and others.—We never recommend hospitals. Consult the Students' Number of the *Medical Times and Gazette*, which will give you the desired information—lists of fees, and all the regulations.

A Medical Officer.—The essential principle of the hospital drain disinfector, invented and registered by Mr. William Soper, M.R.C.S., is the slow and constant evolution of chlorine gas in immediate contact with the sewage of infectious and other hospitals.

Nestor.—Before the East India Company carried out the project of embarking in the trade, the only opium exported into China was conveyed thither by the Portuguese from Turkey. The annual supply did not exceed 200 chests, and it was used strictly for medicinal purposes. In 1773 the Company first engaged in the traffic.

An English Sanitary Primer for India.—The Government of India offer a premium of 500 rupees for the best English sanitary primer of not more than twenty-four pages. The prize work will be the property of the Government, who will be at liberty to translate it into different vernacular languages.

Factory Legislation.—The first Factory Act ever passed (42 George III., c. 73) was called specifically "The Health and Morals Act," and while the immediate cause of its enactment was the alarming spread among the manufacturing population, especially of Derby, Nottingham, and Lancashire, of epidemic disease, this condition of things, it was stated, was chiefly brought about by the new conditions of industrial labour. The original design and purpose of the English factory system was entirely moral and sanitary.

Yellow Fever Epidemics: Rio de Janeiro.—A revised code of rules has been promulgated lately by the authorities at Rio de Janeiro, making some better regulations as to the shipping when yellow fever is epidemic in the neighbourhood. It is ordered, *inter alia*, that the discharging of cargoes is to take place only between five and ten in the morning, and between four and six in the evening, so as to avoid the scorching sun and the dangerous night-dews.

Obstetrician.—It is true that every infant born in France, whether the child of a prince or of a *chiffonnier*, was obliged, according to law, to be presented at the *mairie* of its parish within twenty-four hours of its birth. This harsh measure induced many a doctor to sign certificates of thriving infants being in a despairing state of health, in order to allay the fears of their anxious mothers. The object of the law was to ascertain the number of male births, and inscribe their names for future enrolment in the army.

Nuisances.—The Metropolitan Board of Works summoned two manure manufacturers at the Southwark Police-court, last week, for creating a nuisance in the management of their business. In the first case, a manufacturer, of South Bermondsey, was charged with endangering the public health by failing to adopt proper measures to neutralise the effects of accumulations of decayed fish, tanners' refuse, and other rubbish. The defendant, who urged that he had done everything in his power to comply with the by-laws of the Board, was fined £5 and costs. Notice of appeal was given. The other case, on a similar charge, was adjourned. A firm of gut-makers in the Borough have been fined £20 for persistently violating the provisions of the Act prohibiting offensive vapours being allowed to escape from factories. It was stated that notices had been several times served upon the defendants to abate the noxious smells, but nothing had been done in the matter.

DR. FOTHERGILL'S VIEW AS TO FINAL CAUSES.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—On reading Dr. Fothergill's Lectures on Diseases of the Heart in your recent issue, I was unpleasantly impressed with what seemed to be on the part of the lecturer, an obtrusion of (not to use what might appear an offensive phrase) the denial of ultimate design. He there says:—"It is generally stated in text-books that hypertrophy exists to overcome obstruction, thus attributing a sort of intelligence to the heart-walls—just as a savage, who does not comprehend the causes of a storm, attributes it to an angry god. There exists no greater obstacle to the right comprehension of this trophic change than this impression of an intelligence underlying it." Here I believe he misquotes the general statement on the point. When it is said that hypertrophy exists to overcome obstruction (this is Dr. Fothergill's mode of putting the opinion), all that is meant is, evidently, that obstruction results frequently in hypertrophy, and that this latter effect acts with more or less efficiency in lessening or otherwise modifying that obstruction, which in its absence would be more rapidly fatal. If herein there is discerned an instance of pre-existing design, of course not on the part of the heart-walls, and such as we see in many other diseased processes, it indicates a fault of reasoning to assume the positive negation of the contrary. And if physical science be not necessarily concerned with the doctrine of final causes (as understood in theology), it does not necessarily exclude it. Therefore, a lecturer on disease goes, in my opinion, far outside of his subject when he thrusts upon his audience mere hypothetical assumptions, involving, if true, the most serious conclusions; and that, too, at a time when, from all the circumstances of the case, that audience cannot question then and there the correctness of his statements.

Hanley, September 30. I am, &c., J. F.

Tea.—The acceptance of tea by English taste was acknowledged nearly 220 years ago, when tea appeared for the first time among taxable commodities, it being thought worth while to levy a duty of 8d. a gallon upon all made for sale. An advertisement in 1658 informed the public that the excellent physicians approved drink called "tcha," "tay," or "tea," and that it was to be had at the "Sultaness's Head," a coffee-house in Sweeting's-alley. Garway, the founder of "Garraway's," claimed the merit of being the first to offer tea in leaf and drink for public sale in 1657, earning the patronage of many physicians, noblemen, gentlemen of quality, and merchants, by retailing it at from 16s. to 50s. a pound; whereas, before he embarked in the trade it was difficult to get at the rate of £6 or £10. By 1659 the new beverage was obtainable in most streets in London.

COMMUNICATIONS have been received from—

Mr. George Gaskoin, London; Dr. James Ross, Manchester; Mr. H. A. Reeves, London; Dr. T. T. Whipham, London; Dr. A. W. Edis London; Mr. E. Nettleship, London; Dr. W. M. Whistler, London; Mr. J. Chatto, London; The Secretary of the Clinical Society of London; Dr. Pearson Irvine, London; The Secretary of the Medical Society of London; Mr. T. M. Stone, London; Mr. F. Fletcher, London; Mr. Frost, Stoke-on-Trent; Dr. Ed. J. Sparks, Crewkerne; Dr. M. Alsberg, Cassel; The Registrar of Apothecaries' Hall, London; Dr. Gillespie, London; Mr. Isaac Gregory, Blackpool; Dr. J. M. Bruce, London; Mr. J. T. W. Bacot, Seaton; Mr. R. W. Parker, London; Dr. Thos. Barlow, London; Messrs. C. Lockwood and Co., London; Dr. Fairmann, Hanley; Mr. A. Marsh, London; Dr. Lee, Washington, U.S.A.; Dr. J. W. Moore, Dublin; Mr. Talfourd Ely, London; Dr. M. Tidy, London.

BOOKS AND PAMPHLETS RECEIVED—

Raymond Caizergues, Des Myélites Syphilitiques—St. Moritz and the Upper Engadine—Robert Liveing, A.M. and M.D. Cantab., F.R.C.P. Lond., A Handbook on the Diagnosis of Skin Diseases—Herbert Fry, Royal Guide to the London Charities for 1878-79—James Stocken, L.D.S.R.C.S. Eng., Elements of Dental Materia Medica and Therapeutics, with Pharmacopœia — Annual Reports of the Supervising Surgeon-General of the Marine Hospital Service of the United States, 1876-77—Nathan Allen, M.D., The Prevention of Disease, Insanity, Crime, and Pauperism; Studies on the Laws of Life—Charles Bell Keetley, F.R.C.S., The Student's Guide to the Medical Profession.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médicale—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Cincinnati Lancet and Clinic—Gazette Hebdomadaire—Hardwicke's Science Gossip—Chicago Medical Times—American Practitioner — Students' Journal and Hospital Gazette — Monthly Homœopathic Review—Medical Temperance Journal—Veterinarian—Glasgow Medical Journal—Edinburgh Medical Journal—Birmingham Medical Review.

APPOINTMENTS FOR THE WEEK.

October 5. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

7. Monday.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

8. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

9. Wednesday.

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 1½ p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

10. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

11. Friday.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

Clinical Society, 8½ p.m. Mr. Hulke, "Fracture of Both Humeri, Rupture of Left Brachial Artery, Loss of Conductivity of Left Median and Radial Nerves, and other Injuries; Recovery, with Restoration of Nerve Function." Mr. Hutchinson, "A Case of Supra-Pubic Lithotomy for a Large Stone." Mr. Lucas, "Case of Pistol-Shot Wound of the Skull." Dr. Whipham, "Perforation of the Appendix Cæci and Cæcum, followed by Pyæmia."

Quekett Microscopical Club, 8 p.m. Ordinary Meeting.

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 28, 1878.

BIRTHS.

Births of Boys, 1262; Girls, 1232; Total, 2494.
Average of 10 corresponding years 1868-77, 2189·8.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	693	662	1355
Average of the ten years 1868-77	657·5	630·1	1287·6
Average corrected to increased population ...	...	...	1378
Deaths of people aged 80 and upwards ...	...	...	39

Note.—The births and deaths registered last week may be compared with the average numbers in the corresponding weeks of the ten years 1868-77 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	3	6	2	12	...	3	1	12
North ...	751729	1	1	3	2	15	1	5	2	7
Central ...	334369	...	...	3	2	10	...	5	...	4
East	639111	...	1	8	1	6	...	3	...	21
South... ...	967692	1	1	10	6	10	...	4	3	17
Total	3254260	2	6	30	13	53	1	20	6	61

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·669 in.
Mean temperature	52·2°
Highest point of thermometer	67·3°
Lowest point of thermometer	38·2°
Mean dew-point temperature	47·7°
General direction of wind	Variable.
Whole amount of rain in the week	0·19 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, September 28, 1878, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1878.*	Persons to an Acre. (1878.)	Births Registered during the week ending Sept. 28.	Deaths Registered during the week ending Sept. 28.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3577304	47·5	2494	1355	67·3	38·2	52·2	11·22	0·19	0·48
Brighton	103923	44·1	60	37	67·8	41·7	52·9	11·61	0·09	0·23
Portsmouth ...	129461	28·9	77	36	...	...	...	...	...	...
Norwich	84620	11·3	41	45	66·5	43·0	51·3	10·73	1·10	2·79
Plymouth	73599	52·8	42	21	62·0	40·5	51·9	11·06	0·95	2·41
Bristol	206419	46·4	119	63	67·7	34·3	52·0	11·11	0·94	2·39
Wolverhampton ...	74240	21·9	44	23	64·5	37·5	49·6	9·78	0·82	2·08
Birmingham ...	383117	45·6	299	185	...	...	...	...	...	...
Leicester	121473	38·0	76	49	67·5	35·5	50·4	10·22	0·72	1·83
Nottingham ...	165267	16·6	102	73	65·5	33·7	49·2	9·55	0·48	1·22
Liverpool	532681	102·2	412	270	61·4	46·0	52·8	11·56	2·25	5·71
Manchester ...	360514	84·0	244	168	...	...	...	...	...	...
Salford	170251	32·9	141	72	63·5	34·8	49·4	9·66	1·62	4·11
Oldham	107366	23·0	73	37	...	...	...	...	...	...
Bradford	185088	25·6	134	76	59·0	37·2	49·5	9·72	1·18	3·00
Leeds	304948	14·1	218	132	61·0	39·0	51·0	10·56	0·76	1·93
Sheffield	289537	14·7	213	127	66·0	37·0	51·3	10·73	0·44	1·12
Hull	143139	39·4	106	74	61·0	36·0	49·8	9·89	0·74	1·88
Sunderland ...	112459	40·6	83	49	68·0	44·0	53·7	12·06	0·72	1·83
Newcastle-on-Tyne	144570	26·9	114	59	...	...	...	...	...	...
Edinburgh... ...	222371	53·1	146	87	61·8	40·7	50·8	10·45	0·94	2·39
Glasgow	566940	94·0	387	230	63·0	44·0	52·2	11·22	0·99	2·51
Dublin	314666	31·3	210	175	67·1	37·9	53·7	12·06	0·43	1·22
Total of 23 Towns in United Kingdom	8373953	38·0	5835	3443	68·0	33·7	51·3	10·73	0·86	2·18

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·67 in. The highest reading was 29·99 in. at the beginning of the week, and the lowest 29·29 in. on Monday afternoon.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1878 by the addition of seven years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. Nottingham, Salford, and Oldham, however, form exceptions to this rule, as the estimates for these three towns have been revised with the aid of local information as to the rate of increase of inhabited houses. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE
ON A CASE OF ELEPHANTIASIS ARABUM.

By TILBURY FOX, M.D. Lond., F.R.C.P.,
Physician to the Department for Skin Diseases in University College Hospital.

GENTLEMEN,—Last week I made some remarks upon a case of the anæsthetic variety of elephantiasis Græcorum; to-day I propose to speak to you about the man upstairs who is suffering from elephantiasis Arabum, or tropical big leg, as it is sometimes called. Now, this elephantiasis Arabum, or pachydermia, as I stated incidentally the last time we met, consists in hypertrophy of the skin and subcutaneous tissue, leading to great deformity and enlargement of the limb, with thickening, induration, and fissuring of the integuments, and more or less papillomatous or warty growth of the skin. It is also attended by lymphatic inflammation, obstruction, and varicosity. The malady is essentially an endemic disease of tropical parts. It attacks males by preference in the proportion of about five to two. The poor and ill-fed are much more prone to it than the well-to-do; and agriculturists and those who are exposed to the sun, in damp and humid regions, are more peculiarly liable to be attacked by it. As regards the age of individuals affected by elephant or tropical big leg, it may be said with pretty tolerable certainty that the disease is rarely found in persons of less than fifteen years of age, whilst it occurs most commonly in those between the ages of fifteen and forty. The leg is generally the part attacked, and indeed in more than 90 per cent. of all cases, though the joints, the scrotum, the arms, and the face, suffer occasionally. The average size of the leg at its biggest part is said upon good authority to be about fifteen inches in circumference, but the limb may be as much (according to Mr. Vincent Richards) as thirty-six inches round. In some cases the disease would seem to be hereditary. Lastly, elephant-leg is attended by recurrent attacks of febrile disturbance of greater or less severity, and, as I have said, by lymphatic and glandular inflammation and its consequences; and, as a rule, the enlargement of the limb is found to be augmented by, and to be connected, as it were, directly with these febrile attacks.

The relationship between these latter conditions, in an etiological point of view, is not well defined. It is usually taught that the disease and its exacerbations are ushered in by distinct attacks of "fever" of some few days' duration, and to which the term "elephantoid fever" has been given by Sir Joseph Fayrer; and that coincidently or immediately following as a consequence, redness, pain, and tension, and perhaps knottiness, are noticed over the course of the lymphatics of the limb, which become enlarged and otherwise diseased. But there are many exceptions to this sequence of events. Dr. Farquhar and I have recently collected a good deal of information upon this particular point;(a) and it is certain—firstly, that the disease may come on insensibly, and develope gradually, without any febrile disturbance at all, as in twenty-two out of 636 cases collected by Mr. Richards of Balasore, and twenty-six out of eighty-seven cases tabulated by Mr. Sheriff (Triplicane, Madras), and in some cases without any lymphatic inflammation; secondly, that in a large number of instances local attacks of inflammation of the limb or lymphatics are preceded or ushered in by febrile attacks lasting from two to three days; thirdly, that the two conditions may be coincident; and, fourthly, that the febrile paroxysms are frequently secondary to glandular inflammation.

The more the clinical history of the disease is examined, the greater is the accumulation of evidence in favour of the dependency of the febrile state upon the lymphatic and glandular inflammation. Dr. Farquhar and I have found upon a careful examination that the remarks of some of our informants, to the effect "that febrile attacks precede the local disease," do not so much refer to actual glandular mischief as to the enlargement of the implicated limb with inflamed lymphatics; and in that sense, no doubt, the fever would *precede* the local disease at the same time that it might be symptomatic of lymphatic inflammation, and follow the swelling of the glands." Mr. Richards of Balasore, who has given so graphic a history of nearly 700 cases, says, "I have noticed the lymphatic disturbance two or three hours before the advent of the febrile paroxysm. Indeed, so commonly does the lymphatic disturbance *precede* the paroxysm of fever, that many patients regard the swelling of the glands of the axilla or groin as a premonitory sign of an attack. Patients will inform you that in two or three hours they will have fever, etc." The same evidence is afforded by the clinical history of Mr. Sheriff's eighty-seven cases before referred to.

The tendency of modern writers is to regard the disease as essentially the result of lymphatic inflammation and obstruction, the febrile attacks being due to the lymphatic mischief. As regard the cause of the lymphatic disease, two main theories are in favour: one which attributes it to an altered blood-state, induced by climatic influences, and in connexion with which exposure to cold and damp operates as a speedy excitant of lymphangitis; the other is the presence of filariæ in the lymphatics. The latter explanation as the cause of common uncomplicated elephantiasis, to my mind, cannot be entertained at present. The idea that filariæ are the cause of elephantiasis has arisen thus: filariæ have been found in the lymph and blood in cases of enlargement of the scrotum, with exudation of *chyle-like fluid* (chyloderma). They have also been detected in cases of elephantiasis in connexion with this so-called "lymph-scrotum"; and it has been assumed that as filariæ cause the lymphatic varix in the one, it must do so in the other form of scrotal and in leg enlargement, in which chyloderma, or chyluria, is absent; but it is assumed that the two conditions—the chylous and non-chylous enlargements—are the same. But facts at present seem to indicate that filariæ have not been found in uncomplicated elephantiasis—that is, in disease without chylous exudation; and secondly, that filariæ occur only in connexion with chyluria (chylous abscess, as shown by Dr. Bancroft especially) and its associated condition, the escape of chyle from the skin, or chyloderma. Filariæ, therefore, are the cause of the conditions associated with chyluria and chyloderma, and not of elephantiasis; but the former may complicate the latter. As Dr. Farquhar and I have elsewhere stated: "They who affirm that the cause of ordinary elephantiasis of the scrotum is connected with the development of filariæ in the lymphatics appear to forget that the results of lymphatic obstruction induced *by different causes* —for example, elephantoid inflammation and inflammations due to filariæ—must bear a close resemblance the one to the other. There must be varicosity of the vessels and general enlargement of the tissues in the two cases; and this similarity is very likely to be misinterpreted into identity."

It must be allowed, also, that the fact that filariæ are often found, and have existed some time, in the blood and urine of patients who exhibit no symptoms or signs of elephantiasis, is a strong argument against their presence being the real cause of the latter disease.(b) The concurrence of filarious blood (filarious abscess) and elephantiasis in the same subject is not surprising when it is recollected that these things are co-endemic and common in the regions where they are chiefly observed; and what, therefore, at first sight seem to be cause and effect *may* often all be best explained—seeing that there is no necessary connexion between the two—as a concomitance. It has yet to be proved that "true lymph-scrotum" (varix lymphaticus) and true elephantiasis are identical diseases.

There is one other clinical point which I will notice before I read to you my notes of the case under notice. It is this: In England we occasionally observe a condition of the limb answering in all its naked-eye characters to elephantiasis of the limb, in those who have never been out of England, and as secondary to eczema; and it would seem that the disease is to be explained as an hypertrophy of the whole textures, the immediate consequence of long-continued hyperæmia. But as we frequently notice long-continued hyperæmia without much hypertrophy of the leg-tissues, it is but fair to assume that where elephantiasis does occur there must exist some special proclivity on the part of the tissues to take on, under favourable circumstances, a hyperplasic increase; so that it can scarcely be said that the hyperæmia is the true cause of the elephantiasis.

(a) "Endemic Skin and other Diseases of Hot Climates." 1876. Churchill.

(b) Many cases recently recorded by Dr. Manson of Amoy, in the *Customs Gazette*, and the one now under consideration, as we shall see presently, illustrate this point.

The following is our patient's history:—C. M., aged thirty-five years, watchmaker by trade, states that he has always lived very well, and in houses which have been healthy and dry. He has been a temperate man, and has always been well clad. He has lived in London fourteen years, but previously he resided in Scotland. The patient is a short man, with lateral curvature of the spine, which he attributes to the use of a crutch on the right side. His family history affords no special information. The patient is very pale, but his habitual state of health has been very good, with the exception that he has suffered from occasional attacks of rheumatism. His present illness began twenty years ago with a sprain of the ankle, which occurred during a slide on the ice. Two or three weeks after the accident the skin at the outer border of the right foot, about two inches from the heel, began to inflame, and the man seems to have suffered subsequently from an indolent ulcer at the same situation for some time. The patient affirms that the sprained ankle itself got well, but that the sore remained, and he was obliged to use a crutch to get about. The sore has never healed up since. About ten years ago the whole foot began to swell and to become indurated, and the sore continued to discharge a yellowish matter. About this time the other leg appears to have become affected with some eczematous inflammation. A short time after this, a lump the size of a hen's egg appeared upon the upper part of the thigh or groin, and the patient sometimes felt a cord running from the knee to the lump; but this cord was not at all painful, and it existed for seven or eight years off and on. This cord the patient first felt by accident fourteen years ago, and it apparently disappeared about two years since. The skin of the foot, by degrees, became rougher and coarser, and small prominences formed over the foot, and subsequently appeared about the leg. For the last eighteen months the original sore has become very painful, and has spread round the heel and along the inside of the foot, and on to the dorsum slightly, and for the space of three inches of the leg above the ankle. The foot and the lower part of the leg have increased considerably in size, and the skin of the leg has become rough, but not to the extent of that of the foot. For the last ten years the patient has had what he calls "shivering fits." At first he used to have them once every two or three months, but latterly as often as once a week. These fits began by shiverings, which have lasted for two or three hours, and these were followed by a feeling of heat and a hot dry skin. He has also noticed that these phenomena were invariably succeeded by a corresponding enlargement of the leg and foot, attended with sharp pain in the leg up to, but not above, the knee. The discharge, which is generally pretty profuse from the leg, and is of a serous character, has always been increased in amount in connexion with these shivering fits. The patient says that he himself has never noticed any enlarged glands in the groin. He has never been fairly treated for his disease. Recently, he noticed some additional occurrences in connexion with the shivering fits: he has had headache after them, and has felt drowsy and sleepy before the attack, and during the fit he has been very thirsty, and his breathing has been very quick and difficult. His skin, also, has turned blue, and sometimes nearly black. This latter state of things he has noticed at times during the last two years, and the attacks have passed away, leaving the patient very hot, and with a flushed and dry skin. (The urine, while in hospital, was noticed to be smoky, and contained a large amount of albumen and blood.)

Present State.—Patient's right foot is enormously enlarged, and a large fungating mass extends along the inner side of the foot, beginning abruptly in front about four inches behind the point of great toe. The mass, which is elevated about three-quarters of an inch above the skin, extends only a short distance on and to the sole. Backwards it runs round about an inch above the heel, and extends along outside of the foot to within four inches of the end of the little toe, but it does not extend to the sole of the foot. The mass on the inner side of the foot extends on to the dorsum of the foot as far as a line drawn from the middle of the dorsum of the great toe to the front of the ankle, and up the leg for a distance of six inches from the sole of the foot, and also for the same extent up the posterior part of the leg. On the outer side of the leg and contiguous part of the ankle the skin is smoother. The mass is covered with numerous convoluted growths, which give it the appearance of being deeply fissured. These growths are hard and solid, and contain no fluid, and occur in greatest numbers at the inner side of the foot. At the upper and inner aspect of the mass the skin is smoother; and here a serous fluid exudes from little prominences, which burst repeatedly; but there seems also to be an offensive watery discharge from the cracks and fissures of the general mass. The epithelium of the skin about the mass is very much hypertrophied. The whole leg from the knee downwards is now greatly enlarged, and the lower half of the leg and the foot are very red. The skin itself is much thickened, and in places is of a bluish colour. The skin of the dorsum of the foot is not implicated, but is perfectly smooth and not hypertrophied. Except during "a fit," the patient never has any pain in his leg.

During the time the patient has been in the hospital he had one attack of "shivering," attended by the peculiar febrile paroxysm before referred to as having come on of late. His blood and urine were most carefully examined for filariæ, and not a trace could be found. The urine was acid, specific gravity 1022, and containing one-third albumen, no sugar, a good deal of blood, colouring matter, and a small trace of broken-up blood-globules. In addition to his elephantiasis, the man had advanced Bright's disease, a fatty heart, and an old emphysema. He died suddenly one night a short time after his admission to the hospital.

A careful post-mortem examination was made of the body, but I need only particularise the morbid state of the leg. On dissection of the latter, the appearance presented may be summed up in a general way as follows:—The enlargement and infiltration extended up almost to the knee—*i.e.*, up to the knee the skin was slightly thickened, but the warty condition only occupied the lower third of the leg. The skin to the *roots of the toes* and the dorsum was unthickened, but the sole of the foot appeared to be almost unaffected. On cutting into the skin it appeared quite gristly and of a white pearly lustre, but bundles of fibres were easily made out in the corium. In the subcutaneous tissue there were many masses of yellowish fat enclosed in the bundles of tissue (which was here very lax). No hard cords could be found down the thigh on examining externally, either over veins or lymphatics. No vesications indicative of varicose lymphatics could be found anywhere on examination with a glass, and no varicose veins were present. A mass of enlarged glands was found over Poupart's ligament (half as big as the first), on the same side as the disease. The lymphatics connecting them and passing through the saphenous opening were very much enlarged. The femoral artery, and veins and vessels generally, apparently healthy throughout the limb; they were not seemingly thickened or enlarged; the veins were not plugged. At the back of the knee-joint, four or five lymphatic glands were recognised, and two were as big as small chesnuts, the rest as nuts. One solitary gland as big as a hazel-nut was found in the course of the posterior tibial veins in the middle third of the leg. The muscles were healthy, the fat wasted; the aponeuroses, superficial and intermuscular, were not thickened; and the bones and ligaments were normal. As regards the nerves, it was noticed that several in the lower third of the leg were fusiformly enlarged and of a yellowish colour, especially one cutaneous branch in front and the posterior tibial behind.

A careful microscopical examination was made of the diseased skin, and it was found that the cuticle was everywhere thickened, the papillæ were very much enlarged, and raised into a series of warty like growths, which overlapped underlying portions of the skin, in many parts like mushrooms. The vessels in the papillæ were enlarged and gorged with blood, and large lymph tracts or channels ran upwards beside the capillaries. In the corium the connective-tissue elements were enormously increased, the fibrils being very distinct, and this tissue was studded throughout, but especially in the deeper layers, with numerous masses of cells like lymph corpuscles. These were clearly of lymphatic origin, and occupied enlarged lymphatic spaces surrounding the vessels. They lay in tracts, but no limiting channel-wall could be discovered. The subcutaneous fat was only slightly diminished in quantity, if at all. Very few glands and ducts were found; only an occasional sweat gland was noticed, and no hairs were detected.

Comments.

I have thus given you a complete account of this case of elephantiasis Arabum. I omit all reference to the Bright's disease, because I do not believe that it had any influence

whatever on the leg mischief, which ran its course in the ordinary way. The patient, indeed, would have been alive now but for his renal trouble.

The case is remarkable in the fact that the man had never been exposed to the operation of those agencies that usually cause elephantiasis Arabum. He had never been in any place where the disease is wont to be observed or is endemic; he had not been out of the country, in fact. He had not been greatly exposed, nor had he lived in a damp, humid climate; nor was his malady hereditary.

The patient seems at first to have had a heavy wrench of the ankle, followed by an ulcer; but I do not think that this is the real cause of his malady, but only that it favoured the development of the disease to which he was predisposed—but why so I cannot say. The disease began insidiously, and progressed very slowly for ten years, after which time it ran a perfectly typical course, and assumed the features of true elephantiasis Arabum. The man suffered from periodical attacks of fever of the usual kind in these cases, attended with lymphatic inflammation and coincident and relative enlargement of the limb. The lump in the groin, thought to be hernia, turned out to be glandular, and the lymphatics were discovered post-mortem to be enlarged. The fluid, too, so freely discharged from the little prominent points over the leg was lymph, as shown by minute examination; and the minute microscopic changes in the skin were those usually found in the disease.

The clinical history and the pathological phenomena answer to the general description I gave of this disease at the outset. The case, of course, is not one that can be used in proof or disproof of the dependence of the febrile paroxysms of elephantoid fever upon the lymphatic inflammation as the primary phenomenon, because no record of its early history is forthcoming, and we had no opportunity during the short time the man was in hospital of making this point out; but it does seem to me to be of some little value—first, in illustrating the fact of the two being closely connected; and secondly, also in reference to the question of the production of elephantiasis by the presence of filariæ in the system. A most careful examination of the blood and urine failed to detect any evidence of the presence of these filariæ; and the observation is certainly worth something. But I did not expect to find filariæ, because there was no chyloderma and no chyluria present.

Another point of interest in the case is the light which it throws on the nature of the pathological changes that take place in the disease. The hyperplasia of the connective tissue, which is so apparent, appears to be linked with the development of a lymphoid tissue that *seems* to be formed about *the adventitia* of the lymphatic vessels. It is true that this latter state would seem to be common in many different skin affections—such as lupus, Oriental sore. Still, what is much needed is great precision in the description of the changes that actually take place in the disease, in order to clear the ground for further inquiry, for this will, no doubt, in due course lead to important considerations in reference to treatment.

Lastly, as regards treatment, I regret that I have nothing definite to tell about the case. The kidney disease carried the patient off before we had time to commence any distinct treatment, and indeed nothing had been attempted except to restrain the fetor of the discharge from the leg by the use of sulphurous acid lotion, which gave much relief in every way. But I may sum up in a general way the main points in the treatment of these cases.

In all cases it is essential that patients attacked by elephantiasis Arabum should be moved away from the endemic haunts of the malady to a healthy, elevated, and bracing locality. This, in itself, is often of great benefit. In addition, and as a matter of course, the general health should, if it need, be improved by proper medicinal and hygienic treatment. Much has been said of late in India in favour of a purely milk diet in the treatment of the disease. Of this I know nothing personally, but I have seen much benefit from the free exhibition of quinine. I think it lessens the severity and frequency of the "febrile paroxysms," and so indirectly tends to repress the disease. But, in fact, no internal medicines can be depended upon to exert any direct and specific influence upon the disease. During the febrile paroxysms, salines, with aconite and quinine, are the proper remedies, with opiates to relieve pain. The local treatment is very important, and comprises rest, frictions, inunctions, bandaging, prolonged pressure, arterial compression, and ligature of the main arterial trunk feeding the affected part. In the lesser marked cases, absolute rest, with frictions with mercurial and camphor liniment, and careful flannel bandaging, so as to exert more or less pressure, have been followed by favourable results. I have seen these good results myself. Should these means fail, or should the case be one of long standing or of great severity, it becomes a matter of consideration whether some more serious measures should not be adopted. Prolonged compression of the main artery (digitally or otherwise) has been practised by Dufour, Vanzetti, Hill and Cockle, Gosselin, Bardeleben, and others, with varying success; but it is worthy of trial. As regards ligature of the main artery, there is much difference of opinion. I see that M. le Dr. Marduel (*Lyon Médical*, tome xi., page 584) refers to twenty-three cases which he has collected of the kind, and he says that in eleven the disease was cured, six were ameliorated, in four the malady returned, in one the result was null, and one patient died. According, therefore, to this gentleman's figures, the operation is to be regarded as advisable. I have here (not quoted for want of space) a table showing the particulars of cases in which the main artery was ligatured by Carnochan (4), Statham, Ogier, Butcher, Fayrer (3), Richard, Bryant (3), Watson, Alcock, Buchanan, Anderson, Hueter (4), Sympson, Simon, Baum, Sonden, Prichard, Queivel, Geissel, Leisrink, Bryk (3), etc., in all 34 (but these include Marduel's cases above referred to). Out of these, seven were said to be cured, but in two or three cases of this small number there is no record of the state of things beyond a period of three months after the operation, and, indeed, in only one case is it distinctly stated that the cure lasted any length of time—a couple of years or so. In the remaining twenty-seven cases, amelioration was effected in some, when relapses took place after awhile, and in several instances death ensued. On the whole the results are not promising as regards ligature of the main artery for the cure of elephantiasis Arabum. Certainly, attention to the general health, removal to a healthy climate, prolonged rest for the limb in an elevated position, with careful bandaging so as to keep up continuous pressure, and the free use of quinine, do something to diminish or remove the inconvenience of the disease as well as to ameliorate its severity.

THE CAUSES AND COURSE OF DISEASES OF THE HEART,(a)

WITH SPECIAL REFERENCE TO PREVENTION AND TREATMENT.

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Lecture II.

HYPERTROPHY AND DILATATION.

(*Concluded from page* 372.)

It may be well now to trace the progress of cardiac hypertrophy when it is once established. We understand that it means a new equilibrium struck by muscular hyperplasia. It is desirable in every way to consider how and by what means the new balance can be maintained; as we will find the duration to vary with certain associations. Thus, when hypertrophy is causally associated with some form of valvular disease, the prospects vary with the form of valvular mischief, and with the valve affected. Thus we see that with mitral disease it is not uncommon to find the new balance maintained for many years where the condition of life is favourable, and the patient possesses that power of nutrition which has been pointed out as of so material a value. In mitral disease there is no interference with the circulation in the coronary vessels, and so the tissue-integrity of the heart is maintained. This is a very important matter to attend to and to thoroughly grasp, viz., the tendency to sudden death from failure of the heart's action is in direct proportion to the amount of structural decay in the heart. As long as the muscular fibrillæ of the heart are free from molecular decay by fatty degeneration, the heart will fight and struggle away with great persistency; but when its

(a) A course of Clinical Lectures delivered at the West London Hospital.

tissues are undermined by structural decay, it is apt to cease is efforts sud ⁊ enly. Mitral disease is not liable to end in sudden death, from failure of the heart at least, we all know. Death may be sudden from apoplexy of the lungs, or œdema in them when atrophy is far advanced; but, as a rule, patients with mitral disease are very ill with the secondary consequences of their cardiac lesion before they actually do die. With aortic disease, sudden death is more common, and especially in aortic regurgitation. In aortic stenosis the coronary vessels are not interfered with, and, on the aortic recoil, blood enters them freely, and so the textural nutrition of the heart is well maintained for years. At last, however, the coronary vessels become atheromatous, their coats are thickened, and their lumen diminished; the aorta is less elastic, and its recoil is impaired, so that blood is driven less powerfully into these altered coronary vessels; and the tissues of the heart commence to undergo molecular decay. This progresses until evidences of cardiac failure are furnished; and the weakened heart-walls either fail suddenly, or are dilated until the circulation is much impaired, and we get the consequences of a dilated and feeble heart. Atheromatous patches may form at or near the coronary orifices, and so lead to decay of the heart-tissues from insufficient blood-supply to maintain tissue-integrity.

On the other hand, in aortic regurgitation the course is a shorter one. In this form of aortic disease there is massive hypertrophy, as we have seen, to arrest the dilatation set up by the new distending force acting on the internal surface of the ventricle. This requires a sufficient blood-supply to maintain it; but it is rarely it is long sustained. As Mauriac has pointed out, in aortic regurgitation the blood is no longer perfectly arrested in the aortic recoil, but escapes backwards through the imperfect valves. As the valvular mischief extends, this backward escape becomes greater and the coronary vessels are insufficiently supplied with blood for the needs of the massive heart. Then tissue-necrosis gradually spreads through the heart-walls; the left ventricle once more yields to the distending force; dilatation sets in; hypertrophy's arresting power has gone, never to return, and the heart is arrested in diastole—it is over-distended and fails to contract,—and then all is over. The comparative frequency of sudden death in aortic regurgitation is quite intelligible if we carry out our reasoning on the lines here laid down—viz., that there is an increase in the distending force, and an increase in the internal pressure during diastole; this has been successfully met by muscular hyperplasia: but when that muscular growth is undergoing molecular necrosis it can no longer offer a successful resistance, the decaying walls yield, and then at last fail to contract, and death occurs instantly.

In the same way, we shall see in the next lecture, the hypertrophy found in chronic Bright's disease gives way in time, because of the structural decay of the heart-walls; and dilatation sets in, never to be arrested, and heart-failure follows.

When hypertrophy is established, in order to estimate its prognosis, its progress, and its probable duration, we must carefully survey its causal associations, and its relations and surroundings. Balthazar Foster has shown, as was stated in the last lecture, that the prognosis of aortic regurgitation produced traumatically, is largely affected by the fact of which cusp is torn. If it be that cusp behind which there is no coronary vessel, then the prospects of life are much better than if either of the other cusps are torn, behind which there is a coronary vessel. If the cusp behind which lies a coronary vessel be intact, the backward flow of blood is caught thereby, and the current directed to the coronary orifice. If the cusp in front of a coronary artery be torn, the back-flowing current rushes past the orifice, and so the vessel is imperfectly supplied with blood, and tissue-decay results. This illustrates how strictly mechanical are many matters connected with the heart; and how distinctly the nutrition and the maintenance of hypertrophy are ruled by purely mechanical matters.

This consideration of the failure of hypertrophy brings us to a matter of diagnosis which is so important that a digression from the exact subject-matter is permissible. When called to a case where there is hypertrophy blended with dilatation, the first matter is to ascertain the precise pathological condition. The physical signs will tell us that there is a mixed condition; but they are dumb as to the fact whether there is present dilatation with some hypertrophy, or that a condition of hypertrophy is yielding and failing from structural decay. And yet it is most important to settle the matter: for the one is a condition for which much may be done; for the latter state but very little. The most elaborate physical diagnosis has no word to utter as to this important matter. The age of the patient, the condition of the tissues elsewhere, and generally the history of the patient, the subjective sensations: these are what we must look to to tell us what conclusion to arrive at. The state of the arteries will often afford material aid, and should be taken along with the physical signs. By such means a diagnosis may be reached, and something positive and valid learned, as what state of hypertrophy and dilatation we have to deal with. As is often the case, much turns on an accurate diagnosis; and here, at least, disease of the heart is not a matter to be settled by the stethoscope. The conclusion can only be reached by combining with what the stethoscope tells us, the less easily reached information furnished by a careful investigation of the history of the individual, and the accurate appraisement of associated conditions. If the arteries are highly atheromatous, and so exaggerate the pulse—that is, if the pulse feels much stronger then the heart-beat would warrant—the fact is very significant of failing hypertrophy. If the patient be a stout man, complaining of failing power; if the skin be dry and unperspirable; if the cornea be clouded by fat-granules scattered through its substance; if the bulk of water passed is distinctly diminishing—then in all probability there is a condition of pre-existing hypertrophy yielding under molecular decay; and the dilatation is recent and of the very worst prognostic import.

So much for the failure of hypertrophy and its consequences. It is clear that the consequences of its failure are so serious, so fraught with danger to life, that we must conserve it at all hazards. And yet the pertinent question may be put—"Is hypertrophy ever harmful?" Not only can it be put, but the answer to be given is, "Certainly it may be harmful," for unalloyed good must not be sought in pathological processes. Where there is an aortic stenosis, and an obstruction at that orifice to be overcome, hypertrophy is a clear gain; it antagonises successfully the narrowing of the orifice. In old days, when hypertrophy was a disease *pur et simple*, it was observed that the prognosis was better when an aortic obstruction broke the force of the blood-current, and so protected the cerebral vessels from rupture. Probably no harm does ensue from hypertrophy in aortic stenosis, unless it be that the increased strain thrown on the mitral vela should lead to slow inflammation of them. But in aortic regurgitation the hypertrophy has its drawbacks. Hypertrophy, and massive hypertrophy, is set up to limit distension, and achieves that end; but it does something more. The enlarged and massive ventricle throws into the arteries an abnormally large mass of blood with unnatural force, and the elastic arteries are over-distended on each ventricular systole. The effect of this is to dilate the aorta, and to set up atheroma. It is unnecessary to say that now overstrain of the arteries is regarded as the cause *par excellence* of atheroma, though syphilis and alcoholic indulgence greatly aid it. The over-distension of the aorta and large vessels lessens their elasticity and their recoil; and thus the coronary arteries are imperfectly filled, and tissue-decay soon follows. The hypertrophy, which is invaluable to arrest dilatation from the effects of the powerful distending force, is itself destructive in its turn, and has an injurious effect upon the arteries.

In chronic Bright's disease in men there is usually hypertrophy of the left ventricle without any obvious dilatation. Here, again, the hypertrophy, though most valuable, is not without a drawback. The heightened blood-pressure in the arteries, which exists where thickened arterioles obstruct the onward flow of blood, and an hypertrophied heart throws the blood into the arteries with unusual vigour, leads to atheroma of the bloodvessels, especially the thin-walled vessels within the skull, and rupture of these vessels, or apoplexy, is the common consequence. The associations of apoplexy with atheromatous arteries and an hypertrophied left ventricle are too well known to need anything more being said here. Failure of the heart's vigour alongside arterial degeneration is thus really conservative. "Fatty degeneration of the heart may be a preservative lesion," was an utterance which convulsed the Pathological Society of London when first made within its

walls; but the truth underlying the apparent fallacy is now accepted cheerfully enough.

So much for the ordinary forms of hypertrophy. Hypertrophy, however, occurs under other circumstances, and its occurrence, when so associated, is very instructive. It is known to occur with more or less dilatation in chorea and Graves's disease. Its action in these cases is so violent as to suggest the idea that it will almost shatter off the front walls of the chest; and yet the pulse is not correspondingly altered. We are not yet in a position to say how the hypertrophy in these cases is brought about, any more than we can explain the cause of the palpitation. They are both due to something yet undiscovered. It is suspected that this something is due to passing vaso-motor disturbance of the calibre of the arteries. Hypertrophy, too, is caused sometimes, as Hayden puts it, by "habitual nervous excitement of the heart." He says, "Inasmuch as hypertrophy without complication causative of, or dependent upon it, is never fatal, the opportunity for examining a heart affected with this form of hypertrophy, unassociated with antecedent or consecutive disease, is presented only where death in such a case is caused by acute febrile disease, or by accident." As Hayden says, the opportunities for examining such cases are rare; but, on the other hand, no one disputes this class of case. The physical signs of hypertrophy are all presented, and the impulse is strong and heaving. In my own experience of these cases, they have occurred chiefly in women of nervous diathesis and active habits, encouraged by indulgence in tea. That such hypertrophy should exist at all is suggestive when viewed in relation to the hypothesis here set forth of the mode in which muscular hypertrophy is set up. It was there stated that when a motor nerve was irritated, not only was the muscle set in motion, but the bloodvessels connected therewith were dilated. Bearing this in mind, the production of nervous hypertrophy becomes comprehensible enough. The motor discharges of the cardiac ganglia are increased in frequency and in force; not only is the cardiac muscular fibre thrown into great functional activity, but its blood-supply is increased, and hyperplasia results. Here there is no obstruction for the hypertrophy to overcome; but there is an intelligible reason for its occurrence nevertheless.

Having reviewed the different associations of changes in the cardiac walls, we may profitably reconsider the question of how hypertrophy is brought about on the hypothesis here propounded, that it is a trophic change which limits dilatation. Whenever the heart-walls yield to a certain internal pressure during the diastole, elongation of the muscular fibres follows, and then there is increased muscular nutrition if the trophic processes of the system are equal thereto. It will obstruct the reception of this view if the mind be previously occupied by the idea that the cardiac chambers are of an absolutely and unchangeably fixed and certain size. Such an impression is not only unfounded, but it is opposed to certain known facts. Professor Gairdner, of Glasgow, observed on the man Groux, "the man without a sternum," that when he held his breath, and the finger was placed on the apex-beat, the beat was soon lost; the right ventricle becoming distended with blood, constituted a "water cushion" betwixt the finger and the heart's apex. Some time ago I made a series of observations on a strong, athletic, spare man. Placing my finger upon the apex-beat, he held his breath: the beat disappeared until it could no longer be felt. On his commencing again to breathe, the apex-beat could be once more felt; and in a little time it was as distinct as ever. There can be no doubt that the cause of the disappearance of the apex-beat was the filling of the right ventricle with blood—*i.e.*, that it was distended beyond its wont. We are all familiar with the fact that in disease of the mitral valve the right side of the heart becomes at times over-distended with blood to the point of paralysis, and that venesection under these circumstances gives relief. The *rationale* of this is, that the withdrawal of a little blood from the gorged venous system relieves the over-distended right heart, and enables it once more to contract upon its contents. We know that over-distension of the right heart may go on till there is jugular pulsation; and "the safety-valve action of the tricuspid valve" of Wilkinson King was based on the over-distension of the right ventricle. In certain animals whose safety lies in flight, a band (the moderator band of Reil) is found connecting the outer wall of the right ventricle with the interventricular septum to prevent the wall being over-distended; while in diving mammals the outer wall of the right ventricle has cord-like attachments to other parts, in order to prevent paralytic over-distension during the time they are under water. Wilkinson King found that the mitral valve was competent after the left ventricle was fully distended with water, showing that allowance is furnished for alterations in the left ventricle.

All these facts point to the conclusion that variations occur in the cubic contents of the ventricles, and that the ventricles may enlarge, and contract again in a manner not unlike the vaso-motor changes in the calibre of small arteries. Claude Bernard thought the ventricles might act as reservoirs under certain circumstances permitting, by dilatation, of accumulation of blood in them. Michael Foster says of the heart, "the quantity ejected at each beat is governed more by the state of the rest of the body than by the heart itself." We see, then, that like other hollow muscular chambers, the heart presents variations in size from time to time, becoming enlarged and recovering again without departure from health. Obstruction to the onward flow is followed by dilatation of the ventricular chamber, as seen in the experiments made by Professor Gairdner and by myself upon the right ventricle. These facts have a direct bearing upon the production of dilatation and hypertrophy. We can readily comprehend how these passing variations in size may be more or less permanent. The temporary distension may remain as dilatation; or as the heart recovers itself from a momentary distension, so it may attain its normal dimensions by hypertrophic growth in more permanent conditions. If the distending force be not unwonted we may have no apparent dilatation, the process having been arrested at its earliest stage by hyperplasia of the muscular fibres, enabling the heart to close completely upon its contents. Where the call upon the heart is sudden, a certain yielding takes place before the muscular compensation is perfect. As we saw in an earlier section, how far dilatation may proceed, in what proportion it may be blended with hypertrophy, depends upon several factors, as sex, occupation, general nutrition, and amount of distending force. From what has been here adduced I venture to think it is fairly clear that hypertrophy and dilatation are parts of one and the same process; that the commencement of all cases is distension; and that whether dilatation or hypertrophy, or a blend of both, shall result, depends upon certain recognisable factors. Even when dilatation is established, a return to the normal size is possible. Fuller states that he has seen all the signs of dilatation disappear under a continuous course of iron. Balfour writes, "You will see then that cardiac dilatation is by no means a hopeless disease; that in its slighter forms it is readily curable, and is almost invariably cured; and that even in its more severe forms it may be occasionally cured, and is always susceptible of considerable amelioration, the only exceptions being those neglected cases associated with notable eccentric hypertrophy, forming what is termed the "gouty heart." Dr. Balfour takes a more hopeful view of the future of cardiac dilatation than is held by most authorities; but cases of the disappearance of a mitral murmur contemporaneously with restoration of the function of the valve have been recorded by my colleague at Victoria-park Hospital, Dr. Andrew, and by others, including myself. Except the condition mentioned by Balfour, the simple dilatation of myocarditis, and severe old-established dilatation in women of feeble nutritive powers, probably most cases of dilatation are largely amenable to treatment.

The treatment of cases of hypertrophy and dilatation resolves itself into the intelligent application of what has been said above, to each particular case. Hypertrophy is to be aided or secured; and dilatation is to be avoided, or arrested if possible. Even the reduction of a dilated ventricle, or, failing that, the production of a certain amount of hypertrophy around the dilated chamber, are not to be regarded as beyond the reach of well-applied therapeutic art. When hypertrophy is well developed, nothing can be done. Certainly it would be mischievous to attempt to treat it; except when associated with renal changes, of which I shall speak in the next lecture. Even when destructive to the arteries, as in aortic regurgitation, it is useful and essential to limit the dilating process set up by the increased force of the distending incoming current. What we have to do is to maintain the new equilibrium set up by this muscular hyperplasia; to conserve to the utmost the new balance. For this

end we secure comparative rest, a full supply of healthy blood for tissue-nutrition, and further act upon the ventricle by agents which increase the cardiac contractions in vigour. When hypertrophy is blended with dilatation our treatment must be the same, but more vigorous, especially as to the administration of remedial agents—iron as a general tonic, and digitalis, belladonna, or strychnia as acting specially on the cardiac nerves.

In dilatation of the heart a matter of much gravity is presented to us. We see that, in spite of the natural powers of resistance, the heart-walls have continuously yielded until the new equilibrium reached is a very unsatisfactory one, for the general powers are reduced to a level with the feeble heart. The patient has "levelled down" (to use an Americanism) until a balance once more exists betwixt the powers of the heart and its functional duties. The patient is an invalid, for that dilated heart is only capable of a certain amount of work, and very little distresses it, causing palpitation, dyspnœa, alarm, and dread. Consequently, the patient is incapable of exertion, and all exercise is out of question, unless his means will procure him carriage-exercise. Quietude, rest, the avoidance of all effort (including straining at stool) are essential. Small meals at moderately frequent intervals are best, for larger masses press up the diaphragm and disturb the heart. For the same reason, flatulence in the stomach or bowels causes distress, and still more any load in the colon. Sometimes the discharge of wind is most pronounced. Attacks of dyspnœa and palpitation are to be met by heat—as hot poultices—applied over the heart, and the free administration of stimulants, both those which act generally and those which act specially on the cardiac ganglia. As to the general treatment, the continuous treatment of the case, it consists of iron to keep up the quality and the bulk of blood, combined with good food; and, if necessary, cod-liver oil, which promotes tissue-nutrition. I must, however, say, that in my experience cod-liver oil is less successful in cases of heart disease than in diseases of the lungs, either phthisis or chronic bronchitis.

The use of digitalis in cases of dilatation of the heart is largely on the increase, and full doses of it are required. The necessity for large doses is imperative, and twenty drops of the tincture, with ten drops of tincture of nux vomica, may be given three times a day with advantage, especially when the patient has to toil. By such means a large feeble dilated heart may be whipped up to a fair amount of functional power. In some cases the gratifying result of a distinct reduction in the dilatation is attained with a corresponding increase in vigour in the patient. The disappearance of mitral murmurs, together with the reduction in size of the left ventricle, is also not uncommon. Here we must suppose the ostium to have become lessened with the reduction in size of the ventricle, so that the mitral flaps can once more close it on the ventricular systole. In some cases there is insufficiency of the mitral valve from stretching of the ostium along with the heart-walls, and on restoring the ventricle to its normal size the reflux disappears. According to Rokitansky, in confirmed cardiac dilatation the valve-flaps stretch as well as the heart-walls. But, taken early, such cases are largely amenable to treatment. The enormously dilated ventricle sometimes beats so feebly that a mitral systolic murmur is inaudible, but can be recognised after a course of digitalis and iron has given the ventricle more tone. The treatment must be steadily pursued for weeks and months; carefully watching the patient and averting or meeting any intercurrent trouble. In many cases great improvement can be wrought, and even in old dilated hearts where reduction in size is unattainable much improvement may be brought about. But digitalis must be given freely to procure these desirable results. It is said that in digitalis-poisoning the heart at last fails; but in anything like medicinal doses I am certain the free use of digitalis in marked cardiac dilatation is entirely free from any cause for anxiety. Put in an aphoristic form, it may be said it is very difficult to poison a person with digitalis who has a large feeble dilated heart.

A final word as to nervous hypertrophy of the heart. It occurs in excitable women, especially when they indulge in tea. All stimulants should be avoided, and bromide of potassium or hydrobromic acid should be prescribed.

My next lecture will include the gouty heart, and the subjects of angina pectoris and fatty degeneration of the heart.

ORIGINAL COMMUNICATIONS.

IS INTERMITTENT A MARSH FEVER?

By JOHN SULLIVAN, M.D., M.R.C.P. Lond.

When the human body is exposed to the miasmatic emanations from a marsh, or to those conditions of soil which render marshes unhealthy, the nerve-centres become profoundly impressed, giving rise to phenomena—constant, though varied—marked by periodicity and intermittence.

What is the nature of that unhealthy air, or malaria, which exists in and about a marsh? A marsh is a waste, uncultivated piece of land, very damp, or partially covered with water, which does not dry up, but remains stagnant. In this description may be included all malarial localities. Although water may not be visible on the surface, nevertheless water will be found beneath the surface, imprisoned, circumscribed, and mixed with organic *débris*, where, under the influence of heat, it will ferment, putrefy, and exhale through the porous earth a miasma identical in its effects and in its nature with that exhaled from an unhealthy marsh above ground.

When water from any source falls upon any soil, a portion of this water will pass off as vapour; the remainder will filter through, and, if it meets with no obstacle, will be absorbed and totally disappear. Whatever tends to oppose the progress of this filtering water promotes the formation of a marsh. It is for this reason that, when the subsoil is argillaceous, or of a tertiary formation, or a tufa of volcanic origin, as may be noticed in the Campagna of Rome, in Tuscany, along the coast of the Mediterranean, it then forms the basis of some very malarial soils. If the soil be thickly wooded, and clothed in rank vegetation, evaporation beneath the shade of lofty umbrageous trees, as in the virgin forests of India or America, is checked, the hot oppressive air is confined, ventilation is obstructed, the water is detained by heaps of decayed vegetable matter, or will filter through, and thus augment the streams and rivers, which, fed from this source, seldom dry up in the tropics, even in the driest season of the year. The malaria in such localities is very pernicious. The springs in some places are exhausted during the dry season from the absence of water to filter through. The rivers no longer supplied, unable to convey to the sea the water which stagnates in their beds, become the depositories here and there of unhealthy marshes. Whenever we meet with a bar or sandbank at the mouths or estuaries of rivers, where the land lies low and flat, it will be the result of the incessant conflict between the ascending and flowing sea-wave and the descending waters of the river. The bar presents an obstacle to these waters, which, after mixing with sea-water, overflow their banks, and inundate the adjoining lands; and thus deltas, islets, and swamps are formed, the hotbeds of marsh infection in hot climates.

A marsh favours the development of a peculiar class of vegetation. It is the receptacle of a constantly renewed organic creation, and of the process of an incessant putrefaction. A marsh, to quote an ingenious Italian writer, "is the mysterious laboratory of life and death. It is the cradle and grave of an innumerable variety of plants and animalcules. A marsh presents a striking contrast between the stagnant immobility of its silent water, and the mobility and agitation of the myriads of animated beings which it shelters. And hence, to protect unmolested the orgies and gambols of an unclean creation, a marsh opposes, in order to ward off the approach of man, a barrier of infection and disease." It often presents a shining bluish appearance. The colour and transparency of its water may be modified by the nature of the elements held in suspension, some in a partial, others in a complete state of decomposition; or there may be present infinite quantities of microscopic parasites, some imparting a green, others a reddish colour to the stagnant water, the odour from which is sometimes fetid and very repulsive.

The water of a marsh may, by its density, its temperature, and the degree of its saturation, interfere with the process of fermentation in a fermentable body; but if another liquid be added to it, even the water of another marsh, but more especially if salt and fresh water become mixed, by

which mixture sulphuretted hydrogen gas is generated, fatal to organic life, the conditions of a marsh become greatly altered. Any change in the medium of the water of a marsh will prove fatal to the life of the innumerable plants and animalcules which live in it; they perish and are converted into putrefying matter. If a marsh abound in water, insect and vegetable life is preserved—no putrefaction takes place; but when the quantity of water is diminished as it dries up, exposed to the rays of a burning sun, the malaria from a marsh is specially noxious. The water of an unhealthy marsh contains various deleterious gases. In many of the Tuscan marshes, if the water be stirred up with a cane or rod, the gases that arise are inflammable. Marsh malaria contains organised microscopic creations—microzymes, micrococci, spores, etc.—the product of incessant fermentation and putrefaction; and this malaria may be conveyed to the mucous membranes of the human body by contact, by inhalation, or by the agency of the wind.

Now, this fermentation in a marsh leads us naturally to a consideration of the germ-theory of biogenesis: life springs from antecedent life.

If an ear of tainted or corrupt corn be suspended in a bottle of muddy water, we shall soon observe that as some microzymes die which people this marsh in miniature, infusoria and bacteria become developed. We are thus led to infer that marsh infection is the product of the absorption of animated sporules; or, as Lancisi terms them, "animated effluvia." Life is the consequence of antecedent life; spontaneous generation is impossible.

Myriads of organised creations abound in marshes, which, by means of a locomotive apparatus consisting of agile filaments or ciliary points, move about instinctively and with great rapidity, some to find a soil suitable for germination, others for some fixed point of rest, vegetable or animal juices, to which they might attach themselves as parasites and multiply. It is interesting to inquire which amongst the varied creations which people a marsh is the most capable of generating that morbid agent in malaria which gives origin to fever and ague.

Lancisi, Torrigi, Ballestra, and other Italian writers, are of opinion that marsh malaria is composed of the sporules contained in the protoplasm of the cells of an alga which abounds in marshes, and which they have frequently detected in the effluvia from the Pontine Marshes.

What is the nature of that morbid agent to which the miasma or malaria from marshes owes its special action? No other morbid cause produces the same morbid effect. This agent, although invisible, must therefore be special and material. The term "miasma" implies corruption, the product of that fermentation and putrefaction of organic matter which constantly exists in marshes. It is a compound of heterogeneous elements from vegeto-animal decomposition, diffused in the air above and around a marsh; and whereas this infectious exhalation, when introduced into the human organism, is incapable of undergoing unlimited multiplication, it cannot be communicable or contagious. Its immediate action when absorbed is nerve-stimulation; its natural action is nerve-depression, or paralysis. Nerve-paralysis must be preceded by nerve-stimulus. This produces, in marsh fever, contraction of the arterioles in the periphery, derivation of blood to internal organs, increased internal temperature, sensation of cold and shivering; while the consequent nerve-paralysis induces heat in the periphery, increased vascular action, and, finally, general relaxation and sweating. This poison manifests itself in a series of paroxysms, or explosions of fever, followed by intermittence.

Nerve-energy may resist to a certain point all accumulating disturbing agencies, when it will suddenly give way to a fresh manifestation of the phenomena of fever and ague. Such phenomena may be observed in the sudden explosions of periodic neuralgia, epilepsy, asthma, etc., under conditions of body in which some cause of irritation productive of these diseases constantly exists. An anæmic state of the blood is characteristic of these diseases, which, as well as fever and ague, are of nervous origin. But periodicity is more marked in diseases of a malarial origin than in any other disease due to a disturbance of the nerve-centres. Graves, in his inquiries into the law which regulates a relapse of fever and ague, arrives at the conclusion that the law of periodicity which governs the disease, while it occasions fits, continues likewise to preside over its latent movements when no fits occur; so that a relapse of fever and ague, after a suspension of many months, may appear on the very day on which the fit would have occurred had no suspension taken place.

Since, therefore, exposure to the conditions which render a marsh unhealthy, generates in the human organism a specific febrile condition marked by periodicity and intermittence, intermittent may with great propriety be termed a marsh fever.

Is marsh malaria a gaseous body, which specially so paralyses the nerve-centres as to give origin to a series of characteristic phenomena, as carbonic acid gas causes special nerve irritation and spasm of the glottis? Or does the action of malaria depend on the presence of special living germs evolved during fermentation in a marsh?

Without the contact of air, which involves the germs of impregnation, neither fermentation nor putrefaction can take place; and it has been proved by Professor Lister that even lactic fermentation cannot possibly take place in the absence of the impregnating influence of atmospheric air. The air we breathe must therefore involve living germs. Even the blue ether above us, as seen from the highest elevation, far away from any possible contamination with the earth, teems with infinite invisible floating bodies, not to be detected by a microscope of the greatest known power, but made visible when a stream of electric light is thrown upon them, as practised by Professor Tyndall. This eminent man has exhibited through the same medium the contagium in a sample of old hay, involved in clouds of fine particles, which rose up when the hay was shaken; and this contagium was more infectious than that usually found in common air, capable of influencing the process of brewing and other like products. What germs may we not expect to be derived from the putrefaction of animal and vegetable origin in a foul marsh!

Dr. Burdon-Sanderson has been able to obtain from an aqueous infusion of putrid animal tissue an organic substance—"sepsin"—to which septic fluids owe their virulence. He has proved that the serum of blood, if kept excluded from contact with air, will remain intact; whereas, if it be impregnated with the most minute particle of this septic extract, it will determine the development of bacteria, spirillæ, and a variety of organisms. But the malaria or miasmatic septic effluvium from an unhealthy marsh has hitherto resisted all attempts and systems of analysis; nevertheless, the existence of malaria, the effects of which on the human organism are constant and uniform in their nature, although not appreciable by the senses, should no more be doubted than that typhoid or enteric fever is the product of the effluvia from foul sewage.

Pouchet, of Rouen, is so firm a believer in the notion of a spontaneous generation that he considers the "germ theory" to be inconsistent with the idea of a Creative Wisdom. I, for one, believe that creative wisdom is most effectually displayed in the observance of the germ theory in obedience to the mandate in the Divine Word: "God created every living thing that moveth, saying, Be fruitful and multiply." The Creator gave the first impulse to universal life in every form, however minute and apparently insignificant, which can only be perpetuated by antecedent life.

A prominent member of our profession not only disbelieves in the agency of living propagating germs, but also in their very existence. He advocates a "glandular theory," that diseased glandular secretion is at the root of some communicable diseases which he calls "septinic, not zymotic." If of some, why not of all? A theory which does not apply to all diseases of a class is no theory at all. Poisons, no doubt, direct their energy to one tissue in preference to another, or to one particular gland or series of glands for which they may have an affinity. Hence, we detect disease of Peyer's glands in typhoid, of the mucous glands of the throat in diphtheria, of the secretions of the nasal surface in glanders, etc. But any glandular secretion that may form in the course of a communicable disease, although it may propagate, does not originate, but is the consequence of the specific poison which produces the disease.

Now, no matter or glandular secretion taken from the subject of fever and ague can by any possibility reproduce the disease. I cannot, therefore, comprehend how "ague" can be reckoned in the number of communicable diseases.

"If it were true," this physician continues, "that every contagious disease is due to its external independent living germ, that these germs continue to increase and multiply,

why do these germs after a time cease to multiply, and allow the patient to live?"

The air above and around us teems with invisible life—not opposed to healthy vital action, but capable when tainted by disease from any source, be it local or conveyed from afar, of communicating the disease from an unhealthy to a healthy locality, from an infected to a healthy subject. Man may be surrounded by elements tending towards disintegration and destructive of life; but life in health, sustained by nerve-energy, is capable of resisting these elements. When this nerve-energy becomes enfeebled as the health declines, when the tendency to decay manifests itself, this cohesive resistance will yield to the influence of the surrounding germs, ever prone to attach themselves to unresisting organic unhealthy matter, to consume the nitrogen of the tissues, and thus complete their disintegration and decay.

Two patients are seized with the same contagious disease, the one in a mild, the other in a severe form. Both are exposed to the same diseased germs which have served as the vehicle of the poison. Both would be equally affected by these germs did not the healthy organic resistance in the one prove superior to that of the other. While a third person may be exposed to the same agency, and not become affected at all.

If all men were susceptible of equal impressions from diseased germs or atmospheric influences, then the superior must yield to an inferior organisation, and the entire race of man on the earth's surface must perish. The germs of disease cease to multiply because their action is neutralised by the superior influences of improved healthy vital action in convalescence tending towards cohesion, opposed to feeble action tending to dissolution and decay. Healthy tissues are an unsuitable soil for such germs: they cannot attach themselves as parasites; they can neither grow nor multiply in them.

"No man," continues the authority from whom I quote, "has ever seen a diseased germ. We can study the yeast growth, its causes, its action, the changes it produces; in epidemic diseases we have no such guide."

Nobody doubts the existence of a noxious gaseous body, although it be invisible.

Now, yeast, which is the development during alcoholic fermentation of a microscopic cellular organism—the yeast plant, "torula cerevisiæ," capable of multiplication, is the cause of this fermentation, and when introduced into a fermentable body acts as a ferment. So will the contagium in a communicable disease act as a ferment in a healthy body, produce its own special phenomena (the coexistence of which in the body, as Dr. Maclagan says, is conveniently described as fever), and reproduce the communicable disease. And as we can watch and observe the action and progress of the yeast plant, so can we study the origin, action, and progress of the special contagium.

"The matter," he again says, "which sets up the poisonous action in a living body is actually dead matter."

Now, what he calls dead matter is the organised product of the disease during its development and progress, which disease was caused by an external agent, but which product is often capable of reproducing the disease in the course of which it was formed. Vaccine matter owes its activity to transparent microscopic organised granules capable of transmitting the cow-pox; but the cow from which the matter had originally been taken had never been vaccinated with such matter.

Why do atmospheric agencies, in that subtle region where electricity, magnetism, motion, and sound execute their invisible interchanges, exert so great an influence on the organism in the causation of disease? Sudden variations of temperature at certain seasons of the year, causing violent electric disturbance, or sudden displacements of air, to be replaced by a violent rush of air from a far distance accompanied by rains or by storms, may influence the human organism; but these atmospheric phenomena are transient in their effects. Any morbid effect produced by atmospheric influence must be attributed to some noxious principle involved in the air, modified by soil or by climate—to the presence of invisible living germs, which are attracted by unhealthy animal or vegetable tissue, and attach themselves (if not prevented by antiseptic means) to dead tissue, causing putrefaction and resolution. A host of modified germs, tainted with a specific contagium, may suddenly invade a locality, and generate a specific epidemic. Do we not often find a flourishing field of corn suffer from a blight, and droop in the course of a single night?

When the writer asserts that during a prevailing epidemic many cases are traceable to nervous impression, distinct from cases due to direct contagion, it appears to me that he adduces a strong argument against his favourite theory. The impression of fear cannot, independent of any other cause, produce an attack, say of cholera. Fear, by debilitating or paralysing nerve-energy, may render the system more susceptible of a special impression from the cause of the disease. Peculiar atmospheric conditions, involving specific germs, acting upon an organism rendered more susceptible from fear, will impress the vasculo-motor system of nerves, affect the circulation and composition of the blood, accompanied by the phenomena peculiar to the epidemic.

When we reflect on the influences created by the nature and quality of the air we breathe, or the many proofs we daily witness of the efficacy of the antiseptic treatment in disease, attested by the experiments and writings of the most eminent teachers and philosophers of our day, both at home and abroad, we are compelled to incline to the belief that the germ theory of disease is the more consonant with the laws of nature, of creative wisdom, and the best calculated to promote the social and sanitary condition of a people.

UNIVERSAL TALIPES-SHOE.

By H. A. REEVES, F.R.C.S. Edin., M.R.C.S. Eng.

The accompanying woodcuts will give an idea of a simple and inexpensive apparatus which the ingenious and punctual orthopædic mechanist, Mr. Schramm, of 64, Belmont-street, Chalk Farm-road, made for me some months ago. Its object, which is fully attained, is to do away with the frequent changes of shape and size of the splints and shoes generally used, and to save time, trouble, and expense. On the outer side there is, as usual, a metallic stem connecting the leg and foot pieces; but the joint is a modified ball and socket, and is perforated by a screw, to which a ring is attached (a bar may be substituted as perhaps giving greater power for screwing up, and as less likely to hurt the fingers), by loosening which the shoe can be set at any angle, and fixed by reversing the action of the screw. The foot is fastened to the foot-piece, and inversion or eversion, etc., prevented by passing the bandage over and under the foot in the desired direction. For severe cases a spring bar can be attached to the outer or inner side, as the case requires. After tenotomy (if this be needed), the foot can be put up in the deformed position, and brought quite straight, gradually or quickly, by the use of the modified ball-and-socket joint. The instrument may be made of various sizes and of any strength, and as it is efficacious, simple, and cheap (from 7s. 6d. to 10s. for for hospitals), and as nothing else is needed till the patient is ready for the boot and support, I need not say more to show its value.

I never was in favour of using complicated apparatus in any department of surgery, and as I have had the opportunity of treating a large number of deformities of various

kinds—most of them severe cases—and have always made successful use of simple methods, I cast about me for a simple shoe which would do for any kind of talipes. I believe I have found one, and it is pleasant for me to be able to add that my colleagues at the Royal Orthopædic Hospital, Messrs. Read, Balkwill, and Baker, have expressed themselves as much pleased with the shoe. Mr. Brodhurst and his co-adjutors at that institution always adopt simple methods and apparatus; and, provided an operation or an instrument be efficacious, the simpler it is the better is it.

Grosvenor-street, W.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

UNIVERSITY COLLEGE HOSPITAL.

CYSTIC GOITRE—TAPPED—INJECTED WITH IODINE AND IRON—SUPPURATION—CURED.

(Under the care of Mr. HEATH.)

For the notes of the following case we are indebted to Mr. S. H. Burton, M.B., B.S. Lond., Surgical Registrar.

Louisa B., aged thirty-eight, admitted on January 29, 1877.

Previous History.—About fifteen years ago patient noticed a swelling, about the size of a hazel-nut, in left side of neck. It has grown gradually to present size. It sometimes causes a feeling of suffocation, especially at the catamenial periods. Eight years ago the tumour was painted with iodine, without any appreciable result. Patient is a native of Essex, and has enjoyed moderate health. None of her relations have goître.

Present State.—There is a very large tumour on the front of neck, consisting of a rounded swelling the size of fist on right side, just above the clavicle, and on the left side of two superimposed globular swellings, each larger than that on the right side. Across the middle line the swellings are connected. The tumour is freely movable under the skin and from side to side. Surface smooth and rounded. Swelling on left side fluctuates distinctly; right side soft and elastic. The whole tumour moves slightly on deglutition. Patient is pale; there is no exophthalmos; no heart disease.

February 5.—Mr. Heath inserted a trocar into the swelling on left side, and let out seventeen ounces and a half of a reddish-brown fluid, mixed with much blood. The fluid was alkaline, specific gravity 1030, and contained much albumen. Half an ounce of liq. iodi. was then injected, the walls of the tumour manipulated, and the injected fluid let out. The tumour almost immediately swelled up nearly to its original size. About an hour later half a pint of blood escaped.

6th.—1 a.m.: There was considerable hæmorrhage from tumour.

7th.—Tumour is large and tense, and fluctuating.

9th.—Tumour is a little smaller; is hard to the feel.

12th.—Mr. Heath aspirated and drew off four ounces and a quarter of dark blood-like fluid.

14th.—Bleeding in the night. Tumour rather smaller.

15th.—Tumour strapped.

19th.—Mr. Heath drew off with trocar and canula one ounce of dark blood-like fluid. Two drachms of liq. ferri perchl. and glycerine injected, and canula plugged.

20th.—Patient feels very weak. Temperature 101°. Plug removed from canula, and four ounces of dark blood-like fluid came away. Two drachms of liq. ferri and glycerine injected. 8.30 p.m.: Temperature 104·8°.

21st.—Patient very weak. Temperature 104°.

22nd.—Considerable discharge of dark fluid from the aspiration puncture. Two drachms of liq. ferri and glycerine injected.

23rd.—Patient very weak; complains of a choking sensation in throat. Temperature 102·5°; pulse 108. Mr. Heath inserted aspiration needle, but, as only a little fluid exuded, he made an incision about two inches long, and squeezed out about eight ounces of a brown clot-like material. Oakum poultice applied.

24th.—Temperature 104°. Patient feels very weak. Tumour swollen nearly as large as before.

25th.—Tumour syringed out with carbolic lotion.

March 2.—Patient continues very weak. Syringing of carbolic continued.

5th.—The tumour is diminished in size; great discharge; syringed as before.

16th.—Patient much stronger. Tumour much diminished in size. From this time till her discharge from hospital, April 7, patient gained in strength daily, and the tumour continued to diminish in size.

NORTH STAFFORDSHIRE INFIRMARY.

HÆMORRHAGE FROM A PALMAR ABSCESS—LIGATURE OF THE RADIAL AND ULNAR ARTERIES —SECONDARY HÆMORRHAGE.

(Under the care of Mr. FOLKER.)

[Reported by Mr. W. A. Frost, House-Surgeon.]

Thos. W., aged thirty, farm labourer, was admitted on July 17, 1878. Two weeks before admission an abscess formed on palmar surface of the hand, on the radial side of the index finger, and spread into the web between it and the thumb. On the day before admission it was opened by a surgeon; free arterial hæmorrhage ensued and continued all night. When admitted at 9 a.m. he was pallid; his pulse excitable, small, and weak; his tongue coated; and he seemed very nervous and depressed. The radial half of the hand was much swollen, and there was a wound on the palmar surface two inches and a half long on the radial side of the second metacarpal bone. There was then no hæmorrhage externally.

July 19.—Hæmorrhage occurred, the hand having in the meantime become much more tense; the clots were removed, and an attempt made to secure the vessel (the radialis indicis), but this, owing to the swollen and sloughy condition of the parts, failed, and the bleeding was arrested by perchloride of iron and pressure.

21st.—Hæmorrhage recurred, and was again stopped by pressure, but the tension continued to increase as if bleeding were going on in the cellular tissue of the hand.

22nd.—At 9 a.m. hæmorrhage recurred; the radial and ulnar arteries were accordingly tied at the wrist. The wound was then thoroughly washed out, and all the clots removed.

23rd.—No further bleeding. All pain and tension of the hand disappeared.

26th.—Free hæmorrhage from both vessels. The ligatures were still on, but had ulcerated partly through the vessels. Ligatures were applied on each vessel, above and below the original ligatures. Ext. ergotæ liq. ℥x., acid. sulph. dil. ℥x., aq., 4tis horis, alternately with a pill containing ferri redacti gr. ss., quin. sulph. gr. ij., 4tis horis.

31st.—Hæmorrhage from the lower end of radial on the ligature separating. The hand and forearm were enveloped in cotton-wool, and the elbow flexed. This arrested the bleeding until August 2, when it recurred from the radial whilst the elbow was still flexed. Pressure by a graduated compress and perchloride of iron—the hand and arm being raised by a weight and pulley—were successful in arresting it.

No further bleeding occurred, and the wounds granulated, and the patient left the hospital on August 26. When last seen, on September 24, a slight stiffness of the fingers alone remained.

Remarks by Mr. Frost.—The above case seems a fair illustration of the difficulties which may be met with in what appears at first sight a very simple matter. Pressure in a sloughing wound, where the vessel was deeply situated and the parts swollen, could hardly succeed; and, failing, would do harm. Still it was perhaps worth a trial. Flexion seemed objectionable at first, from the close proximity to the patient's face in which the offensive wound would have been placed, and from the great difficulty there would have been in changing the dressings. Ligation of the arteries was so successful in subduing the swelling and arresting the hæmorrhage that in a similar case I should be disposed to adopt it earlier. As far as the hand was concerned, the arrest of the hæmorrhage was permanent; and had the patient's blood not been impoverished by the ill-health which led to the abscess and by the repeated hæmorhages, all would have been well. As it was, free hæmorrhage, as soon as the ligatures began to ulcerate through the vessels, showed the absence of clot. The ligatures were reapplied, and it was

hoped that by the administration of ergot a sufficiently firm coagulum might be induced to form; the latter, however, proved not to be the case in the lower end of the radial, by hæmorrhage recurring on the separation of the ligature. To have tied the radial lower down would have been difficult, as the last ligature was applied immediately above the point where the vessel dips under the extensors of the thumb. Pressure failed; flexion, however, was successful, but only until the collateral circulation was established. The blood, however, by distribution through so many channels, had doubtless lost much of the *vis a tergo*, and new pressure and elevation were successful. In any similar case, pressure having failed, I should be inclined to proceed at once to ligation of the arteries, before the loss of blood had led to the risk of secondary hæmorrhage occurring. My great anxiety was lest ligature of the brachial might become necessary; in which case the condition of the patient would have rendered the risk of secondary hæmorrhage and a fatal result very great.

CHILDREN'S HOSPITAL, PENDLEBURY, MANCHESTER.

TRAUMATIC ANEURISM OF RIGHT RADIAL ARTERY —SUCCESSFUL LIGATURE OF VESSEL AFTER FAILURE OF PRESSURE.

(Under the care of Mr. JONES.)

Louisa D., aged fourteen years, admitted May 27, 1878. A month ago the blade of a pair of scissors was run into the patient's forearm. There was a good deal of bleeding, and afterwards the arm became red and swollen. Pulsation soon appeared in the swelling and was controlled to some extent by direct pressure. On examination a hard round pulsating swelling, small enough to be covered by a sixpence, was seen one inch above the left wrist, and in the line of the radial artery. It had all the usual characters of an aneurism. Pressure by means of a bandage and pad on the aneurism was tried, with the effect of only slightly diminishing its size.

On June 29 the artery was tied about an inch and a half above the aneurism. At the completion of the operation slight pulsation was still to be felt. The ligature did not come away till July 30, and on August 15 the wound healed. At that date a firm nodule, about the size of a pea, was all that remained of the aneurism, and no pulsation could be felt in the radial below the point of ligature.

Remarks.—In this case the artery was deligated at some distance from the aneurism in preference to laying open the tumour and securing the vessel in two places, as is often recommended in aneurism of a traumatic origin. The circumscribed nature of the swelling, in addition to the readiness with which the pulsation in it could be arrested, determined the choice of operation. Direct pressure, combined with pressure on the vessel above, sufficed to control the pulsation in the tumour, and diminished very perceptibly its size. This treatment, although persevered in for several weeks, produced no appreciable alteration in the swelling; hence the necessity for operative interference. Pulsation could be discovered in the tumour after the ligature (catgut) had been tightened. This, which soon disappeared, is to be attributed to the enlargement of the collateral vessels, consequent on the treatment previously adopted. The termination of the case in complete recovery served to show the applicability of the Hunterian method of operating in cases of traumatic aneurism wherever the tumour is small, and pulsation easily controlled; the blood being contained in a sac formed by a protrusion of the cicatrix in the arterial wall. The old operation of cutting open the tumour and tying the vessel above and below should be reserved for those forms of traumatic aneurism in which the blood is not circumscribed, but where it infiltrates the tissues.

A Veteran Smoker.—At the Hygiene Congress of Paris it was stated during the discussion on the influence of tobacco on health, that Dr. Strohen, eighty-six years of age, the father of eleven children, and in the enjoyment of perfect health, has for sixty-five years smoked fifteen cigars daily.—*Gaz. Hebd.*, October 4.

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Medical Times and Gazette.

SATURDAY, OCTOBER 12, 1878.

MEDICAL EDUCATION UNDER THE CONJOINT SCHEME.—No. II.

We have already pointed out that one effect of the proposed scheme of education and examination would be in a great measure to abolish the earlier classes in our medical schools. That is to say, by adopting a kind of voluntary plan of education the classes would be so reduced in importance as to be at best mere skeletons of their former selves; for to enable the student to pass his First Professional Examination the only course which it is proposed to make compulsory is one of Practical Chemistry. The subjects of this First Professional Examination are Chemistry, Materia Medica, Medical Botany (whatever that may mean), Pharmacy, and Osteology, but, with the above exception, the knowledge necessary to pass this examination may be acquired anywhere. We do not object to the plan which would make compulsory an examination in Physics, Chemistry, and Botany previous to entering on the proper study of Medicine, but in our view the proposed scheme has nothing to commend it.

Let us next turn to the Second Professional Examination. The period for which this is fixed is eighteen months after entering a medical school; and the subjects of this examination are Anatomy and Physiology, but, unfortunately, in their present unsatisfactory conjunction. How anyone acquainted with the state of knowledge in these two important branches of medical education can reconcile this combination, it is difficult to understand.

A man may be a very good examiner in one branch, and have but a comparatively limited acquaintance with the other; and that this is notoriously the case at present, in the case of more than one examiner, is very well known. Moreover, in our view the conjunction of the two subjects is an

injustice to the student himself. The paper set gives him little or no choice of questions to be answered, and often he exhausts himself on one subject at the expense of the other. This would not be the case if separate papers were set and separate examiners assigned to each subject. We are confident that such a simple alteration as that just indicated would effect a very decided increase in the student's knowledge, both as regards extent and accuracy.

Turning next to the requirements proposed under this scheme as to attendance on courses of instruction, we find that they adhere rigidly to the rule laid down by the General Medical Council, that no man ought to be compelled to attend more than one course of lectures or of instruction on any given subject. Hence the only compulsory attendance proposed is one course of lectures on Anatomy and one on Physiology; but two winter sessions of attendance in the dissecting-room whilst engaged in Dissecting, and a single course of three months' duration of instruction in Practical Physiology and Histology, are separately provided for.

To this scheme, if duly and carefully carried out, we cannot with reason greatly object. But it is evident that under it the lecturer on Anatomy should have it as his duty to correlate and harmonise the knowledged acquired in the dissecting-room. To the dissecting-room should be relegated all the work of demonstrating. The lecturer on Anatomy should have a totally different kind of work to do. A single course of Physiology will in a certain sense be a real boon to the student, for, although compelling him to stretch his attention during a given period over a greater area of subject-matter than need be the case at present, it will obviate the necessity of the first year's student attending a course which it is almost impossible for him to understand. A course dealing, for instance, with the most abstruse problems of animal chemistry, before he has learned the merest elements of the science, and considering the minute structure of organs, with the situation and relations —almost the names—of which he is entirely unacquainted. Besides, the removal of the course of practical instruction to the summer session will tend to lighten the winter's labours.

But the scheme of instruction and examination proposed for the third period seems to us to be eminently unsatisfactory. Each student is required to attend a six months' course of Medicine and a six months' course of Surgery, together with a "course of lectures on Midwifery, including the use of obstetrical instruments, and on Diseases peculiar to Women during not less than three months." Whatever may be said of the teachers of Medicine and Surgery, it is quite plain that the energies of the teacher of Midwifery will be taxed to the utmost. But instead of the ordinary second course of Medicine and Surgery as at present given, the scheme proposes two new courses, entitled Practical Medicine and Surgery respectively, each extending over six months. In the course of Practical Medicine, instruction is to be given as to the application of anatomical facts to medicine on the living person or the dead body, in the methods of examining various organs, the employment of instruments in diagnosis, the examination of diseased structures, whether recent or in a museum, and the chemical examination of morbid products. Now, we submit that this *olla podrida* constitutes no proper course of instruction in the true sense of the word: the subjects proposed ought to be, and can only be, taught in the dead-house or in the wards, and seem only thrown in as a kind of make-weight for the abolished course of Medicine, properly so called. The same may be said of the proposed course of Practical Surgery. Here too we have the application of anatomical facts to surgery, the methods of procedure required to detect the effects of disease and accident, the use of surgical apparatus, the examination of diseased structures, and operations on the dead body—all of which ought to occupy their proper place in any course where surgery is duly taught.

Such separate courses are not likely to be of much service, for subjects of the kind can only be taught with advantage in the concrete, never in the abstract, form. But, to our mind, the crowning absurdity of the scheme is that which has reference to certain other courses. Each student must attend three months' courses on Pathological Anatomy and on Forensic Medicine, as well as a course of undetermined length on Public Health; but he is not to be examined on one of these subjects. This proposal has been well and vigorously denounced by Professor Douglas Maclagan, of Edinburgh, at the Bath meeting of the British Medical Association; for though examinations on Forensic Medicine and Public Health are nominally included in the examinations on other subjects, it is perfectly plain they will practically be left alone. Surely, if it is worth while insisting on a student's attendance on these classes, it is worth while examining him as to his knowledge of the subjects. We cannot protest too earnestly against any such proposals, and assuredly they will not be allowed to pass muster in any scheme made to apply to Scotland.

It is understood that, in a certain measure, this scheme has been put forward on account of the outcry against the number of lectures a student has to attend; but we fear the student may well say, "Save me from my friends!" For, turning to the more strictly practical part of the proposed curriculum, referring to hospital practice, we find that whilst the student has to attend a regularly recognised hospital for the purpose of receiving clinical instruction during three winter and two summer sessions, he is also called upon to attend during nine months lectures on Clinical Medicine, and during other nine months lectures on Clinical Surgery, as well as being engaged for three months in the study of Diseases peculiar to Women, and having during the whole period of attendance on clinical lectures to be present at demonstrations in the post-mortem room. His load of labour as to attending on lectures will not be greatly lightened. Finally, he will be required to produce certificates of having acted for six months as a medical clinical clerk, and for other six months as a surgical dresser. Good as such recommendations are in themselves, they are rendered of none or next to none effect by the clause which follows:—"These duties may be discharged at a general hospital, infirmary, or dispensary, or parochial or union infirmary, recognised for this purpose, or in such other manner as shall afford sufficient opportunity for the acquirement of practical knowledge." Here the whole thing breaks down, for whilst we are far from denying that much sound knowledge may be acquired elsewhere than in a medical school, that knowledge and practice has a much greater tendency to be of a slipshod character than if acquired in the well-regulated wards of a hospital to which a medical school is attached. Even now many students prefer obtaining a dressership anywhere rather than in their own hospital, provided they avoid the stricter discipline such an appointment entails.

But the whole question resolves itself into this: Does the scheme above indicated fairly represent the educational wants of the day? We think not. Briefly to point out some of the most important objections which rise to our mind, we would say that too much work is crammed into too short a space. There may be cramming, or even instruction: there cannot be education. Secondly, and as a part of the first objection, we would point out that numerous courses are manufactured out of what ought to be ordinary clinical instruction. Thirdly, teaching and examining do not go hand in hand; there are examinations where there need be

no classes, classes where there are no examinations. Neither system is satisfactory. Finally, in the meantime, what becomes of all that special instruction which is to save the public from the hands of the specialist? There is absolutely no provision made for it. We have special departments at most hospitals for such things as ophthalmology, skin diseases, and infantile diseases, to say nothing of dentistry, aural diseases, mental diseases, and the like. It is plain that the public want some knowledge of these things in a man; and if it is unsafe to leave a student untrammeled to wander at his own sweet will in the paths of knowledge, it would surely have been well in any scheme of education at the present day to have taken some cognisance of these. As it stands, the scheme must be pronounced imperfect—we had almost said crude and imperfect, but we rather fear that by long incubation the egg has simply become addled.

THE REPORT ON THE ARMY MEDICAL DEPARTMENT.

We now proceed to consider, according to the promise given last week, some of the suggestions and proposals made in the Report of the Committee on the Army Medical Department. We think they deserve particular notice, because while at first sight they seem to embrace mere practical details, on closer inspection they reveal opinions and indicate a policy. We will first take the last of the "Recommendations"; it is No. 30, and reads—"That the numbers of the executive ranks be gradually reduced to 796 Surgeons-major and Surgeons." The figures (100) annexed to it indicate the paragraph of the Report on which the Recommendation is based. It points to the reduction of establishment as the only set-off to the heavy expenditure entailed by increase of pay and pension to the medical officers of the future. But some other paragraphs must be read in connexion with the one quoted, in order to arrive at a comprehension of the opinions of the Committee, which seem to us to embody a future policy. The number of 796 members of the future executive establishment perhaps by no means indicates the extent of the coming reduction. The Committee, indeed, remind us of the wicked daughters of King Lear, when they argued against the necessity of his having any special band of trained followers or guard; and after proposing a reduction of fifty at a blow, ended by asking—What need one? Let us look at Paragraph 101. It says, "It may be objected that in this establishment we have made no provisions for a war, or for any unusual demand upon the Department. In reply, we say that however necessary it may be in the combatant ranks and in the administrative departments to maintain the officers at war strength, it is not requisite to do so in the Medical Department—there is not the difference between a military and a civil surgeon that there is between a combatant or administrative officer and a civilian; at the base of operations and in the rear of the army the civil surgeon would probably be as efficient as a military medical officer." We do not suppose that the Director-General has any intention of effacing the administrative officers of the Army Medical Department, but it looks bad for the Executive Department from which they had their own origin. Again, in Paragraph 102 the Committee say, "When a small body of soldiers travel by rail or transport, it is the practice to require a medical officer to travel with them: yet in every village they pass through, and probably in every ship they embark in, there will be a medical practitioner perfectly competent to deal with every sudden cause of disability likely to arise." This certainly recalls poor Lear's trained band, and we say to ourselves again, as we reflect on the proposed reduction of the executive members of the Army Medical Department—What need of one?

Dipping once more into the Report, we come upon Paragraph 32. This treats of difficulties with regard to quarters, but also touches indirectly on the establishment of medical officers. It says, *inter alia*, "At the same time we think it is a subject for inquiry, whether there is a necessity for such close personal medical attendance on soldiers. No difficulty is experienced in civil life, even in large institutions, such as schools and colleges, in the *non-residence* of medical men; and it would probably be found equally compatible with the physical efficiency of the soldier." Surely this expression of opinion may make one doubt whether in a few years the 796 Surgeons-major and Surgeons will not have been greatly diminished in numbers.

Turn now to Paragraph 81. It bears on competitive examination, but we find the reduction of establishment idea again cropping out, consequent upon the discovery the Committee have made, that generally speaking a civilian is as good as a military surgeon, if not better. The Committee say: "Before registration as a surgeon, every student has to obtain a diploma in surgery and a diploma in medicine. These diplomas entitle him to undertake any professional duty, however difficult. *We cannot see that there is any recondite knowledge necessary for a military surgeon which is not requisite for a civilian. Perhaps* he may be deficient in the treatment of gunshot wounds or in military hygiene: the course at 'Netley' should supply the requisite knowledge on those subjects." We have put part of the passage in italics, for we think that even *perhaps* may mean more than at first sight appears. Can it be that the Committee look forward to the time when "Netley" may disappear along with the executive members of the Army Medical Department? The Committee admit elsewhere, in Paragraph 7, that "medical officers are indispensable for the army," though they add—"It may not be necessary to draw to it the very *élite* of the medical profession; but it is desirable that there should be a fair leaven of surgeons of a high class, and it is eminently desirable that the officers of the Army Medical Department should, as a whole, be at least equal to the average of successful medical practitioners." And they say further, "A body of not far from 1000 officers is an appreciable factor, even in so large a profession as the medical,"—a remark which does not of itself point to a reduction of the Army Medical Department, but which cannot, however, do away with, or even lessen, the significance of the paragraphs we have quoted above.

There is no need to follow up this inquiry further at present, but we think we have shown that we were justified in saying in a previous article that the Report of the Committee did more than investigate the causes of dissatisfaction or point out the means of removal. The Report is indeed full of suggestions, many of them revolutionary, and some of them pointing to destruction; and one is almost led to question whether the Committee are not of opinion that the best way to satisfy Army Medical Officers would be by abolishing them altogether. We are not prepared to go as far as this ourselves, nor perhaps do the Committee quite intend it, but we have ever considered that departmental medicine has in it great elements of abuse. It has a tendency to degenerate into red-tape, and to become exclusive by the adoption of little forms and returns which embarrass the uninitiated stranger, who may yet be a master of his profession. A department, of course, is a necessity, for from it must be chosen the administrative officers, who are indispensable; but the smaller the department, so much the better, and we think all the more highly of the Committee for being of the same opinion, but we cannot help wondering why they hid away important suggestions in paragraphs which apparently had no connexion with the destructive thoughts which really occupied their minds.

THE PATHOLOGICAL EXCRETION OF CARBOLIC ACID.

It has been shown by Städeler that phenol, or carbolic acid, is a constant constituent of the urine, and in 1876 Salkowski described four cases of disease, two of them diffuse peritonitis, in which the amount of phenol was abnormally increased. Quite recently, Dr. Brieger of Berne has carefully examined the subject in Herr Nencki's laboratory at Berne, especially with a view to determine what relation there is between the decomposition of albuminous substances in the bowel and the amount of phenol excreted—as Baumann has proved that this body is a product of the putrefaction of albumen, and Brieger that it is a normal constituent of the contents of the bowel. The account of Brieger's researches, and of others bearing on the same subject by Drs. Odermatt and Schaffer, with a controversial communication from Professor Salkowski, will be found in the *Centralblatt Med. Wiss.*, Nos. 30, 31, 34, 1878, from which the following particulars are taken:—The carbolic acid in the urine is estimated by distilling the latter with dilute sulphuric acid, and precipitating the phenol as tribromphenol. In healthy persons on ordinary diet the daily excretion of phenol is about 0·0158 gramme. In gastric cancer it rose in two cases to a mean of 0·025 to 0·061. In three cases of phthisis the excretion was quite normal, and in only one of three cases of typhoid fever was there a trifling increase. In a case of English cholera the mean was 0·052. In peritonitis, as Salkowski had previously stated, the quantity excreted rises enormously, *e.g.*, to 0·3018 gramme in one case, and to 0·138 in two others. It is extremely interesting to notice that *in septic conditions the largest excretion of phenol occurs*. Thus, in a case of gangrenous empyema with pleural fistula, Dr. Brieger obtained 0·3112 gramme from the urine on the second day after the patient's admission to the hospital. On the third day, when the previous fever had subsided and the pus had been rendered inodorous by injections of iodine, 0·6309; on the fifth day 0·0226, and on the ninth 0·1098 gramme in twenty-four hours. As Dr. Brieger expresses it, "It is extremely remarkable that the same body which we use as our most powerful antiseptic should itself be developed in the largest quantity within the animal organism during septic conditions, and we may expect that determinations of the amount of phenol excreted in septic diseases will help to make their *rationale* more intelligible." We have already in previous articles (*Medical Times and Gazette*, September 22, 1877, and December 29, 1877) dealt with the subject of the excretion of indican in the urine in various diseases; and as it is probable that indican is derived from indol, a product of the decomposition of albuminous substances in the bowel, it is important to know whether the excretion of indican and phenol run parallel to one another. Brieger finds that they do in some diseases, but not in others. Thus in peritonitis the excretion of both is abnormally large, while in anæmia and in certain cachectic states the phenol excretion is subnormal, while that of indican is increased. Some light may eventually be thrown on the relation between the excretion of these two bodies by the experiments of Brieger and Odermatt with various decomposing albuminous substances. They found that at a temperature of 40° Cent., and with free access of air, the quantity of indol, from which, as just stated, indican is derived, increases in the early stages of putrefaction, and gradually diminishes as putrefaction proceeds; while the quantity of phenol produced is inappreciable during the first few days of the process, and then steadily increases until the whole of the albumen has been decomposed. Another point which throws some light on the relations of phenol to the organism is that which has been brought out by Professor Salkowski and Dr. Schaffer, namely, that if dogs have phenol mixed with their food, rather less than half of it fails to appear in the urine; while, on the other hand, Dr. Schaffer finds that the lost phenol does not escape from the body in the fæces. Professor Salkowski has suggested that indol and phenol, which with skatol (a homologue of indol) have been proved by Brieger to be normal constituents of the fæces, are not exclusively found in the intestine, but also to some extent in the tissues of the body; but Herr Nencki has never been able to extract either indol or phenol from fresh muscles or glands by distilling their watery extracts. Hoppe-Seyler has also failed to find carbolic acid in the blood, or in any of the liquids of the body. Still, Brieger has obtained an abundance of tribromphenol by distilling putrid pus with dilute sulphuric acid; and he concludes that in septic conditions the production of phenol is not confined to the intestine. Hence at present it is impossible to say for certain whether the excess of phenol in the urine of disease is due to its increased production somewhere in the body, or, as Salkowski believes, to a failure of the tissues to *destroy* it in its passage through them from its place of origin to the kidneys. Anyhow, the solution of the problem is of great interest to physician and physiologist.

THE WEEK.

TOPICS OF THE DAY.

At the request of the Tottenham Local Board of Health, Mr. Thornhill Harrison, C.B., the Local Government Board Inspector, recently held an inquiry at Tottenham to determine what is the reasonable cost at which a proper supply of water may be required to be furnished. The Tottenham Board had ascertained that in one portion of their district alone, eighty-nine houses were not supplied with water, but had recourse to wells. Complaints having been made that the water in some of these wells was impure, the Board had samples analysed, the result being that the wells were condemned. But here a difficulty arose. The local water-rate is calculated at 1s. 4d. in the pound per annum of rental, and some of the houses deprived of their wells would accordingly be called upon to pay £2 2s. per annum, while the sum of 8s. 6d. is the maximum that could be enforced. The Board had therefore delayed taking compulsory measures for closing all suspicious wells until they could charge more than 2d. per week for a proper supply of water. After a lengthened discussion, Mr. Harrison referred to the fact that a safe water-supply cannot be obtained from shallow wells, while it was evident that 2d. per week was not a reasonable payment for an ample water supply. He had no doubt the Legislature intended to confine that small charge to cottages, but as the Act stood no more could be demanded, however large the premises, where local boards exercised their compulsory powers, unless the Local Government Board fixed some other charge. It seemed to him unfair that the uniform rate could not be charged, but local boards had no power to compel the use of their water where a "proper supply" already existed. It is confidently expected that the Local Government Board will endorse the views of their inspector, and fix a fair rate of charge.

The Metropolitan Board of Works last week proceeded against another manure manufacturer at the Southwark Police-court, for creating a nuisance in the neighbourhood. Mr. Thomas, the Sanitary Inspector of Bermondsey, said his attention was called to defendant's premises on the 6th ult. He visited them, and saw a large quantity of decomposed fish and other matter being manufactured into manure;

there was nothing to prevent the filthy smells escaping. The defendant pleaded that he had discontinued the business, and did not intend to carry it on again. The magistrate remarked that old trades of an offensive kind were now regulated by Act of Parliament; but the defendant, who was aware of the fact, had established a new business, well knowing the penalties he was liable to: he could not be allowed to poison the neighbourhood with impunity, and he must therefore pay a penalty of £30 and costs, and in default of distress be committed to Holloway Prison for one month.

When the spread of education among the working-classes has succeeded in bringing about the abolition of trades' unions and strikes, we may hope to be spared the pain of reading such news as the following:—"It is reported from Sedgley that the medical officers of health in the coal and iron districts of Colesley, in making their reports on the state of mortality for September, allege that the number of deaths is unusually large among adults, and attribute the fact in a great measure to want of sufficient nourishment, arising from inability to obtain food through the serious depression of trade."

The inhabitants of Holloway have recently held a public meeting to consider the drainage of the district. It appears that the neighbourhood suffers from disastrous floodings, especially after storms in North London, and much damage and considerable danger to health have accrued from these overflows of water. The attention of the Islington Vestry has been called to the matter; and they have been asked to aid the Metropolitan Board of Works in carrying out some efficient method of protection, there being little doubt that the drainage is inadequate, and not of sufficient capacity too meet the requirements of so large a population as is concentrated in that locality. It was stated that the subject of the entire drainage of the Holloway district will very shortly be considered.

In reference to the case of Mary Stokes, who, it will be remembered, died in the House of Detention while on remand, and whose death was accelerated by an insufficient quantity of food, it appears that, subsequent to the report of the Inspectors of Prisons for 1878, several changes have been made in the prison dietaries: prisoners under detention pending trial are now allotted the diet appertaining to Class 3. They are therefore now fed according to the same scale as persons undergoing one to four months' imprisonment, but not so well as Class 4, or convicted criminals whose offences have been grave enough to merit six to eighteen months' hard labour. The case of Mary Stokes would, therefore, seem to have been a gross violation of the regulations laid down by the Home Secretary as to the dietary of unconvicted prisoners.

At a meeting of the Town Council of Newcastle-on-Tyne, held last week, a letter was read from Sir William Armstrong, in which he offered to present to the town twenty-six acres of land adjoining the twenty-two acres recently purchased by the Corporation for an East-end park. The land is worth £20,000. The munificent gift was accepted with thanks, and it was proposed to call the park the Armstrong Park. The land is by the Ouseburn, and adjoins Sir William's own estate of Jesmondine, which is beautifully laid out and is open to the public.

At the meeting of the Metropolitan Board of Works held on the 4th inst., Mr. Selway moved—"That it be referred to the Works and General Purposes Committee to consider and report upon the advisability of preparing a Bill, to be laid before Parliament, providing for the acquisition by this Board of the interests of the several companies now supplying the metropolis with water; also, upon what steps it will be desirable should be taken to insure an improved supply of water to the metropolis." Public opinion, he maintained, was far more ripe for this subject than it had ever been before. In consequence of the diversity of management in London, neither the quality of the water-supply nor its quantity was all that could be desired, and the price varied much and was extremely high. After an animated debate, the proposition was agreed to by a majority of fifteen.

It is unlikely that the Local Government Board will allow the Redruth town authorities to set them at defiance, more especially as scarlatina of a malignant type is reported to have broken out again in that badly managed town. Three months ago the Government inspector, sent down to report, threatened the authorities that unless an engineer was appointed to arrange the drainage works the Board would be dissolved, and Redruth merged in the district of the Rural Sanitary Authority. Two gentlemen have accordingly been invited to prepare schemes, and these have been duly submitted, and have been for weeks before the Board without any decision having been arrived at. Indeed, at a recent meeting one of the members is reported to have stated distinctly that nothing would be done during the coming winter. Meanwhile, scarlatina finds a home in the midst of a population, the well-to-do members of which are taking every opportunity of leaving; and patient people are speculating upon the extreme limit which the London Board will fix before it will carry the threat of its representative into execution.

The Medical Officer of Health to the Carlisle Urban Sanitary Authority recently reported that there were 10 cases then in hospital—8 of scarlatina and 2 of typhoid; during the previous week 9 deaths had been registered, and of this number only 1 was from a zymotic disease. The death-rate was from all causes 14 per 1000 per annum, and from zymotic diseases 1·5 per 1000. In the corresponding week of last year 13 deaths were registered, none of which were from any zymotic disease, and the death-rate was 20·5 per 1000 per annum. The Medical Officer further reported that, although it was gratifying to record that the cases of scarlatina had, so far, been of a mild character, yet this was no security for future cases, and the disease not only threatened to increase, but was actually increasing; and he reminded them that nine weeks from the beginning of each case of scarlet fever are required to stop infection.

The important question of water-supply has recently compelled the attention of the Birmingham authorities, and a public meeting of ratepayers was convened last week by the Mayor, and was held in the Town Hall, to consider a proposal of the Corporation to borrow £300,000 for the purpose in question. The chairman of the Water Committee explained the object of the proposed vote, and recapitulated what had already been done towards meeting the water requirements of the borough since the year 1875. He reminded them that the sum of £150,000 had already been expended in increasing the supply, representing a charge for interest and sinking fund of £6000 per annum; but in the same period the water rental had increased by about £15,000 a year. With the £300,000 now asked for it was intended to construct a new thirty-inch main from Plant's Brook, which was needed to relieve the pressure of the existing mains in providing a supply of twelve to thirteen millions of gallons daily, and to cover over the several reservoirs. The resolution was carried in a very full meeting with only four dissentient voices.

THE EXCLUSION OF FOREIGN PREPARATIONS FROM FRANCE. As the season of the year is drawing on when a large number of our invalid countrymen and women migrate to the South of Europe, it may not be out of place to direct

the attention of our authorities at home to the extraordinary measure by which the French Government has endeavoured, we believe for the last two years, to exclude all compound medicines of foreign pharmacopœias from its territory. This fact was brought to our notice indirectly through some remarks in a French paper this summer; and, on inquiry, we find these remarks remarks corroborated. A leading *pharmacien* in the South of France has, at our request, furnished the following statement, which is strictly reliable:—"All *compound* medicines, as well as all *patent medicines*, are absolutely prohibited from entry into France, and even the liquid extracts, soft extracts, tinctures, and liniments of the British Pharmacopœia are excluded. Sometimes, however, they are allowed to pass through the Custom-house in answer to a special petition, which must be addressed to the Pharmaceutical School at Paris, and to the Chef de Douane. A duty of 36 per cent. is charged in these cases —not on the wholesale, but on the *retail* price of the articles. In spite of petitions, goods are frequently stopped altogether, and sent back to England." This statement needs little comment. It is at once obvious that a great hardship is inflicted on English visitors by such a measure, whether we consider their deprivation of preparations which English doctors are accustomed to have faith in, and to order on their prescription-papers, and which are many of them not to be found in the French Codex, or whether we simply take the pecuniary view, and observe the additional cost which medicines so heavily taxed must necessarily entail. Happily, English chemists in the South can, and do, make some of the preparations themselves, and others they sometimes succeed in smuggling in. Thus, a case has been mentioned to us where some drugs, which had once been rejected at the Custom-house, passed into France among the luggage of a royal personage, in charge of the courier. Royal personages, however, are not to be made use of every day, and the risk of detection in smuggling is too great to be often run; and so it comes to pass that English patent medicines especially are not always easy to procure in France. We are no great friends to patent medicines, but, supplying as they do a natural craving for nastiness among the British public, and as taking them forms a pleasant leisure-hour pastime for middle-aged females, we do not see why they should be excluded. Without joking, however, the subject is serious enough to demand a remedy, and we should not be surprised if M. Léon Say were liberal-minded enough to find one, if a proper application were made to him.

THE SANITARY INSTITUTE OF GREAT BRITAIN.

The second autumnal Congress of the Sanitary Institute of Great Britain was duly opened at Stafford last week, the inaugural address being delivered by Mr. Edwin Chadwick, C.B. Congresses and meetings of scientific bodies and associations follow each other with such rapidity, that with every desire to record the proceedings of each for the benefit of our readers, we find our space totally inadequate. We can only briefly mention, therefore, some of the most prominent papers which were read in the different sections during the meeting. On behalf of the National Temperance League, Mr. J. Bowley, its President, gave a breakfast to the visitors, at which addresses were delivered by Mr. Bowley, Dr. Richardson, Mr. Chadwick, and others. Dr. Day, of Stafford, spoke on the subject of Ozone in relation to Health and Disease; Lieut.-Col. Jones contributed a paper "On Economy in the Disposal of Sewage;" and Mr. Monson one "On the Advantages of a Separate System of Drainage." Sir H. Cole, K.C.B., read a paper "On Sanitary Co-operation"; Mr. Ernest Turner one "On Hospitals for Infectious Diseases"; and Mr. Gavin Milroy a third "On Leprosy and its Prevention." In the Chemical Section, Professor Wanklyn and Mr. W. J. Cooper read a paper "On Air-Testing, with Experiments"; and Dr. Richardson had a large and attentive audience to listen to an address "On the Constitution and Formation of a Ministry of Health for the United Kingdom." Mr. H. C. Burdett gave a paper "On Thames Water"; Dr. Bartlett one "On the Chemistry of Dirt"; Dr. Hardwicke an address advocating the compulsory establishment of public mortuaries in large towns; Mr. E. Sergeant, of Bolton, put forward the necessity for the compulsory registration of infectious diseases, with special reference to its working at Bolton; and Dr. Lory Marsh advocated the establishment of a school for the teaching of sanitary science. The Institute would seem to have been very hospitably entertained at Stafford; and the meeting, it is presumed, was a success.

THE REGISTRAR-GENERAL'S REPORT FOR IRELAND AND SCOTLAND—JUNE, 1878.

The Registrar-General's return for Ireland for the quarter ended June 30 last shows that 36,634 births were registered during the period, a number equal to an annual birth-rate of 27·4 in every 1000 of the estimated population; and 26,900 deaths, representing an annual mortality of 20·1 per 1000. The birth-rate is under, and the death-rate over, the average for the second quarter of the last five years. Deaths from the principal zymotic diseases are, collectively, more numerous than for several quarters past: they represent an annual rate of 2·3 per 1000 persons. The increased mortality is mainly owing to the wet, broken weather; in fact, the quarter must be described as an unhealthy one; a prevalence of pulmonary diseases, unusual for the June quarter of the year, must be attributed entirely to the wet, changeable weather. Measles and whooping-cough, especially the former, prevailed in many places; and although neither disease was of a malignant character, owing to lung complications the mortality from both causes was very heavy, especially amongst the badly housed and ill-protected poorer classes. The deaths from fever, also, were more numerous than for many previous quarters, while small-pox was general and fatal in Dublin, and caused a few deaths in other parts of the country. A comparison of the Registrar-General's return for Scotland for a similar period gives the number of births as 33,629, representing an annual birth-rate of 3·74 per cent. of the estimated population. The average rate during the second quarter for the ten years immediately preceding was 3·717 per cent. The deaths recorded during the period under notice were 19,514, being in the proportion of 217 to every 10,000 of estimated population. The average death-rate during the corresponding quarter of the ten previous years was 2·240 per cent., consequently the mortality for this June quarter was under the average. For further purposes of comparison it may be stated that the death-rate of England during the June quarter was 2·08 per cent.; the average death-rate of the corresponding quarter of the ten preceding years was 2·11 per cent. It will be seen, therefore, that while the death-rate in Ireland was over the average, in England it was 3 per 10,000 below the ten years' average, and in Scotland 7 per 10,000 below the average.

MR. SPENCER WELLS' LECTURES.

The course of lectures on the Diagnosis and Surgical Treatment of Abdominal Tumours, lately delivered at the College of Surgeons by Mr. Spencer Wells, has been translated into German by his friend and former assistant at the Samaritan Hospital, Dr. Junker von Langegg, and is appearing in the fifth series of Volkmann's now well-known *Sammlung. Klinischer Vorträge*, as Parts 148, 149, and 150, each of which contains two lectures.

THE ACTION OF PEPSIN ON THE LIVING BLOOD.

In a communication to the *Centralblatt Med. Wiss.*, September 7, 1878, Dr. Albertoni, of Padua, describes some experiments made by injecting aqueous, faintly acid solutions of pepsin (1 in 1000) into the veins of animals, and comparing the coagulating power of specimens of their blood removed before and after the injections. The idea was suggested to him by the discovery by several physiologists of various ferments (pepsin, pancreatin, etc.) in the urine, muscles, and liver, to reach which they must necessarily pass through the blood. Albertoni finds that the injection of a sufficient quantity of good pepsin into a dog's veins "renders the coagulation of the blood very slow and imperfect, and diminishes the amount of fibrin produced." Exactly similar experiments to those made with pepsin were tried with a *boiled* solution of pepsin, and with a solution of hydrochloric acid in water (4 in 1000), but failed. Hence the above effects could only be ascribed to the pepsin. Dr. Albertoni has found paraglobulin in considerable quantity in the blood, which remains fluid after the injection of pepsin. He observed no ill effect on the health of the animals used, and is inclined to regard pepsin as normally exercising "a by no means unimportant function in connexion with the processes of tissue-change. Normally its absorption proceeds too slowly for it to accumulate in the blood in sufficient quantity to produce the above-named changes in the coagulation of the blood and the formation of fibrin."

SUDDEN DEATH OF PROFESSOR HARKNESS, QUEEN'S COLLEGE, CORK.

It is with regret we have to record the sudden death of Mr. Robert Harkness, F.R.S., the Professor of Natural History in Queen's College, Cork. The deceased gentleman had been staying for some three weeks in Dublin, during the September examinations of the Queen's University, in which he took part up to the day of his death. On Friday evening, October 4, he dined with a friend; and about 11 p.m. returned to his hotel, apparently in his usual health. On reaching the landing outside his bedroom, however, he fell down senseless, and was shortly afterwards dead. It appears that Professor Harkness had suffered from heart disease for some years. He was somewhat over fifty years of age at the time of his death.

Oxide of Zinc in Diarrhœa.—In his thesis Dr. Jacquier calls attention to the great service of oxide of zinc in diarrhœa, as observed by him in the practice of Dr. Bonamy of Nantes. The formula is three grammes and a half of oxide of zinc, and half a gramme of bicarbonate of soda, to be divided into four powders, which are to be taken during the twenty-four hours. In all the cases related a cure was effected in three or four days, and in several of these the disease had lasted for one or several months, and had resisted various other modes of treatment.—*Bull. de Thérap.*, August 30.

The German Association of Naturalists and Physicians.—The fifty-first meeting of this learned body, with its twenty-five sections, held at Cassell, was opened on September 11, under the presidency of the veteran Dr. Stilling, who gave an interesting sketch of the scientific history of the town. Numerous scientific celebrities were present, although these are evidently falling off in numbers and quality as compared with some of the preceding meetings of the Association. One of the reporters complains that at these meetings practitioners properly so called are kept far too much in the background, instead of actively participating, as in England and France; and the hospital clinicians and the professors are too predominant. The applications of "Darwinism," on this and every occasion in which German *savants* meet, are becoming rather tiresome and far-fetched, except in the eyes of the enthusiasts. The meeting next year is to be held at Baden-Baden.

ABSTRACT OF

INTRODUCTORY ADDRESS

DELIVERED AT THE OPENING OF THE WINTER SESSION OF THE UNIVERSITY OF DURHAM COLLEGE OF MEDICINE.

By S. McBEAN, L.R.C.P., L.R.C.S. Edin.,
Lecturer on Materia Medica.

The lecturer took for his subject the Origin and Development of Medicine, thinking that a brief historical sketch of it could not fail to be interesting to men who were about to commence, or had just commenced, the study of that science and art. He assumed that, in the very earliest age of the existence of the human family, man would be endowed with intellectual and moral qualities, feelings, and passions, similar to those of which we ourselves are conscious, and by which we are influenced at the present day; and therefore that medicine would take its origin in that sentiment—the most generous which nature has conferred upon man—*i.e.*, that benevolent sympathy which leads us to pity those who are suffering, and excites in our minds the desire to afford the sufferers relief. This sentiment would naturally take practical effect at the hands of that man who first—in the distant age spoken of—saw his fellow in pain or other physical distress, and made some endeavour, probably very inefficiently, to relieve him; and this endeavour was the beginning of what is technically called "practice of medicine." Medicine as a science would take its rise at a much later date, as it would be necessary that men in practice should discover a sufficient number of facts—therapeutic and pathological—whereon to form a basis for its scientific development.

Among the nations of antiquity such knowledge of the medical art as existed was exclusively in possession of, and practised by, certain orders of the priesthood. At all events, they were the only regular practitioners in that day. But the lecturer confined his attention to the order of which we know most—the Priests of Æsculapius. Æsculapius was the son of Apollo, and the god of medicine. In him was supposed to be concentrated the entire sum of medical knowledge. His temples were, for many centuries, the sole repositories of all that was known of the healing art. The priests of those temples deriving their knowledge, in the first instance, by direct revelation from the god himself, afterwards transmitted it, by tradition, to their successors in the priestly office, and to their successors alone, being bound to this by an oath.

Of the priests of Æsculapius, by far the most celebrated was Hippocrates. He was born in the island of Cos in the year 460 B.C., and died in the year 377 B.C., and from him we may date the origin of medicine as a science. He collected and arranged such scattered facts as his predecessors had brought to light, added the results of his own experience, and produced the earliest treatises on medicine and surgery of which we know anything. He broke down that great barrier to scientific investigation—blind adhesion to traditional authority—by teaching his followers to substitute personal observation in the study of disease, for the dogmas of tradition. He also taught that the sacred disease, which before his time, and, in fact, for many centuries afterwards, was ascribed to the influence of demons, depended, like all other morbid conditions, upon purely natural causes, thereby entirely eliminating the supernatural element from the list of morbific agencies; at all events, in so far as the influence of his teachings extended. His greatest work was the history of acute diseases. Surgery made very little progress at his hands, probably owing to religious veneration for the dead preventing the study of anatomy.

He then spoke of the works of Aulus Cornelius Celsus, who lived in Rome in the reigns of Augustus Tiberius and Caligula, and died in the year 45 A.D. In the times of Celsus, surgery, judged by the *armamentarium chirurgicum* of that day, must have been in a very advanced condition, as can be seen by the museum at Naples, where may be found surgical instruments, found in Pompeii, differing but slightly, in mechanism and in purpose, from those of our own time. Claudius Galenus, who practised in Rome, between the years

165 and 201, may be said to have originated the study of anatomy. His knowledge of that science was principally acquired by dissecting the bodies of apes. Notwithstanding his anatomical lore, he appears to have done little or nothing for the advancement of surgery; but seems, in keeping with the mental proclivities of his day, contrary to the Hippocratic spirit, to have devoted his time and talents to speculative medical philosophy and the building-up of medical systems. Eighty-three genuine writings of his have come down to us; his influence upon the history of medicine was immense, as for some ten centuries—from the second to the twelfth—his systems were looked upon as alone correct.

Paulus Ægineta, who flourished about the middle of the seventh century, collected into one work all the improvements which had been effected in medicine and surgery previous to his time. He practised first at Rome and afterwards at Alexandria, and was the last of the Greek and Roman physicians of antiquity. The Alexandrian School was at this time the principal, if not the only, seat of medical learning in the then civilised world; and with the destruction of this school—when Alexandria was taken by the Saracens, in 641—medical learning was for a considerable period completely extinguished. It was, however, rescued from oblivion by the Arabians, who recovered from the ruined libraries of the Alexandrian School and its branches the Greek medical manuscripts, translated them, added doctrines of their own, and again introduced medicine into Europe through Spain, whence it extended to Italy, where, in the year 802, the School of Salerno was founded. In this school the systems of the ancients were alone taught, there being no original research.

Public hospitals and schools were now established, and the education of physicians was completed at these institutions, instead of privately as heretofore.

In 1163 the Council of Tours decreed that ecclesiastics should not practise surgical operations; and from that date medicine and surgery, which had heretofore been practised by the same individual, were separated. The priests and educated physicians, who were partly laymen, partly monks, still continued the practice of medicine, and taught it in those universities which had at this time been established; whilst surgery was abandoned to the laity, who in the twelfth century, and for some centuries afterwards, were pretty much in a state of barbarism. The effect of this decree was, that whereas medicine still retained its position as a learned profession, surgery sank to the condition of a mere handicraft; and whilst physicians were taught in universities, and obtained university degrees, surgeons associated themselves in guilds and civic corporations.

During this period, *i.e.*, from the twelfth to the sixteenth century, medicine and surgery made very little advancement. At the universities the teaching of medicine was nothing better than philosophic speculation; and as the Arabians, we are told, had in time reduced surgery to the application of ointments and sticking-plaster, it is unnecessary to say that that art was during this period in an evil case.

In the sixteenth century, a Florentine physician, Antonius Benevenius, in a book published at Florence in 1507—"De Abditis Rerum Causis"—recommended that the medical systems of the Greek and Arabian physicians should be discarded for the observation of nature; and a new era now began. During this century, and the early part of the seventeenth, the labours of Vesalius, Fallopius, Eustachius, Harvey, and Aseli gave birth to modern anatomy and physiology.

Surgery, illuminated by these sciences, was greatly advanced at the hands of Paré, a famous French surgeon, who, following Benevenius, made authority subject to observation. Perhaps the greatest service he rendered to surgery was the invention, or, as some say, the restoration, of the art of tying bloodvessels to check hæmorrhage. He lived between the years 1517 and 1590, and from this time until the eighteenth century no great improvement marks the progress of this art.

During this century (eighteenth), Percival Pott, an eminent English surgeon, taught that wounds and other injuries would heal by a natural process, and independently of those severe dressings and escharotics which, at this time, were supposed by some inherent virtue to carry on the healing process in those injured or diseased parts to which they were applied; and from this date surgeons more correctly appreciated the value of natural forces in restoring injured tissues to health. John Hunter—a contemporary of Pott—was equally great as a surgeon, a comparative anatomist, and physiologist. It has been said that the epochs of surgery are marked by discovery, the epochs of medicine by hypotheses; and this statement may be regarded as having been fairly true between the time of Galen and the beginning of the present century. During this century, however, owing to the great advance—in fact, it might almost be said, the introduction—of the study of pathology, medicine has obtained a true anatomical and physiological basis; and nowadays, from this basis alone, we seek, in both sections of our art, to evolve those principles which guide us in the practice of our profession. Perhaps the greatest discoveries ever made in medicine and surgery have been made in our own time. First, in the year 1846, it was discovered that ether when inhaled produced complete anæsthesia during the extraction of teeth. In 1849, however, Professor Simpson, of Edinburgh, found by experiment that chloroform possessed more energetic properties as an anæsthetic than ether; and since then ether has been in a great measure superseded by chloroform. By this discovery a surgical operation is now completely robbed of its more immediate terrors; and the old proverb, "Dolor medicina doloris," is for ever refuted. Of course we know that the use of chloroform is not an unmixed good, as during inhalation the toxic may take the place of the purely physiological effect of the drug, and death may ensue. During the last decade Professor Lister has introduced a new mode of treating wounds, which he calls the antiseptic method: and the lecturer considers that the perfection of this system will be that surgeons for purposes of diagnosis, as well as of treatment, will be able with perfect safety to explore the thoracic and abdominal viscera, much as watchmakers do the machinery of a watch.

He then alluded to Professor Esmarch's bloodless method of operating; and went on to say that the very imperfect sketch given taught the great and paramount value of the art of intelligent observation, whether exercised in the practice or in the further development of medical science. It would be the duty of the students—first, in the lecture-room, to appropriate to themselves those facts in medicine, surgery, and the allied sciences, which have been discovered by the labours of others; and secondly, in the dissecting-room, the physiological and chemical laboratories, in the wards of the hospital, and the post-mortem room, whilst still appropriating those facts spoken of, diligently to train those senses we call special, so as to develope in the highest possible degree the power of accurately and minutely recognising every condition of matter, physiological or pathological, presented to them within their respective provinces, and to acquire the mental faculty of correctly appreciating the value of those conditions as affecting physiological or pathological research. "There is, however," he said, "a limit set to our power of observation when exercised in investigating those processes, pathological or physiological, which are frequently occurring, or are constantly in operation, in living bodies. We have to contend with an element which cannot be recognised by any special sense we are at present in possession of: I mean the operation of that histo-chemical force which, in each and all those processes we refer to, plays the leading and most important part. In an inflamed tissue, that which we perceive by the eye, unaided, or supplemented by the microscope, is merely the result of the inflammatory process. That process, itself some perverted histo-chemical operation, we never see; and so it is in the domain of health."

He concluded with a quotation from Professor Billroth, which seemed to him at this point peculiarly applicable, viz., "To find the causes of the morbid processes, to foretell their course correctly, to conduct them to a favourable issue, or to check them; these are the peculiar problems for the physician, and these are equally difficult of solution in internal, as well as in external medicine. Scientific research and refined empiricism are the means at our command for the solution of this problem."

Willingham District, Gainsboro' Union.—Mr. F. Sutton has been awarded the sum of £8 by the Local Government Board for efficient vaccination in this district. (Second time.)

ABSTRACT OF

INTRODUCTORY ADDRESS

DELIVERED AT THE SHEFFIELD SCHOOL OF MEDICINE.

By WILLIAM DYSON, B.A. and M.D. Lond., M.R.C.S. Eng.,

Physician to the Sheffield Public Hospital; Lecturer on Physiology at the Sheffield School of Medicine.

The lecturer stated that medical stndents had a right to expect from their lecturers some word of encouragement and advice on their undertaking the study of such an important science as that of medicine. Having stated his difficulty in the choice of a subject for his address, he then proceeded to speak on topics which related to the curriculum and method of study of the medical student. He emphatically urged and maintained the value of imparting knowledge by the lecture system, and briefly indicated its advantages over the book-reading and "coaching" methods of study. He advised an early cultivation and discreet exercise of the habit of taking notes on lectures and on cases; and, in refercncc to the question of indexing note-books, which was thought to be a trivial one, he urged that it was an important matter. He said: "A case will often be utilised if it can be found in a few seconds; but, if the reference necessitate the rummaging through two or three largc note-books, I am sure that, by the diligent student as well as by the busy practitioner, the reference itself will be referred to a more convenient season." He advised the first year's student not to attempt thc study of collateral subjects, such as biology and physics, at the same time as the large and important subjects of anatomy, physiology, and chemistry; and recommended him to treat medicine and surgery with a sparing hand. He asserted the value of revising the winter subjects during the summer session, and the desirability of passing the primary examinations at the end of the second year. He advocated the holding of hospital appointments, and a very free use of the apparatus employed in physical diagnosis, as invaluable in the attainment of practical and useful knowledge. He further insisted, as essential to future success, on the habit of personally verifying the statements of others. He said: "It is not enough for you that the visiting surgeon informs you that there is a fluctuating tumour, or that the visiting physician tells you that there is an aortic murmur. Howevcr great may be your respect for Mr. A's opinion or Dr. B's diagnostic skill, you must satisfy your senses of the facts which they describe. If there be one act more than another that stunts the knowledge of the student of science, it is the too ready nod of the head, which, like Lord Burleigh's nod, may be construed to mean equally assent or dissent, pleasure or displcasure. If there be one word more than another that wrecks his future usefulness, it is the word 'Yes,' which, alas, is sometimes used to cloak a mass of clinical ignorance. Personal verification must be your first and constant principle in the study of diagnosis; for if your premises be wrong, your conclusions, however logical, will be inaccurate."

In the next place, he invited the attention of the students to the subject of pathology and morbid anatomy; and hc proceeded to prove the importance of this subject as an agency in the advancement of medical science by a rcference to a few of its discoveries. He lamented the absence of it, in its practical aspects, from the examinations of the licensing bodies and examining boards; and he indicated the necessity of practical work in the dead-house, in order that the student might prepare himself for the position he would be called upon to take in after-life at inquests, the police-court, and the assizes. He then dealt with the excuses which the student made for the neglect of his work, discussed the relations of thc subject to therapeutics, and dwelt at some length on the recent advances made by the science. "I have tried," he said, "to show you that pathology has been, and is, one of the main spokes in the wheel of medical science; that its position is in the van of the army of therapeutists; that, in some cases, it is the key to the detection of crime, and the *sine quâ non* to the administration of justice; that, though it is somewhat difficult to follow in all its flights of research, it repays the toil of the industrious fisherman, sometimes by great 'catches,' always by good 'sport'; and lastly, that, at the examinations of the licensing bodies and examining boards, it is conspicuous by its comparative absence. If all these tales about it be true, I claim from every student here to-day a consideration for it which shall be kindly, and an acquaintance with it which shall be deep and practical."

Dr. Dyson then made a feeling allusion to the loss which thc School had sustained by the death of Mr. William Baker, thc late Lecturer in Toxicology; and the students were congratulated on the valuable additions made to the educational staff by the election of Messrs. R. J. Pye-Smith and W. D. James as Demonstrators of Anatomy. He also notified the special recognition by the Senate of the Edinburgh University of Dr. Drew's lectures on Public Medicine. In conclusion, he said: "I urge you, gentlemen, to steer quite clear of the whirlpools of professional abuses. I solicit your best exertions for the maintenance of the honour of this small but important institution, and for the sustenance of the dignity and reputation of one of the noblest of professions. Lastly, I venture to hope that you will not only 'strengthen the roots and foundation of the science itself,' but that you will be eminently successful in the practice of that art whose great aim is the relief of the widespread human misery by which we are so densely surrounded."

FROM ABROAD.

Dyspnœa in Acute Pleurisy.

Dr. Dieulafoy takes the occasion of two cases (which have recently come under his notice at thc Charité) of pleurisy with effusion (*Gaz. Hebdom.*, September 27), for making some observations on dyspnœa as observed in this affection. It is generally believed, he says, that dyspnœa is one of the most common symptoms observed in pleurisy with effusion; and certainly, at first sight, it seems quite natural, when two litres of liquid exist in the chest, when the lung is flattened and thrust back by the effusion, and when hæmatosis is only imperfect, that the breathing should be oppressed. And yet such oppression does not exist, or only to an insignificant extent. Effusion, even when it amounts to a very large quantity, impedes respiration but slightly, so that *dyspnœa is not to be regarded as an habitual symptom of pleurisy with effusion*. This is a point of great practical interest in relation to the indications of thoracentesis.

A medical student at the Charité observed his breath to be a little short, but to so slight an extent that he pursued his duties at thc hospital as usual, and it was almost by accident that his chest was examined, and found to contain more than two litres of liquid. His health was excellent, and he only felt somewhat out of breath when he walked quickly or ran upstairs. Respiration was only 21 in place of the normal 16 or 18. Dr. Dieulafoy practised two aspirations, at intervals of two days, only removing, according to his usual practice, a litre of fluid at each, leaving the remainder, which was absorbed in a few days. The second case occurred in the person of a man-servant who had suffered from a left pleurisy for nine months, during which period eighteen blisters had been applied without effecting a cure. After the acute stage had passed away, for which he had kept his bed, he resumed his duties, but found his respiration still somewhat embarrassed. Still the oppression was very tolerable, as it allowed him to continue the hard work of polishing the floor daily, and sometimes ascending the box of the carriage. He spoke at all times with an ease and vivacity that convcyed no idea of a person suffering from dyspnœa. And yet, on examining his chest, Dr. Dieulafoy found an amount of effusion such as he had never met with before—the heart beating beyond the right nipple, almost in the right axilla, the right lung being to some extent also thrust backwards. After the examination of the chest the quantity of liquid was estimated at five litres, and after so long a sojourn it must have become hæmatic or purulent. But when the liquid becomes purulent in chronic pleurisy, the general symptoms are habitually marked, thc patient losing his appetite, becoming thin, with shivering

and sweating and febrile elevation of temperature, especially at night. Nothing of this sort was observed in this patient, who had a good appetite and no fever, and was polishing floors until the day before his admission. At the examination his respirations only amounted to 27, a much inferior number to that furnished by bronchitis, pulmonary congestion, or the smallest nucleus of a pneumonia. On a puncture being made in order to withdraw the first litre, a thick layer of false membranes had to be traversed, and the liquid withdrawn was hæmatic.

Many other examples might be cited, and among these the case of a person who believed himself to be cured of a pleurisy of three weeks' standing. So little was his respiration embarrassed, that the respirations were only twenty-two, and yet paracentesis, practised three times, withdrew three litres of liquid. This want of accordance between the dyspnœa and the effusion has often been noted, but it has been perhaps too much regarded as an exception, while it would seem to be the rule. Among several examples, Trousseau relates that a nurse came four kilometres on foot to the Necker, carrying her child, without seeming to be much fatigued; and yet on paracentesis being performed, 2500 grammes of fluid were withdrawn. Similar cases are related by Andral and Laudouzy; and it is a fact that even abundant effusions in general only induce but an insignificant amount of oppression—a fact which there is too much tendency to forget when it is sought to make dyspnœa the principal indication for paracentesis. It may be objected that there are patients who, from the very commencement of the pleurisy, and with but little effusion, yet exhibit considerable dyspnœa. This is only a misunderstanding of the term. At the commencement of a pleurisy, in fact, and during the sometimes so painful early stage, when the pain in the side (*point de côté*) is so acute, the patient may have short, interrupted, and jerking respiration, and he is said to have dyspnœa. His breathing is indeed difficult, but it is difficult and impeded only because it is painful, effusion having nothing to do with it, as it does not yet exist. This dyspnœa at the commencement, then, is a false dyspnœa, and is not due, like true dyspnœa, to defective and insufficient hæmatosis, but to the pain which limits the respiratory movements and destroys their normal rhythm. The proof of this is that the breathing becomes easier in proportion as the pain disappears, although the effusion is making incessant progress; and it is often when the liquid has reached its apogee, attaining two or three litres, that the patient believes himself cured, because he is then free of fever and of pain. During the acute stage of pleurisy, also, febrile action accelerates the respiration; for whatever may be the cause of fever, it renders combustion active, and consequently accelerates the respiratory rhythm. But fever is in general very moderate in pleurisy, and exerts but a slight effect on the respiration. Nevertheless, both pain and fever are two of the elements of pleurisy which, by a different mechanism, may engender disturbance of the respiration; but when these two elements have disappeared, or have not existed (as in certain subacute pleurisies termed latent), the patient has no dyspnœa, notwithstanding the large accumulation in his pleura. He certainly is not able to make the same exertions as a man in good health; but when he is in bed, and in the repose which any patient must be in in order to undergo a medical examination, the dyspnœa is so insignificant that it ought not to be regarded as an element of diagnosis, and should not be accepted as an indication for paracentesis.

This association between a large effusion and an almost normal respiration, which at first seems so strange, is not difficult of explanation. In the physiological condition respiration is not exerted alike over the whole pulmonary surface, certain parts of the lung, especially the superior lobes, contributing but very little to the function. But in a pathological condition, when the play of the lung is impeded by the presence of an effusion, the healthy lung comes into action through its whole extent, and nearly re-establishes the equilibrium in the phenomenon of hæmatosis.

The first consequence which results from this absence of dyspnœa in pleuritic effusion is that dyspnœa furnishes only insufficient or unsafe indications when an operation has to be decided upon. To delay evacuating the pleura until the patient is attacked by dyspnœa is to wait until the effusion has attained proportions so considerable that the life of the patient has already been long in danger by the time the decision is arrived at. All the cases in which sudden or rapid death has occurred during the course of a pleurisy with effusion are neither known nor published, but those which have been published show us that the patients generally die on account of cardiac coagula, coagula of the pulmonary arteries, and thrombosis favoured by the entirely mechanical conditions of displacement, torsion, and flattening of vessels, and of the obstructed circulation due to the effusion. Another consequence arising from this absence of dyspnœa is, that when it is present in pleurisy it is a sign of a complication; so that whenever a patient, the subject of pleurisy with effusion, presents more than from twenty-eight to thirty respirations per minute, we know that we have something besides a pleurisy to deal with. If careful examination be made it will be found that the pleurisy is secondary, developed in the course of Bright's disease, or of a cardiac affection with congestion of the lung; or the pleurisy is associated with other diseases, as double pleurisy, bronchitis, pneumonia, pericarditis, fluxion of the chest, or pulmonary congestion.

"To sum up—1. Dyspnœa is not one of the habitual symptoms of pleurisy with effusion. Pleural effusions, even when they reach 1800 grammes or two litres, only accelerate the respiratory rhythm by four or five respirations per minute. I am not speaking, be it well understood, of the painful period which is often accompanied by a false dyspnœa, and I make reserves in the cases in which fever is still vivid. But under all other circumstances, in the apyretic phase of pleurisy, and subacute, latent, and chronic pleurisy, dyspnœa is a symptom so *anodin* that it does not merit being taken into consideration in reference to diagnosis, prognosis, or treatment. 2. On the other hand, when a true dyspnœa is proved to exist during the course of a pleurisy, we must always be on our guard against a complication, whether the pleurisy be secondary (as in Bright's disease or affection of the heart), or whether it be associated with other phlegmasiæ or pulmonary congestion."

Pension to Rokitanski's Widow.—Notwithstanding the numerous high posts which the late Baron Rokitanski held, the emoluments he derived from them were very moderate, and he died almost a poor man for one in his distinguished position. In consideration of his services to science and the State, the Government, besides a continuance of his pension to his widow, has conferred upon her a "special dotation."

Venesection as an Anti-hæmorrhagic.—Professor Chauffard is of opinion that at the present time venesection is too much neglected, and especially in cases where it is desirable to open up another channel for blood which tends to become effused at the surface of an organ. He pointed out a case of hæmoptysis at the Necker, occurring in a robust young man who was almost plethoric, a stone-cutter by trade, and therefore of an occupation dangerous to the pulmonary organs. A very abundant hæmoptysis had appeared suddenly three days before his admission, and still continued. Prof. Chauffard having ascertained that no serious lesion existed, ordered venesection to the extent of 500 grammes, and the cure was immediate and complete. This is the reverse of what is met with when a normal hæmorrhage which is suppressed gives rise to another in its place. It is not only an accidental hæmorrhage which may be thus arrested, but also the hæmorrhagic molimen when it becomes dangerous. Thus one of the most important applications of venesection in practice is for the prevention of catamenial congestions persisting after impregnation, and leading to the detachment of the germ—a cause of sterility which is frequently misunderstood. A case in point is that of a lady who, during a period of ten years, repaired to every resort reputed as useful for the prevention of sterility. She was a stout and plethoric person, with very abundant menstruation, which appeared at regular periods. In neither her nor in her husband was there any cause preventive of impregnation. This had probably taken place, but had been rendered invalid by reason of the abundant periodical discharge which had continued. The day before the expected period a small quantity of blood was taken, and then again the next day; and at the end of nine months the lady had her first child, which was followed by others. This cause of sterility, especially in persons of generous blood, is by no means rare. —*Presse Belge*, September 29, from *Abeille Médicale*.

THE KAK-KE DISEASE OF JAPAN.

Dr. Wernich, whose interesting letters from Japan have been more than once referred to in this journal, has lately published an account of his investigations into the nature of the Japanese endemic disease Kak-ke, in *Virchow's Archiv*, Band lxxi., Heft 3. He regards it as a variety of the disease which, under the name of Beriberi, occurs in many parts of the coast of Asia, as well as in South America and Australia, and whose main features are a general severe nutritive disturbance, accompanied with œdema, and with paralytic symptoms, of rapid onset and often ending in death.

Dr. Wernich describes three forms of Kak-ke—an acute, an abortive, and a sub-chronic form. The first is fatal within three days. The patient is suddenly seized with weakness in the legs, and often vomits; he suffers from palpitation of the heart and dyspnœa owing to serous effusions into the pleural and pericardial cavities; œdema occurs in various regions; and he dies. In the second form the symptoms are similar, but milder, and slow convalescence ensues. The third variety is the commonest, and differs from the first chiefly in its more protracted course, and in the multiformity of its symptoms in different cases—all of which, however, Dr. Wernich believes, can be explained by alterations in the blood and the circulatory organs. He found that the blood corpuscles are smaller than normal, that they do not aggregate into *rouleaux*, and that some of them show signs of wrinkling and shrivelling. The venous circulation is sluggish and easily arrested; while the arterial curve, traced by the sphygmograph, indicates great relaxation and want of resisting power of the arterial wall, with extremely feeble elasticity of the same. The pulse-curve rises very steeply, and the first part of the descending portion forms with it the apex of an acute-angled triangle, while the second part exhibits strong dicrotism. The heart itself does not, according to Wernich, present pathological alterations of an inflammatory kind. The murmurs heard during life are "anæmic." The remaining phenomena of the disease—the great diminution in the secretion of urine, the anasarca, ascites, and other dropsical symptoms; the nervous symptoms—giddiness, sleeplessness, headache, impaired cutaneous sensibilty, and paraplegia—are all explicable, according to him, by the alterations in the blood and the loss of vascular tone. There is no primary organic disease discoverable in the various organs besides that mentioned. The kidneys are healthy. Among the other more or less constant symptoms noticed, are a feeling of intense general illness early in the disease, fever of variable intensity, and gastric disturbance. The mortality in Japan in spring and summer, when the disease is most prevalent, is about 15 per cent. of all the cases, while the annual mortality is scarcely 8 per cent. The Kak-ke scarcely ever attacks any but young and adult *men*, and spares women, children, and old men. Dr. Wernich's general conclusion is that it depends on a decomposition of the blood, by which the serum loses the property of remaining in the blood-vessels. As predisposing causes he regards the poverty of the Japanese diet, which is very deficient in fatty and nitrogenous substances, and the warmth and dampness of the climate. He rejects the idea of miasmatic infection, and ranks the Kak-ke in the same category with pernicious anæmia, chlorosis, and scurvy, on the ground that these affections all agree in remaining latent for a long period, and then running on to severe cachexia, and possibly a fatal termination when some slight demand is made on the organism, which upsets its unstable equilibrium, and sets it going, so to speak, the wrong way.

Dr. Wernich is to be congratulated on his researches, though we scarcely think that he has yet discovered what his countrymen call "*das Wesen*," the essential element of the disease.

Ciliary Blepharitis.—Dr. Roy states that this obstinate affection, which resists so many remedies, he finds readily yields to the application of vulcanised caoutchouc applied during the night as a compressing bandage, washing the eyes with tepid water in the morning, and renewing the application again at night. By this procedure the caoutchouc is brought in exact contact with the diseased parts, and the occlusion secures the globe and conjunctiva from all irritation.—*Bull. de Thérap.*, August 30.

REVIEWS.

A BATCH OF PAMPHLETS ON DISEASES OF THE SKIN.

(1.) *On the Recognition and Management of the Gouty State in Diseases of the Skin.* By L. Duncan Bulkley, A.M., M.D. New York: G. P. Putnam's Sons. 1877.

(2.) *Are Eczema and Psoriasis Local Diseases of the Skin, or are they Manifestations of Constitutional Diseases?* By Dr. Bulkley. Philadelphia. 1877.

(3.) *On the so-called Eczema Marginatum of Hebra as observed in America: a Clinical Study.* By Dr. Bulkley. New York: G. P. Putnam's Sons. 1877.

(4.) *Analysis of 774 Cases of Skin Disease treated at the Demilt Dispensary during the year* 1876. By Dr. Bulkley, Physician to the Skin Department. New York: D. Appleton and Co. 1877.

(5.) *Auto-Inoculation of Vegetable Parasites of the Skin, and the Clinical Testimony for their Identity or Non-identity.* By E. Wigglesworth, M.D. New York: G. P. Putnam's Sons. 1878.

(6.) *Faulty Innervation as a Factor in Skin Diseases.* By Dr. Wigglesworth. Boston. (Reprinted from *The Hospital Gazette*, March 1, 1878.)

(7.) *Transactions of the American Dermatological Association, with the President's Address at the First Meeting, held at Niagara, September* 4, 5, and 6, 1877. New York: G. P. Putnam's Sons. 1878.

(8.) *Malaria and Struma in their Relation to the Etiology of Skin Diseases.* By L. P. Yandell, jun., M.D. Louisville. Kentucky. 1878.

In his first pamphlet (1) Dr. Bulkley endeavours to prove that in private practice the early symptoms of gout, as evidenced by imperfect digestion, urine largely charged with lithates, and a general unhealthy condition of skin and bodily health, form a large factor in the production of such diseases as acne, eczema, boils, lichen, psoriasis, urticaria, etc. We scarcely think he clenches the argument very firmly, and would rather call attention to the extremely sensible remarks which he makes on the management of the gouty state, and which are applicable not only to skin patients, but to patients generally. His aphorism also that "in treating chronic diseases we must look to chronic causes," is one well worth our remembering; and if patients could only be convinced that some of their ailments are the outcome of the errors of years, they would not expect, as they now do, to be cured in a day or two.

In (2) Dr. Bulkley answers the question which forms the title by declaring, after an examination of some of the current theories as to the local origin of eczema and psoriasis, that "the total weight of evidence and argument is that these diseases are both manifestations of constitutional disorders, and not local diseases of the skin." Our space will not permit us to reproduce his arguments *pro* and *con.*, and we must confine ourselves to calling the attention of those who have time at their disposal to the enumeration at page 19 of certain doubtful points in the natural history of eczema and psoriasis still requiring study. The essay on Eczema Marginatum (3) first deals briefly with the literature of the subject, and then describes twelve cases treated in America by Dr. Bulkley, all of which except two occurred in private practice, and in ten of which a microscopic examination revealed the presence of a vegetable parasite. Discussing the etiology of the affection, Dr. Bulkley states that he regards it as "frequently a combination of an eczema pure and simple, or of an intertrigo, and a vegetable parasitic disease, in most instances the tinea trichophytina." He believes that very frequently the parasite "plays the second part in the programme, but soon becomes the prime factor," finding a "congenial nest where it vegetates, and soon obtains a foothold." All the cases were exclusively treated by the free external use of sulphurous acid, and Dr. Bulkley points out that the solution used can scarcely be too strong. Freshly made acid, which has been kept tightly corked, should be alone employed, and the supply for each day should be decanted into a small bottle, and the large one closed again as quickly as possible. The part affected is to be well saturated with the solution two or

three times a day. The "Analysis" (4) is a continuation of similar reports published in 1875 and 1876, one at least of which has been noticed in this journal. It contains remarks on the thirty-nine different forms of skin disease treated during the year, and it is worth noticing that ten species of skin affection met with in 1875 were not represented, and eleven species which did not appear in 1875 were. Among the former were anthrax, elephantiasis Græcorum, iodine rash, keloid, and xeroderma, and among the latter alopecia areata (one case only), copaiba rash, ichthyosis, lupus (vulgaris and erythematosus, two cases of each), morphœa, strophulus pruriginosus (? *Lichen infantûm*, Hutchinson), and vitiligoidea or xanthelasma. Thus, a constant attendant at the Clinic for only one year would have missed seeing at least three important alterations of the skin. The occurrence of only *one* case of alopecia areata in two years is remarkable, as all ages are well represented. Are we to conclude that the disease is very rare in New York, or that most of the cases go to a specialist for baldness?

We may briefly notice a few of Dr. Bulkley's hints for treatment. In eczema he is strongly in favour of arsenic in the form of liquor arsen. *hydrochlor.*, especially in treating infants and young children. In this country Mr. Wilson has long taught the value of arsenic in the young. Bulkley recommends a change in the preparation of arsenic from time to time, as in the case of iron, and he states that "one preparation will sometimes prove very beneficial when others seem almost inert, or even harmful." As a cheap ointment in dispensary practice, he mentions equal parts of fresh mutton fat and cod-liver oil melted together, and spread thickly on cloth. A very successful case of eczema treated with indiarubber gloves is described. The local treatment of acne papules and pustules, by scraping them with "a small spoon-like steel instrument with sharp edges" (the *dermal curette*) is well spoken of, and our own experience is very favourable to some such measure. For boils he still advises "hyposulphite of soda in moderately large doses, three or four times daily, on an empty stomach, and well diluted." He has discontinued the use of phosphorus in psoriasis "because the results were so unfavourable," but continues the local application of a solution of chloral (gr. v.-x. ad ʒj.) to ulcers of the leg, as reported on in 1876, inasmuch as it still gives good results. A number of cases of purpura were all treated with liquid extract of ergot, which Dr. Bulkley still regards as the remedy *par excellence*. One case of severe pemphigus is reported, which proved fatal about six months after being first seen, with well-pronounced and rapid phthisis. It is not stated whether arsenic was tried.

These few extracts will show the thoroughly practical character of Dr. Bulkley's essay, which we cordially recommend with the others to the attention of our readers.

Dr. Wigglesworth's first paper (5) is an account of some experiments to determine what conditions are necessary for the successful propagation and culture of vegetable parasites on the human skin, and whether one form of fungus can by cultivation produce eruptions generally supposed to be characteristic of another form. He concludes that "all vegetable parasites of the skin are not inoculable at all times, and upon all persons," that "the various mycoses of the human skin possess each its own distinguishing characteristics," although they may temporarily "simulate in appearance one of the forms, temporary or permanent, of an apparently different species," and that the question of the "identity or non-identity of the mycoses must be regarded as still undecided."

In his essay (6) the author gives a short *resumé* of modern views as to the connexion of various alterations in the skin with injuries to nerves, and describes two interesting cases treated with galvanism by himself and Dr. J. J. Putnam with great benefit.

We have already referred to Dr. White's (the President of the American Dermatological Association) address (7) in our notice of the *Archives of Dermatology*, vol. iv., from which it is reprinted in the journal for August 3, 1878, but we may say here in passing that it is well worth reading. This is more than we can say for Professor Yandell's paper (8), which comes last on our list. The propositions that "Malaria is the chief source of acute skin disease, and scrofula of chronic skin disease," and that "the more inveterate cases of skin disease are often due to the coexistence of these two things," are scarcely more likely to receive the assent of British practitioners than of the "fourteen members" of the American Dermatological Association who were present when the paper embodying them was read.

The Student's Guide to the Medical Profession. By Charles Bell Keetley, F.R.C.S. Eng., Assistant-Surgeon to the West London Hospital, late Assistant-Demonstrator of Anatomy at St. Bartholomew's Hospital. London: Macmillan and Co. 1878.

In this little book Mr. Keetley treats of "the Natural Qualities desirable in a Medical Student"; of the "Expenses" necessary in entering the Medical Profession; of the desirable Preliminary Education; of the "Minimum Qualification to Practise," and the several legal qualifications and honorary degrees obtainable; of the "different Modes of beginning Medical Study"; of the "Choice of a Medical School"; the various ways of living while a Medical Student, and of the distribution of Expenses; of "Prizes" and "Honours"; of "Lectures," and of "Dissecting, Practical Physiology, Surgery, Dressing, Medicine, Special Departments"; of "the time immediately following Qualification"; of "Honorary Hospital Appointments, Specialism," and of "the Old English Universities (especially Cambridge)." He gives a "Special Chapter for Ladies who purpose to study Medicine"; a "Glossary for the use of Parents and Beginners"; and an Appendix, containing the Regulations for the Preliminary Examinations in General Education. As the work consists of only sixty-three pages, the number of subjects dealt with seems very large, but many of them are treated of very briefly, and none of them at great length, as Mr. Keetley wisely purposes only "to supplement the information given in the students' numbers of the medical journals." In the list of legal qualifications Mr. Keetley has omitted the licentiateship of the Royal College of Physicians of London, though he mentions it casually when advising the best course for a student who cannot afford the time and money that must be spent in obtaining the "highest qualifications." Supposing these cannot be sought, Mr. Keetley says, "let the student get the M.R.C.S. (of England), and add to it the M.D. of one of the Scotch or Irish universities. This will involve two years' nominal residence at some university. The additional expense is small. The M.D. of the Queen's University can be obtained after six months' residence. If the student cannot go to Scotland or Ireland, let him take the L.R.C.P. London; or there is the M.D. of Durham." Mr. Keetley underestimates the additional expense of two years' residence, even if "nominal," at a Scotch university, as he underrates the professional value of the L.R.C.P. London, when he, as it were, brackets it with the M.D. of Durham. Our author has, one must suspect, been unfortunate in his experience of medical school lectures. He is very severe on compulsory lectures, and has calculated "that twenty thousand guineas are annually paid by parents and guardians of medical students in order that a quarter of a million of golden hours of youth may be wasted by compulsion in listening to feeble matter vilely delivered." As he believes this, it is natural that he should suggest that during hopelessly bad compulsory lectures the student "may recreate himself by sketching or going to sleep," only taking care to do this in such a way as not to "hurt the feelings of some unfortunate lecturer, whose only crime is perhaps ignorance of his own utter incompetence."

The most useful part, perhaps, of Mr. Keetley's little Guide is that which deals with the time immediately following qualification. He gives some sound advice regarding the points a man should himself especially attend to, in buying a practice or a partnership. But he is not altogether a trustworthy adviser here. He says that, among other things, the would-be purchaser of a practice should consider "whether the patients are of a kind likely to come over to him"; and "should carefully compare his own qualities and qualifications with those of" the outgoing man, and of the neighbouring practitioners; for, "if the new practitioner be ignorant and snobbish, the better class of patients are not likely to rush over to him." Is an ignorant snob, or "an insignificant-looking, vulgar person," or a "conceited prig," at all likely to have the self-knowledge to recognise that he belongs to any one of those pleasant classes of individuals? The chapter on the Old English Universities has been written for the Guide by University men; and the "Special Chapter for Ladies" by Mrs. Garrett-Anderson, M.D. The last-named contains, as might be expected from its author,

much very sensible advice. And that common-sense advice on everyday matters is needed by lady-students is evident from the fact that Mrs. Garrett-Anderson states that one of the principal causes of break-down of these students is neglect of nourishment. "I know one," she says, "who boasted that she could live upon 6d. a day; she worked hard, and of course was soon a complete wreck." It would be very hard, we suspect, to find such an instance of enthusiasm and ignorant, unwise self-denial among male medical students.

Mr. Keetley's Guide will, we have no doubt, be found useful; and in future editions he will be able to increase its value by removing some imperfections of style, and by enlarging the extent and scope of the information given.

A Practical Handbook to the Principal Professions. By Charles Eyre Pascoe, Editor of "A Practical Handbook to the Principal Schools of England," etc. London: Hardwicke and Bogue, 192, Piccadilly. 1878. Pp. 184.

Mr. Pascoe's work seeks to give facts respecting the present means of gaining admission to the principal professions. It is compiled from authentic sources, and based on the most recent regulations concerning admission "to the Army, Navy, and Civil Services (Home and Indian), the Legal and Medical Professions, the professions of a Civil Engineer, Architect, and Artist, and the Mercantile Marine." The Church has been omitted, because, in the opinion of the author, "it is a profession requiring in those who seek to enter it, beyond mere educational attainments, qualifications of a special order not to be lightly handled in a work of this kind." We quite agree with him that men who take holy orders ought to do so from motives, and to have, or seek to have, qualifications, of a special order; but the object of his work is apparently not to point out the special mental or moral qualifications that fit a man for any one profession, but only to state the mode of admission, the regulations (if any) as to the education required, the examinations that have to be passed, the number of them and the subjects, the pay, and so on. It is rather a pity, therefore, it seems to us, that he should have omitted from a handbook to the "Principal Professions" the ways in which a man may take holy orders should he wish to do so.

The value of such a book as Mr. Pascoe's depends, of course, entirely on the correctness and fulness of the information given: and testing the work by that part which relates to the Medical Profession, it appears to us that it is a trustworthy guide. The information given, as to education, preliminary and professional; as to the regulations and examinations of the various licensing bodies, the expenses, and the prizes and honours that may be obtained, and the way of entering, and the pay obtained in the several public medical services, is, we think, minute, accurate, and full. The other professions are dealt with as fully, and, it is reasonable to suppose, as accurately at least. We are sure, at any rate, that the book gathers together, in a very handy and available form, a great amount of information that it would require considerable trouble to obtain from other sources. It is a really practical handbook, well calculated to be very useful; and it deserves to be a success.

Cure for Hydrophobia.—The forester Gastel, now in his eighty-second year, writes to the *Leipziger Zeitung*—"I will not carry with me to the grave my well-proved remedy for the bite of a mad dog, but publish it as the last service I can render to mankind: Wash the wound in some warm wine-vinegar and water; and having cleansed and dried it, then pour into it some drops of muriatic acid, because mineral acids destroy the poison of the saliva."—*Allg. Wien. Med. Zeit.*, September 3.

Paracentesis Thoracis in Pleurisy.—In his thesis Dr. Troussaint has collected 263 cases of simple pleurisy for which paracentesis has been performed, and which show that the operation is a very innocuous one. In 176 cases in which the effusion had existed from one to twenty days, there were 171 recoveries, 1 failure, and 4 deaths; in 80 cases, the effusion having existed from twenty days to two months, the recoveries were 73, the deaths 6, and in one case there was failure; and in 7 cases, dating from two months and upwards, there were 5 recoveries, 1 amelioration, and 1 death—total, 263 cases (249 recoveries, 2 failures, 1 amelioration, and 11 deaths).—*Bull. de Thérap.*, August 30.

GENERAL CORRESPONDENCE.

ARMY MEDICAL DEPARTMENT.

[To the Editor of the Medical Times and Gazette.]

Sir,—Allow me, through the medium of your journal, to warn medical aspirants, if there be any, for the Army Medical Department, not to place any confidence in the War Office Committee's "Recommendations" lately published, until they see Mr. Secretary Stanley's Warrant actually in print and made "law," so far as "law" can bind the terms of Medical Warrants—which it cannot do. I was told by a medical officer that a very favourable Warrant was actually in print in the War Office in 1864. The *Times* wrote an article upon the Medical Department just at that time, advocating the cause of the medical officers. This article infused confidence into the aspirants for commissions, and a rush of candidates came forward. As soon as the want was thus supplied, the intended Warrant was torn up, or at least never appeared, which is the same thing. I was told at the time that a medical officer of standing in Dublin had a good deal to do with the "whipping in" of the candidates, himself being caught by the bait thrown out into a belief that better days were coming. He has since, to his cost, discovered that more than faith in coming events favourable to his brother officers is needed to produce a certainty, for he was afterwards induced to try the validity of his own guarantees in a court of justice, and of course failed. Poor blind Justice was never the companion of Mars. I cannot vouch for the exact truth of the story of the suppressed Warrant; but the tale was currently believed in the Service at the time, and I think that this suspicion, if it is no more, is sufficient to warn the unwary before they act upon the "Recommendations of a W. O. Committee."

Our Royal Warrants, even when published, are not faithful, and, *à priori*, less so when not promulgated.

I am, &c., Timeo Danaos.

NEW INVENTIONS AND IMPROVEMENTS.

OZOKERINE.

Earth-wax, or fossil-wax, is a paraffin which, under the name of Ozokerit, has been made very well known to the public by Messrs. J. and C. Field, of the Candle Works, Lambeth Marsh. By long-continued and skilled labour and attention these gentlemen have brought their ozokerit candles to great perfection, as respects consistence, form, colour, and illuminating power. They now produce also from ozokerit a purified and refined hydrocarbon, to which they have given the name of "Ozokerine," and which they propose for medical use as a simple dressing, and as a basis for ointments. This substance belongs, as will be understood from what we have said of the source whence it is derived, to the same class as vaseline, and has the same special excellencies as a dressing or an unguent—that is, it resists all chemical change, and never becomes rancid and irritating. It is rather firmer in consistence than vaseline, and for some purposes that may be an advantage; and we are inclined to think, from our experience, that it is also very gently stimulant, and therefore even more useful than vaseline as an application in some chronic states of skin diseases. We have no doubt that Ozokerine is a valuable and useful substance; and, as it is said to be considerably cheaper than vaseline, it will in all probability be very largely used. Messrs. Corbyn, Stacey, and Co. are Messrs. Field's sole agents for the supply of Ozokerine.

THEVENOT'S GLOBULES.

We have received from Messrs. H. K. Edge and Co., 34, King William-street, London, a sample-chest of the globules invented and prepared by Mons. C. Thevenot, of the Société de Pharmacie, Paris, for the administration of medicines. The invention is a very successful addition to the many efforts made nowadays to render the administration of drugs of all kinds pleasant, or at least not positively unpleasant. The enclosing case is made of vegetable gum, not gelatine as in ordinary capsules, and it is certainly perfectly and quickly

soluble. The globules do not become hard by keeping; they convey the contained medicines without taste or smell; and volatile substances can be thus enclosed, and preserved unimpaired for long periods. They undoubtedly provide a very convenient form of keeping, carrying about, and administering medicaments, simple and compound; and the list of the various kinds prepared by M. Thevenot is a very long one, including medicines of all kinds. The only objection we have to offer regarding them is that some of them, as those containing "carbonate of iron and rhubarb," and the "vegetable charcoal" globules, are of a not pleasing colour.

Messrs. H. K. Edge and Co. are also the sole agents in the United Kingdom for "Kips' Cartridge," a most ingenious and handy invention. It is a small, very neat packet, of the shape of, and very little longer than, an ordinary ball-cartridge, and contains—(1) a compress for staunching blood; (2) a piece of plaster for healing inflammation sores, boils, whitlows, burns, cuts, etc.; (3) a bandage for securing the compress, or to form a sling; (4) a piece of tape for securing the bandage, or compressing an artery or vein; (5) a small bottle of ammonia, to be mixed with water for stings or bites; (6) waxed thread; and (7) safety and surgical pins. It is an admirable traveller's companion, and deserves to become very popular.

OBITUARY.

GEOFFREY CHAUCER PURCELL, A.B.T.C.D., L.R.C.P. and L.R.C.S. Edin., A.M.D.

This much esteemed officer died at the early age of thirty-four years, at the residence of his father, Theobald Purcell, Esq., Q.C., Harcourt-street, Dublin, on Monday, September 23. Dr. Purcell, who had served with distinction for many years in India, came home last year in very indifferent health, suffering from renal disease. Notwithstanding, he worked on enthusiastically until a cold, caught in the beginning of September, led to acute œdema of the lungs, which speedily proved fatal. He reached home only in time to die. The large concourse which followed his mortal remains to Mount Jerome Cemetery, on September 26, testified to the love and esteem in which the deceased officer was held by all who knew him.

MEDICAL NEWS.

Royal College of Surgeons of England.—At the recent preliminary examinations in Arts, etc., for the diplomas of Fellow and Member of the Royal College of Surgeons, 410 candidates offered themselves—viz., 128 for the first-named distinction, and 282 for the Membership. Of this number 71 passed for the Fellowship and 179 for the Membership. For the Fellowship the following were successful, viz.:—

H. G. Ashwell, H. A. W. Batten, F. W. Bennett, C. R. Bishop, J. S. Bolton, J. U. Bolton, C. G. Brodie, H. U. Bromley, R. H. Browne, C. J. Byrne, W. A. A. Cheves, Herbert Child, J. W. C. Cook, J. A. Cornett, L. B. Claremont, Graham Cox, W. T. Crick, Percy Edgelow, A. D. Edginton, W. H. Elam, J. P. Fenoulhet, H. A. Fotherbey, George Frost, E. H. M. Gavey, A. J. Grant, John Godson, P. A. Guinness, H. J. Harries, H. W. Hart, G. S. Hatton, John Hern, Frank Hewkley, E. B. Holland, F. H. Julyan, F. H. Kenny, H. B. Lee, J. K. Lewis, Edward Linnell, C. E. Longton, F. C. McLellan, H. W. Macnamara, S. H. Mangin, A. E. Marsack, Albert Martin, B. A. Maturin, W. D. J. Morris, O. L. Oakes, R. A. Palmer, Norman Porritt, B. G. Pullin, G. G. O. Phillips, H. W. Pomfret, F. H. Pott, S. T. Pruen, T. D. Pryce, St. J. O. Rands, L. O. L. Raymond, Wm. Richards, Alfred Robinson, A. W. Rowe, J. H. Russell, R. T. N. Samuel, J. T. Smith, J. N. Stephens, Mark Style, F. W. Sutton, C. J. W. Tatham, E. T. Thring, H. E. Walker, A. D. Willcocks, C. F. Willis, and H. R. Woolbert.

The following gentlemen passed the preliminary for the Membership, viz.:—

R. B. Anderson, Charles Aeblaster, G. F. S. Arthy, W. E. Audland, A. W. P. Ayers, S. H. Badcock, A. F. Baker, H. H. Ballachey, H. P. Barnett, J. F. Bate, George Bent, W. E. Betts, C. E. F. Biggs, P. C. C. Billups, F. R. B. Bisshopp, C. K. Bond, H. K. Bradbury, W. E. Bremner, Edward Brown, L. D. Brown, S. C. Buckland, W. H. Bulger, W. C. Burt, F. N. Burwell, W. L. Byham, C. A. Bynoe, E. R. W. Carroll, E. G. Carter, Herbert Child, H. R. Churcher, F. W. Clarke, W. E. Coleman, E. T. Collins, M. C. Corner, John Cunningham, R. H. Currey, Reginald Cusack, W. F. Dale, Edward Davies, Frank Day, A. A. Dighton, E. R. Dimsey, H. H. Dixon, Joseph Dodge, H. L. Dowsing, E. A. G. Doyle, H. E. L. Earle, W. W. Esam, D. R. P. Evans, W. H. F. Farmer, H. H. Fisher, R. M. Fleming, W. E. Foster, J. A. Fox, J. K. Frost, T. E. Gee, J. H. Gilbertson, G. H. Graham, William Green, E. C. Greenwood, W. A. Griggs, J. A. L. Guilmant, R. F. B. Halpin, G. E. Hargitt, T. F. W. Harrigan, Horace Hartley, Harry Harlock, C. J. J. Harris, J. C. Harris, E. W. Haydon, Harold Hendley, D. E. Hickman, A. E. Hind, Ralph Holyoake, Samuel Hughes, R. A. Jackson, C. S. Jago, John Jenkins, W. M. Jenkins, Evan Jones, John Jones, R. S. Jones, A. G. Kealy, Edward Kershaw, Tom King, W. F. Lace, Walter Lacroix, John Land, Howard Lawrence, Herbert Ley, H. J. Ley, F. E. Little, J. O. Littlewood, G. J. Long, T. P. Lowe, John Lynes, Ernest Maberly, W. C. McDonnell, F. E. MacCarthy, T. H. Maddison, J. A. Marsden, W. B. Marston, George Milhouse, J. P. Millington, C. A. Mitchell, J. D. Moir, David Morgan, C. E. Morris, E. G. Morris, J. H. Murray, John Murton, R. C. Nicholls, E. L. Norris, J. H. North, J. J. Oakman, Rowland Owen, A. L. Paliologus, F. A. Parry, G. S. Passmore, Edward Paxton, G. C. Peachey, F. E. Pearse, H. G. Plimmer, G. R. McJ. Pollard, W. E. Porter, John Powell, J. H. Prall, F. O'B. Raddock, W. T. Rees, Bernard Relton, Robert Richards, C. A. Ridal, G. E. Roach, David Roberts, F. A. Rogers, W. J. Rogers, R. F. Roper, P. H. E. Rubie, John Schofield, R. A. Scott, H. E. Shadwell, C. F. D. Shaw, W. M. Sheen, L. J. Shepherd, E. H. Simmons, P. W. Smith, E. R. J. Sneath, Frederick Spicer, E. S. Schaefer, Harold Stelfox, G. H. H. Symonds, E. C. Tatam, J. W. Taylor, Henry Thirkill, C. W. Thompson, W. B. C. Treasure, E. S. Tresidder, H. B. Trist, Arthur Trower, R. H. Turner, T. H. Vickers, J. T. Walker, C. H. Wall, A. M. Watkins, William Watson, H. H. Weatherly, G. R. Weaver, W. F. Webster, F. W. Welstead, J. C. Whatham, J. C. F. Whicher, J. H. White, D. W. Whitfield, William Whitworth, Montagu Williams, R. D. de la H. Williams, W. H. Winder, E. H. W. Wingrave, A. T. Wood, and Everard Woods.

The above, if so disposed, can at once commence their professional studies. The next examination will take place in March. The Library and Museum, which had been closed during the previous month, were re-opened on the 1st inst. In the latter department there is a vacancy for an anatomical assistant, caused by the retirement of Mr. Walter Pye, elected Assistant-Surgeon and Lecturer at St. Mary's Hospital.

Apothecaries' Hall, London.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, October 3:—

Farrar, George Albert, Brighouse, Yorkshire.
Mantle, Alfred, Worcester.
Patterson, George Henry, King's-road, Brighton.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Dyson, Thomas Sheppard, St. Bartholomew's Hospital.
Evans, Theodore Charles, St. Bartholomew's Hospital.
Heaven, John Cookesley, Bristol Hospital.
Lathbury, Charles John, St. Bartholomew's Hospital.
Pearless, Edward Montague, St. Bartholomew's Hospital.
Rygate, David John, London Hospital.
Vockmann, Ronald, London Hospital.
Wills, Joseph Pearce Burdett, St. Mary's Hospital.

BIRTHS.

Baker.—On September 29, at Dawlish, Devon, the wife of A. de Winter Baker, L.R.C.P. Lond., M.R.C.S.E., of a daughter.

Hopkins.—On October 4, at Richmond-hill, the wife of Surgeon-Major Nathaniel Hopkins, M.R.C.S. Eng., Indian Medical Department, of a son.

Maurice.—On October 3, at Marlborough, the wife of J. Blake Maurice, M.D., F.R.C.S. Eng., of a daughter.

MARRIAGES.

Aikman—Carey.—On October 3, at Guernsey, John Aikman, M.D., eldest son of the Rev. J. Logan Aikman, D.D., to Alice Emily, younger daughter of the late De Vic Carey, Esq., of Le Vallon, Guernsey.

Griffin—Grounds.—On October 1, at St. Pancras Church, Frederick C. G. Griffin, M.A. and M.B. Oxon., of 12, Royal-terrace, Weymouth, to Charlotte Martha, second daughter of Captain Grounds, late of H.M.'s Indian Navy.

Lucas—Hume-Smith.—On October 1, at Slad, Joseph Richard Henry Wallace Lucas, L.R.C.P. Edin., of Liverpool, to Ada Maria, third daughter of Adam Hume-Smith, Esq., of Calcutta.

Owen—Barry.—On October 5, at Enfield, C. W. Owen, L.R.C.P. Lond., of H.M.'s Bengal Army, to Mary Elizabeth, eldest daughter of Horace Barry, Esq., of Bush-hill House, Winchmore-hill, N.

Wade—Wase.—On October 3, at Huntspill, Somerset, Reginald Wade, M.R.C.S. Eng., of Highbridge, Somerset, to Ellen Susannah, eldest daughter of Jeremiah Wase, M.R.C.S. Eng., of Huntspill.

DEATHS.

Cashman, Dora, wife of Richard Uniacke Cashman, M.D., Army Medical Department, at Richmond Vale, Bootle, Liverpool, on October 4.

De Vitre, Edward Denis, M.D., at The Elms, Lancaster, on October 4, aged 72.

Farr, Frederick, M.R.C.S. Eng., at Montpelier House, Dunstable, Beds, on October 12, aged 56.

Latham, Mary Clara, second daughter of Robert Gordon Latham, M.D., at Putney, on October 6, aged 18.

Martin, Edward, M.R.C.S. Eng., at Victoria House, Weston-super-Mare, on October 3, aged 55.

Rix, Joseph, M.D., at St. Neots, on October 1, aged 74.

Shebman, Edward James, M.D., F.R.S.E., at Rotherham, on October 3, in his 81st year.

Wood, Hannah, wife of William Wood, M.D., of Wakefield, and daughter of the late William Starkey, surgeon, at Wakefield, on October 7.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Cheltenham General Hospital.—Resident Surgeon to the Branch Dispensary. Candidates must be on the "Medical Register" as qualified to practise medicine and surgery. Applications, with copies of testimonials, to the Resident Secretary at the Hospital.

Derbyshire General Infirmary.—House-Surgeon. Candidates must be members of the Royal College of Surgeons of London, Dublin, Edinburgh, or Glasgow, and unmarried. Applications, stating age, accompanied by diplomas and testimonials, to the Secretary, not later than October 12.

Lancaster Union.—Medical Officer of the Southern District of the Union. Applications, with testimonials, to J. Grant, Clerk, from whom further information may be obtained.

Royal Albert Edward Infirmary and Dispensary, Wigan.—Senior House-Surgeon. Applications, with testimonials, to the Secretary, on or before November 1.

Wonford House Hospital for the Insane, near Exeter.—Resident Medical Superintendent, who will also act as Secretary. Candidates must be registered both in medicine and in surgery, and have had experience in the care and treatment of the insane. Age not less than thirty. Salary £350 per annum, with board, lodging, washing, and attendance. Testimonials of this year's date (not more than six) to the Committee of Management, Wonford House, Exeter, on or before October 19, endorsed M. S.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population in computed according to the census of 1871.

RESIGNATIONS.

Bridgwater Union.—Mr. H. M. Kemmis has resigned the Second District; area 8548; population 5388; salary £70 per annum.

Dunmow Union.—Mr. G. Richards has resigned the High Easter District; area 13,433; population 2672; salary £69 13s. 9d. per annum.

Maidstone Union.—Mr. E. M. Owens has resigned the Fifth District; area 2918; population 3191; salary £55 per annum. Also the Workhouse; salary £85 per annum.

St. Austell Union.—Mr. R. B. Hill has resigned the St. Blazey District; area 4990; population 5520; salary £29 per annum.

APPOINTMENTS.

Blaby Union.—John Young, M.R.C.S. Eng., L.S.A., to the Enderley District and the Workhouse.

Bury St. Edmunds.—Mr. J. Wiggin, F.C.S., as Analyst for the Borough.

Cambridge Union.—R. N. Ingle, M.D. St. And., L.R.C.P. Lond., F.R.C.S. Eng., to the Third District.

Festiniog Union.—Robt. P. Griffith, M.R.C.S. Eng., L.K. & Q.C.P. Ire., to the Llanfihangelytraethan District.

Grantham Union.—Mr. A. Ashby as Analyst for the Borough.

Rochford Union.—Francis D. Grayson, M.R.C.S. Eng., L.S.A., to the Rayleigh District.

Wilts.—Mr. W. T. Donkin as Analyst for the County for one year.

Wycombe.—Mr. J. A. Wanklyn as Analyst for the Borough of Chipping Wycombe.

Trichinous Swine in Prussia.—Eulenburg states in his *Vierteljahrschrift*, 1878, Band 28, that 1,728,595 swine were submitted to microscopical examination in Prussia during 1876, and that of this number 800 were found to have trichinæ, and 4705 measles. The relatively greatest number of trichinous swine were found in the Posen Government. Besides these, 220 pieces of bacon or pork imported from America were found to be trichinous.—*Casus Zoolog. Anzeiger*, July 29.

Tincture of Myrrh in Pertussis.—Another remedy for whooping-cough, and, like all its predecessors, simple and efficacious, is brought forward by Dr. Campardon, who, on the strength of several cases treated with it, strongly recommends the tincture of myrrh in doses of from three to ten drops, given several times a day in vinum cinchonæ, although this is not an indispensable vehicle. It in nowise militates against the appropriate treatment of any inflammatory complication that may arise.—*Bull. de Thérap.*, September 15.

Unequal Length of Normal Limbs.—Dr. Roberts observes that a good deal of attention has of late been paid to the fact that the limbs of the two sides are seldom of the same length. From a great number of observations that have been made it has been found that the two limbs, neither of which have sustained fracture, sometimes differ as much as half an inch in length. These results have been arrived at from measuring living persons, and this is often a very difficult thing to do with exact accuracy. Dr. Roberts, therefore, has taken most accurate measurements of the femurs and tibiæ of eight skeletons, and he found the difference between the corresponding bones to vary from one-sixteenth to seven-sixteenths of an inch, and the legs to vary from each other by from two-sixteenths to twelve-sixteenths of an inch. These results show, he observes, the folly of trying to make the limbs of equal length after one of them has been fractured.—*Philadelphia Med. Times*, August 3.

The Conscription in Paris in 1876.—The report of the examinations made by the Conseil de la Révision de la Seine sets forth the following facts as regards the young men twenty-one years of age drawn for the conscription:—The mean stature was 1·645 metre, while last year it was 1·648 metre. Of 14,871 registered, 482 exceeded a height of 1·700 metre, and 263 did not attain the regulation height of 1·540 metre. Of the exemptions 310 were for affections of the sight, 210 for the loss of a limb, 146 for affections of the chest, 47 for deafness, 24 for mental disease, and 5 for various infirmities.—*Gazette Méd.*, September 28.

Prevalence of Phthisis in Victoria.—The following are the conclusions of the Report of a Special Committee of the Medical Society of Victoria:—1. The mortality from phthisis in Victoria is little more than one-half of that in England. 2. The rate of mortality from phthisis in Victoria has been perceptibly less of late years. 3. That rate is especially low among persons under fifteen or twenty years of age, and has been very greatly reduced (in them) between 1861 and 1871. 4. The reduction of mortality among young persons is to be explained by the comparative immunity among those born in the colony. 5. The apparent increase of mortality among young adults is due to the influx of phthisical persons from abroad. 6. The uniformity in the rate of mortality over the whole colony for a good many years is owing to certain insanitary conditions operating, especially in Melbourne; since for the rest of the colony the rate was reduced by about one-third between 1861 and 1871.—*Australian Med. Jour.*, December.

Increase of Salaries of the Medical Professors of Paris.—By the law of December, 1875, regulating the payment of Professors of Faculties of Paris, those of the Faculties of Laws and of Letters were adjudged 15,000 fr. (£600) per annum, while those of the Faculties of Medicine and Science were only to be paid 13,000 fr. This difference did not arise from any want of appreciation of the importance of these latter faculties, or of the talent of their professors, but from the belief that the numbers of examinations to be held (the holding these forming one of the most arduous duties of the professors) were considerably fewer. It turns out, however, that the amount of work to be done is very much the same at all the faculties, and that during the scholar-year 1876-77 no less than 6360 examinations were held at the Paris Faculty of Medicine. Moreover, laboratory work has greatly increased, for, while ten years since there was only one chemical laboratory, there are now two, besides laboratories for physics, botany, geology, physiology, etc. While the Paris Faculty of Medicine possessed only two or three laboratories in 1869, it now has twelve. The Government has therefore resolved to place the professors of all the four faculties on the same footing.—*Gaz. Hebd.*, October 4.

The Inadequate Salaries of Irish Poor-Law and Sanitary Medical Officers.—At the last meeting of the Board of Guardians of the Enniscorthy Union, an extract of a very important nature from the report of Mr. William O'Brien, Inspector of the Local Government Board for Ireland, concerning his late inspection of the dispensary districts of the Union, was read, together with a communication from the Secretary of the Local Government Board on the subject. In that report Mr. O'Brien states, regarding these dispensary districts, that while the duty to be performed is arduous, and in some cases especially unattractive, by the formation of the ground, and the local circumstances of the county, the salaries paid to the several medical officers—viz., £90 per annum, with an additional sum of only £15 per annum for duties performed under the Public Health Act—are exceptionally low, and, in his opinion, altogether inadequate under existing circumstances. Mr. O'Brien also states that in no instance could the duties of medical officer be performed without the employment of at least one horse, the cost of which, together with that of a servant, when deducted from the medical officer's salary would leave him but a small remuneration for his services; and the private practice of the medical officers in some of their districts is exceedingly limited. The Secretary of the Local Government Board consequently requests that the guardians will be good enough to take the subject into consideration, with a view to an increase in the salary of each of the medical officers, which is considerably below the average salary in the dispensary districts in Ireland—viz., £121 per annum.

GLYCEROLE OF ACETATE OF LEAD IN ECZEMA RUBRUM.—In a paper in the *Philad. Med. Times* (August 3), Drs. Duhring and Harlingen relate several cases with the view of making this treatment, introduced by Mr. Balmanno Squire, better known in the United States. The following are the conclusions they arrive at from the results observed:—"In the glycerole we have a valuable addition to the therapeutics of certain forms of chronic eczema, particularly eczema rubrum of the lower extremities. It is most useful in those cases where the affection is extensive, of a dusky hue, accompanied by much weeping, oozing, and infiltration of the skin, together with swelling and œdema of the subcutaneous tissues, and a full and varicose condition of the venous circulation. In such cases, the glycerole, used with diligence and followed by careful bandaging, constitutes a remedy of the highest value. It has not, however, any anti-pruritic qualities, excepting so far as it may reduce the œdema which sometimes seems to give rise to pruritus. Nor has it any resolvent effect upon infiltration of the more superficial layers of the integument. In this respect it fails just in those cases and at that stage of eczema rubrum where the skin is no longer acutely inflamed, but is thickened, indurated, and pruriginous—in other words, where ordinarily the preparations of tar and potash are most useful. It fails, moreover, to exert a favourable influence in those cases where the disease shows itself in numerous variously sized superficial patches, and where the deeper layers of the skin do not seem to be affected. With regard to its effect in the vesicular and squamous varieties of eczema, this is not satisfactory, and it is less favourable in proportion as the case departs from the typical form of eczema rubrum."

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Medicus.—No good could be obtained by the publication of your letter. You had better leave matters alone.

Intoxicating Liquor, Constantinople.—The old disused prohibition forbidding the sale of wines, spirits, or intoxicating liquors of any kind within a hundred yards of a mosque, has, through the action of the Officer of Public Worship in the department of the Sheik-ul-Islam, been revived in all parts of Constantinople, Frank and Turkish quarters alike. The Embassies and Legations have received lists of foreign subjects keeping establishments for the sale of such liquor in the interdicted areas, with a request that they will instruct their officials to aid the Turkish police in closing any resorts where a violation of this regulation may occur.

Preventable Accidents.—From the last report of the Manchester Steam Users' Association, it appears that ten explosions, killing eight persons and injuring fourteen others, have occurred during the interval between May 25 and September 20, inclusive; none of the boilers which exploded were under the charge of the Association. The result of the examinations made by the officers of the Association confirms the conviction previously arrived at, that explosions are not accidental, that they arise from no mysterious causes, or from the development of those previously unknown, but are due in the majority of cases to conditions which by proper supervision could be provided against.

Natation.—The Metropolitan Board of Works, appreciating the popular desire for a more general knowledge of swimming, are setting a praiseworthy example to promote and facilitate the learning of this most necessary and useful acquirement. They have resolved "That it be referred to the Works and General Purposes Committee to consider and report upon the desirability of forming lakes in the Board's open spaces, or such of them as may be deemed advisable, which could be used as swimming-baths for both sexes."

The Poor and Putrid Food.—At a recent meeting of the Clerkenwell Vestry, one of the local inspectors reported that on the previous Saturday night he seized 18 cwt. of putrid rabbits and fish as unfit for food. "A fearful state of things," it was stated, was to be seen on the Saturday night in the quantity of articles in a putrid condition being offered for sale. One dealer sold several cases of decomposed rabbits, and the next morning many of the people who had bought them brought them back, and hung them on the railings in front of his house. They declined to eat poisonous food for their Sunday dinners, preferring to submit to the loss. The Vestry, seeing the necessity for the adoption of the most prompt measures under such circumstances, have wisely decided that in future the inspectors should have power to prosecute without previously coming to the Vestry—a power which, it may be hoped, will, in the interests of the public, be vigilantly put in force.

Condemned Building Materials.—The Local Boards are apparently actively supervising building operations in their respective districts. A builder of the Junction-road, Holloway, was fined by the Edmonton magistrates £5 and costs for using mortar on buildings in Manor-road, Coleraine-park, Tottenham, which had not been approved by the Local Board of health of the district, as required by the by-law of the Board framed in accordance with the Public Health Act, 1875.

Sanitas.—1. No fewer than twenty-five plans have been sent in to the Thames Valley Drainage Board for the drainage of the united district; of these, four are for total diversion to the sea, twelve for irrigation, four for precipitation and irrigation, three for precipitation and filtration, and two for precipitation only. 2. Local Boards of Health have no power to compel the use of their water where a "proper supply" already exists.

Compulsory Vaccination in Bombay.—A Bill was to be presented on the 13th ult. to the Bombay Legislative Council, to prohibit the practice of inoculation, and to make the vaccination of children compulsory in Kurrachee. A similar Act has been in operation for some time in Bombay, and, it is stated, with admirable results, the natives having taken much more kindly to vaccination than some people thought they would.

Sanitary Reports, India.—The Report of the Sanitary Commissioner with the Government of India for 1876 has been laid before the Secretary of State, who in turn submitted it for remark to the Army Sanitary Commission. The Report is rather out of date, but it is observed that the deficiency common to most sanitary reports is apparent in this also—namely, the absence of information as to the local condition of places specially affected by disease. With regard to the stations where cholera-deaths took place, in particular Peshawur and Murree (where half the mortality from this cause occurred), the Commission remarks that "there is no account of the sanitary conditions under which these deaths took place." The Secretary of State therefore wishes it to be impressed on all sanitary officers that the investigation and reporting of local sanitary conditions should form the principal, because it is the most practically useful, department of their work.

Beer-selling in Birmingham.—Ever and anon are new nefarious practices in trading discovered. It appears that some of the milk-sellers in Birmingham are in the habit of carrying with them, on their rounds, cans of beer, the contents of which they sell to the servants when the latter are being supplied with milk for the household. The appearance of the beer-can is in all respects similar to that of the milk-can, and consequently no suspicion is excited in employers as to any other liquid being brought to the house. The difficulty *primâ facie* as to the Excise licence is got over by procuring an outdoor beer licence. In every point of view such a vicious system is to be deprecated. Its temptations and demoralising effects on servants are obvious; and this counterfeit publican, under the guise and semblance of a milkman, will, we should hope, be speedily suppressed.

A Disturbed Student.—The nuisance caused by steam whistles used for calling or dismissing workmen is, by 35 and 36 Vict., c. 61, prohibited, unless sanctioned by the sanitary authority. Penalties for the offence are recoverable by summons before a magistrate.

A Home for Female Inebriates.—From the recent annual report of the Lady Superior of St. James's House, Kennington-park, it appears that in the past eleven months 343 applications for admission had been received. A large number of female inebriates had presented themselves at the doors of the institution, begging for admission. The Home had been enlarged so as to accommodate eighty inmates. The total number who had received attention during the year was 132. Out of ninety-five cases admitted during the eleven months, fifty-two were admitted free of charge, and were clothed as well; eight had been sent by the magistrates. Of those who left the Home, one had returned to her late life; two, being unable to resist temptation, had returned; and the others had done well. The receipts from the inmates themselves was £1068, the subscriptions amounted to £321, and the laundry workroom had yielded a profit of £249. But there is a debt on the institution amounting to £369 odd.

J. J., Lincoln.—The original foundation of the Royal College of Physicians of London dates as far back as 1518. The present building in Pall-mall East was opened in 1825.

Colour-Blindness.—By a recent order of the managing directors of the German railways, their officials have been subjected to trying tests, with the view of ascertaining their ability to distinguish clearly between red and green lights; and the result has been that a very considerable number of men have had to be removed from their posts, and provided with other employment, in consequence of colour-blindness.

Eye and Ear Infirmary, Liverpool.—A new building is about to be erected for this institution, which was greatly needed. The building will consist of a main block and two wings, one containing the out-patient department, facing Stowell-street, and the other running parallel with the gymnasium. The wards will be capable of accommodating eighty patients. Special wards will be provided for cases of a contagious nature, and a few private rooms will be set apart for patients who can afford to pay. Well-arranged lavatories, offices, and an operating theatre, and accommodation for students, are comprised in the plans, and the administrative department will be replete with every convenience. The estimated outlay is about £15,000.

Interested in the Movement.—The present position of the ambulance movement may thus be shown:—In June last the number of persons attending classes was 1100 as against 2000 at the present time. In the country, since June, centres have been established at Alfreton, Chesterfield, Chislehurst, and Stafford; others will shortly be commenced at Exeter, Sheffield, and Leeds. In the metropolis several classes have been or are about to be started, at Lavender-hill, Regent-street, and Notting-hill; and it is proposed to open another, chiefly for shop girls, at Lupus-street. At the present moment, in the metropolis, 270 men and 133 women have received certificates. Of the men more than half consisted of the police and working-men.

COMMUNICATIONS have been received from—

Mr. W. E. Poole, London; Dr. W. MacNeill Whistler, London; Dr. Edward Sparks, Crewkerne, Somerset; Mr. John Chatto, London; Mr. George Gaskoin, London; Mr. D. Colquhoun, London; Dr. J. Milner Fothergill, London; Mr. B. R. Wheatley, London; Dr. Tilbury Fox, London; Mr. T. M. Stone, London; Mr. J. T. W. Bacot, Seaton; Dr. M. Mackenzie, London; Dr. Dyson, Sheffield; Mr. Hamilton Craigie, London; Dr. J. W. Moore, Dublin; Mr. Becher, London; Dr. S. K. Cotter, Pietermaritzberg; Mr. Toomey, London; Mr. Falconer, London; Dr. Shuttleworth, Lancaster; Mr. Foster, Willingham; Mr. R. Cooper Todd, London; Dr. Collins, Leamington; The Secretary of the Harveian Society; Mr. J. Pearson Irvine, London.

BOOKS AND PAMPHLETS RECEIVED—

Dr. Edward Fournié, Application des Sciences à la Médecine—Dr. George Huette, Histoire Thérapeutique du Bromure de Potassium—Dr. Gaston Graux, De la Paralysie du Moteur Oculaire Externe avec Déviation Conjuguée—London Hospital, Report of the Medical Registrar for 1876—Erasmus Wilson, F.R.S., F.R.C.S., Lectures on Dermatology delivered in the Royal College of Surgeons of England in 1876-77-78—Clinical Manual for the Study of Medical Cases, edited by James Finlayson, M.D.—Oscar Jennings, Comparaison des Effets de divers Traitements dans l'Hystérie—George William Thomson, L.F.P.S.G., L.M., L.S.A. Lond., The Preservation of Health in Tropical Climates—Dr. Henri Picard, Traité des Maladies de la Vessie et de l'Affection Calculeuse—Henry Ashby, M.B., Notes on Physiology—The Public Health (Ireland) Act, 1878.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médicale—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Cincinnati Lancet and Clinic—Gazette Hebdomadaire—Leisure Hour—Sunday at Home—Indian Medical Gazette—Analyst—Westminster Review—Practitioner—Journal of Psychological Medicine.

APPOINTMENTS FOR THE WEEK.

October 12. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

14. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

15. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Pathological Society, 8½ p.m. Drs. Tilhury and Charles Fox—On the Anatomy of Molluscum Contagiosum. Mr. Butlin—Conclusion of a Case of Multiple Sarcoma. Dr. Thin—Further Illustrations of the Histology of Rodent Ulcer. Mr. John Gay—Gangrene of the Penis. And other Specimens.

16. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 1½ p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

17. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

Harveian Society, 8½ p.m. Dr. Eastes, "On the Phenomena of Hystero-Epilepsy." Mr. W. Sedgwick, "Clinical Notes on Poisoning by Chloral-Hydrate."

18. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 5, 1878.

BIRTHS.

Births of Boys, 1246; Girls, 1183; Total, 2429.
Average of 10 corresponding years 1868-77, 2237·6.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	740	615	1355
Average of the ten years 1868-77	669·2	627·5	1296·7
Average corrected to increased population ...	...	...	1387
Deaths of people aged 80 and upwards ...	...	...	44

Note.—The births and deaths registered last week may be compared with the average numbers in the corresponding weeks of the ten years 1868-77 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	6	2	4	10	...	...	2	6
North ...	751729	...	8	6	6	12	...	3	1	3
Central ...	334369	...	1	3	...	5	...	5	...	6
East	639111	...	...	11	3	8	1	8	1	11
South	967692	4	4	12	7	5	1	6	...	19
Total	3254260	4	19	34	20	40	2	22	4	45

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·913 in.
Mean temperature	55·8°
Highest point of thermometer	74·5°
Lowest point of thermometer	38·5°
Mean dew-point temperature	49·9°
General direction of wind	Variable.
Whole amount of rain in the week	0·13 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, October 5, 1878, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1878.*	Persons to an Acre. (1878.)	Births Registered during the week ending Oct. 5.	Deaths Registered during the week ending Oct. 5.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3577304	47·5	2429	1353	74·5	38·5	55·8	13·23	0·13	0·33
Brighton	103923	44·1	59	28	66·2	46·4	56·0	13·33	0·11	0·28
Portsmouth ...	129461	28·9	84	43	...	...	...	...	...	...
Norwich	84620	11·3	50	30	68·0	40·0	54·8	12·67	0·77	1·96
Plymouth	73599	52·8	43	27	65·0	46·0	56·3	13·50	0·45	1·14
Bristol	206419	46·4	136	74	72·1	41·3	55·5	13·06	0·07	0·18
Wolverhampton ..	74240	21·9	61	28	62·5	34·6	52·0	11·11	0·27	0·69
Birmingham ...	383117	45·6	311	180	...	...	...	...	..	..
Leicester	121473	38·0	83	39	70·5	37·5	53·6	12·01	0·23	0·53
Nottingham ...	165267	16·6	103	60	68·4	33·4	52·5	11·39	0·78	1·98
Liverpool	532681	102·2	385	283	65·6	33·8	53·2	11·78	0·89	2·26
Manchester ...	360514	84·0	216	159	...	...	...	...	...	...
Salford	170251	32·9	127	70	71·5	30·0	51·6	10·90	1·26	3·20
Oldham	107366	23·0	80	46	...	...	...	...	...	...
Bradford	185088	25·6	140	78	62·8	36·0	51·6	10·90	1·18	3·00
Leeds	304948	14·1	241	147	66·0	35·0	52·6	11·45	1·24	3·15
Sheffield	289537	14·7	243	108	69·0	32·7	53·2	11·78	1·73	4·39
Hull	143139	39·4	126	71	72·0	...	...	...	0·81	2·06
Sunderland ...	112459	40·6	83	55	67·0	41·0	56·2	13·44	0·20	0·51
Newcastle-on-Tyne	144570	26·9	96	69	...	...	...	...	...	...
Edinburgh	222371	53·1	136	74	64·0	33·5	50·9	10·50	1·03	2·62
Glasgow	566940	94·0	377	232	64·3	34·5	51·6	10·90	0·79	2·01
Dublin	314666	31·3	190	153	69·5	44·3	58·4	14·66	0·37	0·94
Total of 23 Towns in United Kingdom	8373953	38·0	5799	3409	74·5	30·0	53·8	12·12	0·68	1·73

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·91 in. The lowest reading was 29·52 in. on Monday, and the highest 30·16 in. on Wednesday.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1878 by the addition of seven years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. Nottingham, Salford, and Oldham, however, form exceptions to this rule, as the estimates for these three towns have been revised with the aid of local information as to the rate of increase of inhabited houses. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE ON VAGINISMUS.

By J. MATTHEWS DUNCAN, M.D., LL.D.,
Physician-Accoucheur and Lecturer on Midwifery at St. Bartholomew's Hospital.

Gentlemen,—We have had in Martha ward recently several cases of vaginismus; and a case of secondary vaginismus forms the text of this lecture.

What is vaginismus? It is one of the numerous diseases that occur in two forms, either primary or secondary. When the disease is primary it is a pure neurosis—that is, we can find nothing visible or tangible to account for it. When it is secondary it is not a pure neurosis; it is a neurosis, but it is a neurosis for which we can in some degree account. This vaginismus is a neurosis of motility, and it consists of spasm. It may be called spasm of the vagina, for that is the part that is affected or changed. The spasm of vaginismus is, so far as it affects the voluntary muscles, a tonic spasm. The voluntary muscles that it affects are the constrictor vaginæ and the anterior part, if not the whole, of the levator ani. One result of the spasm of these muscles is complete closure of the vagina as a passage. This tonic spasm of the voluntary muscles has generally been regarded as the whole of the spasmodic part of the disease; but the affection in a bad case is so severe that I am inclined to think there may be other spasms, of involuntary muscles, concurring to produce the condition of a woman suffering from vaginismus, which I shall immediately describe to you. In the diseases of women there are many spasms of involuntary muscle: the most violent spasms producing the torture of extreme dysmenorrhœa being well known. It is also known that irritations which produce spasms of involuntary muscles in certain of the lower animals are identical with the irritations which produce the spasms that I am referring to—spasms such as I believe occur in vaginismus. For instance, experimental physiology has shown that irritation of the clitoris produces contractions of the uterine horns; and it is ascertained that irritation of the urethral orifice produces contractions of the fundus of the bladder. It is therefore surely not going too far to suppose that, in the condition of a woman suffering from vaginismus, you have not only spasm of the voluntary muscles, the constrictor vaginæ and the levator ani, but also a painful spasm of the involuntary muscular fibres of the uterus proper.

When a woman is suffering from vaginismus, in a characteristic bad case, pain is produced by touching any of the external parts of generation near the vaginal orifice. The further touching of these parts throws the woman into a paroxysm of agony in which the spasms I have described occur. If the irritation is continued there results a state of opisthotonos. The woman is almost, if not altogether, insensible, and her recovery from the condition takes a long time; it may take hours to get over the disorder into which she has been plunged by the irritation that produces the complicated condition called vaginismus in an extreme case. The worst cases are simple uncomplicated cases where the disease is, as I have said, a pure neurosis of motility.

There are other spasms in these parts which I shall not have occasion to lecture upon here, but which are so closely allied that I must mention them. There is a number of well-authenticated cases of spasm of the levator ani during sexual connexion. This is not ordinary vaginismus, but it illustrates the subject. It is a painful spasm of the levator ani during sexual connexion, in some cases producing incarceration of the penis. There are other cases of the same spasm (which I shall describe a little further on) induced by the process of parturition, and obstructing it.

I have given you a description of simple vaginismus, and you can easily understand from what I have said that, except in extraordinary circumstances, it is not discovered until sexual connexion is attempted; it is therefore a disease which is most frequently discovered on marriage, when sexual intercourse is found to be painful and difficult or impossible. If you consider the importance of this conjugal relation you can easily understand that, in a certain important sense, there is no more serious disease than this. It is a disease which involves no danger to life. The disease, if sexual connexion is not attempted, is as good as absent; but in the case of married women it is a disease which is exceedingly important, apart from any influence it may exert upon the general health.

This condition of the sexual relations is called dyspareunia—painful or difficult sexual connexion. All cases of vaginismus are cases of dyspareunia; all cases of dyspareunia are not cases of vaginismus. You can easily understand that there are many cases of pain and difficulty in sexual coitus which are not vaginismus. All cases of vaginismus are proved by the dyspareunia; it is the dyspareunia that reveals the condition, or that leads to the investigation which discovers the condition.

I must say a little more about uncomplicated vaginismus. I have already given you a sketch of the disease; but there is a little more known about it, and before I dismiss it I must tell it to you. In a case of simple pure vaginismus I am not aware that you can discover anything in the temperament or condition of the woman in any way to lead you to expect its existence. The parts, when they are examined, are found to be in perfect health, perfectly well formed. In order to examine them, the patient must be put under the profoundest influence of an anæsthetic. In making the examination you will, in the great majority of cases, discover that the disease is not simple, but secondary—that is, you will find something that more or less completely accounts for the disease. It is almost invariably accompanied by a diminution or absence of sexual desire; indeed, it is frequently accompanied by a negative condition of the sexual appetite—sexual repugnance. This characterises almost all cases of simple vaginismus. Such women, however, may conceive. It is a well-known fact that it is not necessary for conception either that a woman should have sexual desire, or that her vagina should be penetrated. The result of pregnancy illustrates the inveterate nature of the disease. One of the early cases on record, published more than half a century ago, gives an accurate account of the malady. It was a case in which the patient conceived, and had a child at the full time, and was none the better in consequence of parturition. I am myself aware of several cases of this kind; and this physiological or pathological fact has a very clear bearing upon the subject of treatment. In a case of simple vaginismus there is no cure, nothing of the kind, as the result of the birth of a child. Occasionally, in consequence of the great distension and laceration of the vaginal and vulvar orifices, there is a less intensity of the disease; but that is all. It has been alleged that a woman suffering from this disease is liable to the same spasms of the voluntary muscles during parturition, and there are cases recorded where the parturition has been so difficult in consequence of this spasm as to require craniotomy. This kind of spasm occurs during parturition in women who have not suffered from vaginismus; but it is alleged to be a condition that is to be expected in cases previously affected by vaginismus. I am satisfied, however, that there is no good ground in actual observations for this expectation. In three cases that have come under my own care or notice very lately I have seen no such result. Perhaps the modern difference produced by the use of chloroform in painful labours may account for this absence of spasm during parturition under the influence of the anæsthetic, whose value in painful labour has been known for little more than thirty years.

The case of vaginismus that is the subject of lecture today is not a case of primary or simple vaginismus; it is a case of a much more common kind, a case of secondary vaginismus. In these generally slighter cases you can, by a careful physical examination, discover disease. The disease that occurs most frequently in newly-married women is a painful red spot at the fourchette, occasionally also a fissure there. The red spot is at the anterior margin of the perineum; the fissure may be either in the same place, or in the fossa navicularis, or in the external or internal margin of the hymen. When this redness or fissure is touched, the woman can identify it as the source of her disease; she may say, "That is the part," and, on looking at it, you find the condition I have described.

The next most frequent condition observed, especially in newly married women, is vaginitis, either acute or chronic; and this, of course, accounts for the vaginismus without any difficulty. There is frequently, however, and especially in women who have been some time married, a chronic vaginitis which is in many, not in all cases so affected, the cause of

the disease. Cases of severe, though not acute, vaginitis without vaginismus are not uncommon, and there is a case in Martha now. There are several other more remote causes which I shall not mention, such as the sensitive caruncle of the urethra.

The case I am about to read to you is an example of a kind of disease that is very far from uncommon, and which, I am sure, has escaped notice in many cases held to be examples of simple vaginismus, but which were really secondary. The disease is in outward appearance very slight, and requires thorough investigation to discover it. It consists in the presence of one or more little ulcerations which appear to be healthy. They are generally situated round the orifice of the vagina beyond the hymen. Under treatment, or without treatment, they heal, and break out in other parts. They are frequently accompanied by little hypertrophies—hypertrophies of bits of the hymen, hypertrophies of the orifice of the urethra. They are intensely tender and sensitive; and, in order to their examination, the deep influence of an anæsthetic is necessary. What is the nature of this disease (which I do not think has been accurately described)? I am at a loss to say. Whether it is allied to eczema or to lupus I cannot decide. I think it is allied to lupus, and the characters that lead me to think so are these: first, the situation of the disease; secondly, the way in which it heals up and breaks out again; and thirdly, the occurrence of these little nodular hypertrophies of the hymen, urethra, and other parts.

You are not to suppose that every woman with this disease has vaginismus; the association is not necessary by any means. A woman with a slight, or even a severe, degree of vaginitis may not have vaginismus. It is only when the pain and sensitiveness are extreme, or at least elicit the spasms, that the disease produces vaginismus. You will find many women with these and other ulcerations—some of them certainly lupus, others not—who have no vaginismus at all, indeed little or no tenderness of the affected parts. This is a very important distinction. No doubt it points to some important textural difference, which I cannot tell you of because I do not know it. Evidently there is great variation in these diseases, but I know of no difference in the general history or in the appearances on examination, except the sensitiveness and consequent production of a reflex vaginismus. Of this secondary disease the case that I have to bring before you is an excellent example. I shall not read it till the end of the lecture.

The last thing I have to enter upon is the important matter of treatment. In the simple, pure neurotic cases I am bound to say I know of no treatment that is of decided use. If the case is a slight one, the dyspareunia may be modified by an enlargement or distension of the vaginal orifice, but only slightly modified. Such distension can be easily effected by the surgeon. In a severe case any operation with this view is followed by no benefit. This is what I referred to when I spoke of the evidence in regard to treatment derivable from childbirth. There, surely, you have abundant enlargement and laceration, tearing open of the orifice of the vagina and vulva; and in a bad case of this kind there is no absence of the disease when sexual relations are resumed. In a slight case there may be some improvement, and I have known diminution of the pain and suffering follow the bearing of a child. There are, however, operations which I do not think have been sufficiently tried, and which are justifiable, considering the desperate circumstances of a woman suffering from intense vaginismus. I think it would be legitimate to try the operation introduced long ago into practice—the cutting of the pudic nerve. I have seen the operation performed, with no benefit.

This individual operation was, in important respects, an unsatisfactory one, and did not contribute to settling anything; but I must add that our knowledge of the therapeutic results of the division of nerves is not, in this matter, very encouraging. It has been proposed to remove the most sensitive parts; I regard this proceeding, meantime, with no favour. Operations of this kind have been frequently performed, and declared to be successful. At present I have no doubt that the observations were misinterpreted. It is quite easy to cure many cases of this disease. I have no belief in the cutting away of the hymen, or that such operations have any influence in a simple, pure neurotic vaginismus. In secondary cases you are very hopeful in your treatment, and your hopefulness is in proportion to the curability of the discovered tangible disease. In the great majority of instances occurring immediately or soon after marriage, where you have the red spot or the fissure that I have described, time alone, with rest of the parts, is all that is required for their cure. You temporarily separate the parties from one another, and you hear no more about the case. In such examples, if the duration of the disease is prolonged, childbirth will certainly cure, or almost certainly, because in childbirth you have an imitation of a treatment (which is undoubtedly of value in these cases) used in the case of the analogous disease attacking the anus. Cutting through the mucous membrane, or deeper, and expanding the anal orifice, cures the irritability and the fissure of the anus. And so also in these parts. Vaginitis, a common cause of secondary vaginismus, is generally easily cured. Chronic vaginitis is sometimes very difficult to cure.

The case I have to bring before you presents a good picture of one form of the disease, and of a course of treatment that has utterly failed hitherto. But I do not at all despair of this poor young woman being cured of this very painful and distressing malady. The case is as follows:—

E. P., aged twenty-one, has been married for two years. Is strong and healthy, and has menstruated regularly since she was fourteen years of age. Has sexual appetite, but dyspareunia amounts now to complete impotence. Has a slight yellowish discharge. She was admitted to Martha ward, seeking relief from dyspareunia.

This condition has, in a case that I have known, been made the ground of a divorce. You may conceive, therefore, what an amount of misery and evil may result to a woman from this disease, when it amounts, as in this case, to complete impotence.

On examination there is found ulceration of the lower half of the end of the urethra, which is very vascular and projects like a caruncle. Around the orifice of the vagina, and external to the hymen, are five rounded spots of apparently healthy superficial ulceration, of the size of one or two lines in diameter. They may be touched without producing loss of blood. The hymen is lacerated and its posterior part is thickened, inflamed, and projects. The affected parts are intensely tender. No evidence of syphilitic or gonorrhœal affection is discoverable. The thickened portion of hymen was excised, and the five ulcerations were well cauterised by the thermo-cautery. Twenty-seven days afterwards it was found that three of the cauterised spots were healed; but anteriorly on the right side were two new little ulcers. There is now a small tubercle just within the margin of the fourchette. The lowest part of the posterior columna rugarum has become slightly hypertrophied. There is no ulceration of the urethra, which is now healthy. Dyspareunia as before. A month after this examination, she, in my absence, came under the care of Dr. Godson, who dissected off the whole of the hymen, and made an incision through the fourchette—a proceeding which has been systematically recommended. After another month she declares herself as feeling better, but the dyspareunia remains as before. The urethra now presents only slight caruncular redness on the left side posteriorly. On the right side of the urethral orifice, and about half an inch distant from it, is a new speck of ulceration. On the right side of the vaginal orifice is another ulcer like the former, but somewhat larger; another posteriorly near the fourchette; and still another to its left.

Although treatment has been in this case successful, the success has been of a kind not to boast of, because it has always been followed by a reappearance of the disease. The woman is at present feeling better than when she came originally under our care, but she is still suffering from this curious disability.

Before concluding, I may tell you that in several cases of this ulcerative disease I have operated by excising the diseased bits, and without success; that is to say, the disease has reappeared after the parts first affected were removed by knife. And what is extraordinary about these cases is this, that in other women you will have apparently the same disease, even much more, without any vaginismus, even without any pain. There are many women who have ulcerations (of which this case is a good example) who are quite unaware that they have any disease at all, who have no dyspareunia and no complaint. In a case of this kind which I saw lately, operation by the actual cautery was, after a consultation, resorted to, and with complete cure of the disease, so far as the ulceration was concerned; but the woman has now

around the orifice of the vagina several tubercles, which are red, not painful, and which indicate what I have already said is my own impression, that the disease is analogous to lupus rather than to eczema or any other disease with which I can place it side by side.

ORIGINAL COMMUNICATIONS.

THE ORIGIN OF SOME MOTOR DISORDERS.

By OCTAVIUS STURGES, M.D.,
Physician to the Westminster Hospital.

(*Continued from page* 376.)

So far we have traced some of the more obvious and familiar modes of conduct of the muscular system in the differing obedience of its several groups; in the tendency of them all to movement which is rhythmical and precisely repeating; and in the laws of associated movement. We recognise in such phenomena fruitful sources of defect which are in fact inherent and, although more or less prominent according to the circumstances, never altogether absent. And we may go further. There are other facts before us illustrative of the conditions of motor government, not less familiar but less easy of analysis than the former inasmuch as they involve considerations of mental co-operation, where it may be argued that the nervous and not the muscular system is the proper object of the inquiry. Yet we may safely venture on this further enterprise if we only keep close to the facts, not seeking as yet to determine the exact place of the muscles in the chain of agencies but merely watching what they do.

The muscular system *imitates* and the imitation is unconscious and involuntary and sometimes even in spite of the will. Among many other illustrations there are the various postures and muscular acts, copied from one to another yet serving no useful purpose, which distinguish classes. There is the shooting out of the hand as a preliminary to using it to be seen in those that affect dexterity or grace. A particular instance is seen in fashionable snuff-takers of the last century. There is the sudden straightening of the arm while extending the shirt-sleeve, common at the present day amongst officers of the British Army. Acts like these are not done with any design but are simply class movements. There are few of us who have not adopted a number of useless and deforming acts and gestures, copied unconsciously from those about us, which we wear habitually as a disguise and only throw aside in moments of real emotion. Women and children and men of narrow capacity show this tendency the most, and often, no doubt, with deliberate intention. The wider the sympathies and the higher the culture the less is the liability to adopt these class attitudes, or perhaps it would be truer to say that the liability seems less because there is a larger universe to copy from and the pattern is less readily recognised. Thus it happens that men remarkable for capacity are either free from this infirmity and remarkable for simplicity and frankness of bearing, or else prone to some peculiarity of posture or movement which is clearly their own.

This tendency to imitate not only varies with individuals, it is more or less dominant according to the occasion. Under favouring circumstances it becomes universal and irresistible. Thus attitudes of weariness are very easily conveyed. A smiling or a mouruful face is reflected in another face. The oblique mode of address adopted by some persons who in conversation avoid the eye of their companion or only meet it furtively is immediately conveyed to the other. We are not considering at present how much of mental element there may be in these several acts. It is enough to observe that the face and the frame will copy from others expressions and attitudes whether of weariuess, of sorrow or of bashfulness from the mere sight of such exhibitions without concern or sympathy for the cause. And much more readily and irresistibly, no doubt, would those attitudes spread which from their nature are rare, as where the utmost horror or fear is expressed, the corresponding attitude of sympathy on the part of observers following as it were with a constant interval and becoming more and more compulsory and universal as the extremity of passion is approached.

This peremptory conveyance of muscular spasm needs the more mention inasmuch as the word "imitation" fails to convey an adequate or, indeed, a correct conception of it. Imitation, in its proper sense, if it may occur sometimes without a conscious consent, requires at least the acquiescence of the will. But there are numerous instances of the conveyance of spasm such as no imitation could accomplish and the utmost effort fails to restrain. It would seem better, therefore, to recognise the law which such phenomena disclose rather than to define it by a word which would limit its operation by the assumption that these are so many acts of copying.

But in addition to this infection from one to another it may be observed how in the same individual the various departments of the muscular system are moved by a common sympathy so that particular acts will engage other muscles besides those actually made use of. Thus almost all muscular acts of any difficulty or nicety involve the highly sensitive muscles of the face and tongue, not indeed in any orderly movement but in some kind of distortion or grimace.

A further sympathy is exhibited where the act performed is one in which several groups of muscles have an iuterest although but one set is actively concerned. The mental association which sets in motion these extra muscles will move them more or less according as the particular act is difficult or easy, as though by such meaus the task were actually assisted. The imperfect writer roughly shapes his letters with his tongue. The imperfect reader is seen to speak the words to himself as he reads them. And where there is no difficulty but only unusual fervour or a desire to be emphatic the same sympathy appears. The lips and the tongue move in silent prayer, the head nods and shakes in rehearsing or recalling our own words of eloquence or rebuke. And indeed there are but few of the voluntary muscles which may not be stimulated to movement when some great or exciting act of theirs, past or to come, is made the subject of reflection. So that it may be said not only that our movements are quick or slow according to the general tone of our minds but further that the particular muscles moved will often betray the subject of our thoughts. Illustrations of this are amongst the oldest stories of the world, and preserved in many shapes. The barber's brother in the "Arabian Nights" musing on his own course of conduct towards his wife when exalted above his fellows kicks over the glass-ware on the tray before him.

We may notice next certain conditions of the mind which have the effect of imposing a certain attitude upon the body. To take a single illustration there is the posture assumed by submissive yet self-regarding persons when soliciting help or deprecating injury. The germ of this is to be found in the frank surrender of a little dog when in presence of an undoubted superior he throws himself on his back and is still even to his tail. Similarly the attitude of servility among men is known by its stillness. This is to be seen not merely in the cringing for favour or mere obsequiousness, but still better amongst those who are sorry for themselves and blindly confident in others.(a) I have a woman now in Westminster Hospital aged more than fifty, who exhibits this. She is a hypochondriac who for a series of years has been continually under drug treatment and claims no other merit. She will stand quite fixed before us, with shoulders bent and head on one side, the hands folded before her and eyes partially closed. When made the subject of clinical remark in language she is unable to understand and thus brought under the observation of several persons at once this attitude becomes the more striking and the face still more expressive of unresisting endurance. And if, while thus talkiug, her arm is lifted the woman will retain it in its new place. She will concur, indeed, in any posture that may be imposed upon her. Some time ago I had charge, for some unimportant ailment, of an ill-nourished and listless child aged between five and six who would suffer all her limbs to be raised in succession and remain for many minutes with arms and legs in the air. I have seen a similar tendency to a less degree in more than one child since.(b)

(a) The attitude of fervent prayer is one of fixed spasm where the same posture is maintained for a length of time. Amongst religious devotees various deformities arising from this cause are taken as signs of superior holiness.

(b) My friend and colleague, Dr. H. Donkin, has kindly given me note of a very similar case to that alluded to above occurring in his own

Attitudes of this sort, extending but rarely to the whole muscular system, will be seen more commonly in those higher muscles of expression which are everywhere the earliest and best exponents of the laws we are discussing. Every physician is familiar with the deliberate and formal manner in which hypochondriacs display their tongues. They will throw back the head and close and quiver the eyelids while they extend the organ for inspection to its utmost limit and there leave it. It is common enough for children to keep their tongues out until told to withdraw them. This may often be intended as an act of obedience, but I think it occurs also from that defective volition not uncommon in childhood which requires that so long as they are impressed by being under formal observation they should be prompted to each separate act.

Opposed to this attitude of stillness and pliancy is the general spasm which pervades the body on the verge of some grave catastrophe. The jaws are set, the hands are clenched or clutch tightly some object within reach, and the whole body is in rigid convulsion awaiting the fatal moment.

From attitude considered as a mental expression we might go on to movement in the same relation. No reader needs to be reminded of the restlessness of uncertain expectation or the various forms of spasm, tremor, and palsy variously associated with the passions. Yet it needs to be remembered in the present day that the examples of the kind which are presented for our acceptance fall very far short of the reality. Real passion in the violence of its spasm and contortion is much more deforming and disabling than the actor would venture to represent even were it possible. Extreme emotion is so contagious and hideous that its exact representation would be dangerous and distressing. And however the actor may identify himself with his part his passion never rises to real paralysis or real spasm as true passion does.

Of all powerful emotion it may be said generally that the tendency is to usurp the power of the will, summoning in succession, in the order of their responsiveness, the several groups of so-called voluntary muscles, both those which commonly minister to expression and those which are commonly employed in purposive acts.

It is easy to underrate the force of these acts of muscular response by attending only to that division of them where the attitude or movement is purely voluntary, and neglecting the rest. The courtier's bow at a State ceremonial is an act of the voluntary kind. No habit or length of practice would suggest such homage a moment after his dismissal. Naaman bows himself in the house of Rimmon because it pays, the movement stirring no sentiment in his mind save one of revolt. Men and women smile in society when there is nothing but weariness within, and a real smile would be impossible except for the incentive supplied by being in company. In all such instances it is obvious not only that it is within choice whether to respond or not but even that the particular mode of response needs to be prompted by a distinct effort on our part and would never be performed without it. But there are other muscular attitudes and movements with little or nothing of the voluntary element about them. The uplifted hand bespeaks silence with more or less of insistance according to the material it works upon. In an ordinary assembly of men and women the wish which the sign conveys is obeyed or not according to the temper of the majority. But there is no similar choice exercised by a crying child when upon the finger being raised its cry suddenly ceases. This effect, whether produced by diverted attention or anything else it matters not, is purely involuntary. Similarly the start of surprise varying as it does in different individuals from a slight convulsive tremor to an oscillation so violent as to upset the body, is altogether independent of the will. And fear and horror and dismay (provided of course that they are of a given intensity) will move the body each time to precisely the same attitude or commotion of spasm or tremor with no more room for choice than when the limbs are convulsed in meningeal inflammation or paralysed in cerebral hæmorrhage.

We see therefore the body impelled to movement, to stillness, to spasm or to tremor with every variety of inducement. We see the same muscular conduct made compulsory to some while it is optional with others. We see moreover that consciousness of the observation of others is an important factor in modifying movement or impressing stillness. Acts of volition may be suspended at the bidding of another when the command is reinforced by an appeal to some imaginary law of nature. Most of us have seen persons of undoubted probity struggling in vain to open their eyes or move their limbs when under the incantations of "electro-biologists" and other pretenders.

So that here, again, the motor functions in their corporate capacity are found acting variously according to their circumstances. We have only to learn the full measure of their variability. Granted that attitudes expressive of emotion are conveyed to those who do not share the emotion itself. What will be the force of this conveyance under the most favouring conditions? Granted that alarm and impending danger both stiffen the frame and relax it. How far will muscular spasm from this cause enter into the ordinary lives of the timorous and apprehensive? Granted that external observation produces facial convulsion, impairs coordination and makes movement constrained and difficult. To what degree will these defects reach when such influence is pushed to the utmost in a suitable subject? The answer must be sought by looking around at our fellows. It is found, as I hope to show, in the observation of the many disorders of movement and posture which are unjustly described as anomalous and, by a strange blindness to our own imperfections, relegated to the mysterious region of disease.

(*To be continued.*)

practice at the East London Hospital for Children. A girl aged three years, brought to the hospital for supposed infantile paralysis, would suffer her limbs to remain fixed in various positions in which they had been casually placed. For example, her arm having been lifted at right angles to the trunk remained in that position for several minutes. "As she sat on the edge of a chair I extended both legs on the thighs which position she maintained though crying for the discomfort of it. She was put on her back and both legs and arms raised as high as possible so that she rested only on the back, keeping this position for two or three minutes. This condition lasted about a month; the child retained almost any attitude in which she was placed." She then by degrees took courage to walk, the tendency to fixed postures disappeared, and with it a fretful and sulky temper. The case in Dr. Donkin's judgment may be regarded as "hysterical paralysis with cataleptic phenomena."

DEATH FROM CHLOROFORM IN SHEFFIELD GENERAL INFIRMARY.

By ARTHUR H. LAVER, M.R.C.S. Eng.,
House-Surgeon to the Infirmary.

Michael H., aged thirty-four, a tall, well-developed man, was admitted into the Sheffield General Infirmary, under Mr. Barber, on August 30, 1878, for fistula in ano and ulcer of right leg. The ulcer was of the size of half-a-crown, and was due to a severe wound received three years ago. The fistula had existed about the same length of time. In other respects he seemed in robust health.

October 1.—The ulcer having healed, Mr. Barber decided to operate on the fistula, and the patient was taken into the theatre for the purpose. Auscultation, as on a previous occasion, revealed nothing wrong about the heart. He was very excited. As he desired to take chloroform, it was given, as is customary at this institution, on a single layer of lint, on which it was dropped from an ordinary drop-bottle. He took it quietly, and apparently easily, for about four or five minutes, by which time about two drachms of chloroform had been dropped on the lint, when he suddenly struggled violently, his pupils became largely dilated, and his pulse stopped. The galvanic battery was immediately applied to the cardiac region, his chest was severely struck with a cold wet towel, and brandy was injected into the rectum. During this time he was breathing somewhat spasmodically, and as no improvement was taking place, he was lifted up by the feet for a few seconds, for a short time after which he breathed more regularly, though his heart could not be felt at any time to beat. In the course of about a minute he was again lifted up as before; on this occasion, however, no improvement whatever took place—indeed, the only effect produced, apparently, was great congestion of the head; and in a short time—about five minutes from the time he commenced to struggle—he ceased breathing. Artificial respiration and the galvanic battery were altogether tried for about twenty minutes.

Post-mortem, twenty-four hours after Death.—Rigor mortis well marked. Pleural cavities empty; no adhesions; lungs healthy, but highly congested. Pericardium contained no

fluid. Heart covered with a large quantity of fat, pale, flabby, and dilated; valves healthy; cavities empty; walls thin. Liver and kidneys highly congested, and their capsules adherent at parts. Brain congested, and containing a small quantity of fluid in lateral ventricles. Microscopically the heart showed well-marked fatty degeneration.

HARVEY AND THE SPANISH ANATOMISTS.

By GEORGE GASKOIN,

Knight Commander of the Royal Order of Isabela la Catolica; Surgeon to the British Hospital for Diseases of the Skin.

THERE is undeniably a heavy prejudice existing against Spain on the score of ecclesiastical tyranny and the narrowness of her scholastic teaching. I freely admit it to be well deserved. Less known and apprehended is the fact that Padua, Harvey's *Alma Mater*, was, of all places in the world, the most enthralled to the same scholasticism; and the incubus of ecclesiastical tyranny was never deficient in Italy. That same effete and degraded scholasticism, Averrhoism, or Aristotleism, by whatever name it may be called, was truly enthroned in Padua, and her chair of philosophy gave voice to decrees which were wholly incompatible with science. I fail to see any superiority or advantage over Spain in that era at least. The Renaissance had proceeded mainly from artificial or accidental causes; in its proper character, Italian society was not progressive. We know the verdict which Milton bestowed upon it—that it only bred flattery and fustian.

Such a hold had this scholasticism on the country, that, if we may believe M. Renan,(a) even as late as the French Revolution nothing was found in the schools of Northern Italy but well-worn handbooks of Padua, the very same as had been used two centuries previous. The schools of Italy in Harvey's day were thronged with foreign students; from the Italian seaports there was a continual issue of printed matter for the service and supply of Europe, but Italy could not be called friendly to the sciences, nor essentially favourable to discovery. Notwithstanding which, such is the charm of its literature, the Italians have never wanted advocates; they have become possessed of a great deal that does not properly belong to them; and of the French may we not safely affirm the same? Gimeno describes the stapes, and Laguna the ilio-cæcal valve; but the first we attribute to Ingrassias, the second to Achillinus, both of whom were in point of time posterior. The partiality of Portal(b) is notorious; and Daremberg(c) is not without his bias, though of such censure we would gladly be excused the award.

There were Italianised Spaniards in the sixteenth century who had made their homes in Italy, and spoke of its advantages as superior, but they met with a stern rebuff and sharp criticism from those who followed their own honest work at home. Thus, of the great Valverde it was said, that with much exactness and abundance of detail, in which he rivalled Vesalius, and often surpassed him, there was a triviality, a want of grasp and *naïveté*, with far less forcible and luminous ideas than those of his Spanish predecessors.

The schools of Valladolid, Salamanca, and Valencia had each and all their notabilities, of whom no mention is made on this side of the Pyrenees. Seville, too, had her Aguero—that Hidalgo de Aguero whose name is associated with the advocacy of union by the first intention; he of whom all soldiers said, as they started on their campaign, "They recommended themselves to God and Dr. Aguero."

Writing in the middle of a century which has been called one of descriptive anatomy, the delineations of his pen are beautifully exact, and show a rare anatomical knowledge. Especially is this the case with regard to the heart. "The apertures," he says, "are four. The first of these belonging to the right ventricle corresponds to the vena cava, and it brings the blood to the heart; from the second springs the pulmonary artery (vena arterial), that carries the blood to the lung; from the third springs the pulmonary vein (arteria venal), which conveys the spiritualised blood to the left ventricle; and from the fourth proceeds the large trunk of the greatest artery in the body, which distributes the blood to all parts of the body." There is a *quies* between the beats of the heart; and what he particularly insists on is that the right side of the heart is made for the sake of the lung (*per amor del pulmon*).

Yet more worthy of mention is the worthy Catalan, Montaña of Monserrat, who belonged to the first half of the sixteenth century, a little earlier than the other. One may say of this man that he had the stuff in him of several physicians. How many lucid explanations from his pen, how many anticipations of our modern theories! Montaña had a chair at Valladolid, but he was a ubiquitous, travelled kind of man, like many others of his day. I would gladly indulge a little in biographical detail, but the limit I have imposed on myself in writing these papers does not allow me to extend the subject much further in this direction. I must postpone to another opportunity much that I have to say about Montaña of Monserrat; but I will just add this. When Montaña is treating of the seminal fluid, he is accordant with all the authors of the middle ages in the idea that it can only be made out of the most highly arterialised blood. And how can this blood become so arterialised? This can only be effected, according to Montaña, *through the pores of the lungs*.(d) But since the passage is of the first importance, it may be better to give the exact words of Chinchilla in his analysis of Montaña, taken from folio 64 of the work of the latter, where he is treating *in extenso* of generation. "He establishes," says Chinchilla, "as principal agent of generation the arterial blood, elaborated and prepared in the ventricles previous to being converted into semen. He distinguishes the blood into arterial and venous, between which there is this difference: that the venous blood is gross, and terrestrial, and impure; and the arterial blood is purified, subtle, and very delicate, and its production proceeds from out of the venous blood collected and depurated by the pores of the lung."

The work in which this expression occurs being published in A.D. 1550 is necessarily prior to Servetus; but there is yet more to be said about Montaña. I shall undertake to show that prior to Servetus he understood the pulmonary circulation in the same way that we now understand it, and I will give a small extract from his works to make this clear. But before doing so I may say that in his description of the heart, its valves and its orifices, etc., he insists upon the point that it is the principal function of the auricles to hold in deposit, and keep for the supply of the ventricles, that exact quantity of blood of which they have need, because, as he says, each ventricle in contracting empties itself of blood, or so very nearly so that scarce any blood can remain in it, and it would be fatal if they were long deprived of it. For this reason the auricles, either one of them, left and right alike, must hold in reserve the exact quantity of blood that is necessary to fill the heart's cavities.

Let us take, then, the imaginary quantity of three ounces, neither more nor less, as that which is suited to the capacity of the heart. Let it be said that three ounces are accepted by the right auricle as the first station in the journey, and when the right ventricle dilates, through contraction of the auricle, the whole of it will be sent into its cavity. In like manner, when this ventricle contracts, through the pulmonary orifice three ounces are driven to the lungs, and, by an equal capacity with the right, the left auricle receives from the lungs the same three ounces, and holds it in deposit for the left ventricle. The left ventricle in its turn acquires it, dilating as the auricle contracts; and lastly, when this ventricle contracts, the three ounces of blood go through the aorta, and so to all structures in the body.

"I say, then," says Montaña, "that the said auricles *principally* serve, either one of them alike, to have and to hold the blood that the heart hath need of, and to feed the heart's necessity, in one ventricle as in the other, in such sort that, though the heart may close and drive on the blood from the ventricle, there should still be in store with the auricles that very proportionate quantity of blood which the cavities of the heart require. And the excellence of the proceeding is apparent: for does not experience show us that the said auricles are filled with blood when the heart is undergoing contraction; and when once more it loosens out, then is the time for the auricles to pour fresh blood into the ventricles. From which it would appear that the said auricles do principally serve in the way of measurement (*medida de la*

(a) Renan, "Averroes et Averroisme."
(b) Portal, "Histoire de l'Anatomie et Chirurgie."
(c) Daremberg, "Histoire des Sciences Medicales," 1870.

(d) Chinchilla, art. "Montaña of Monserrat."

sangre) to give the just amount of blood the heart stands in need of for its ventricles."

The work in which this occurs was published A.D. 1550, three years before the "Christianismi Restitutio" of Servetus. No one can doubt it contains a complete conception of the pulmonary circulation. If to Servetus we give a volume and a statue, this passing notice may be at least allowed to Montaña of Monserrat.

Even one year earlier than this (A.D. 1549) the great anatomist, Pedro Gimeno, has the following passage:—"The heart drawing the spirit from the lungs, and directing to the left ventricle the quantity of blood that comes from the right ventricle, the spirit and blood become there mixed by the instrumentality of friction and compression, and so it is distributed by the *arteria magna* to every part of the body.

Harvey has been justly praised for a judicious use of vivisection and observations on dying animals. Gimeno is not behind him in this. In making observations on the pulse, he dwells upon the fact that fulness of the artery occurs coincidently with the heart's contraction: he adds, "although it may seem contrary to common sense, I have verified this many times in dissections of living animals."

Laguna seems to have broken down in attempting to describe the nature of the pulse, which has been a stumbling-block to many physiologists. He accounted for it by allowing a certain amount of freedom to the movement of the vital spirit in the arteries, which, with our notions of chemistry, we should never think of conceding to the oxygen united with the blood. It is allowed by Portal that he was *on the point* of discovering the circulation of the blood, and posterity would have certainly accorded it to him if he had been reticent in other diversions of his pen. The criticism of Portal is harsh, and I can scarcely admit of its correctness.

I used to think of Servetus as a prodigy, and of Harvey as something beyond human proportion; but in studying more nicely the work of their contemporaries, I have toned down this hero-worship to juster proportions, and I have gained mental health in the pursuit. *Vixere fortes ante Agamemnona, multi.* Certainly there were strong men who lived in the bustle of the sixteenth century.

(*To be continued.*)

LONGEVITY.—The obituary of the *Times* of the 15th inst. contained some remarkable illustrations of prolonged existence in eleven persons, viz., seven ladies and four gentlemen, whose united ages amounted to 931 years, giving an average of 84 years and more than seven months to each. As usual, the fair sex took the lead, the oldest being 92, and the youngest 80 years of age. Of the opposite sex the oldest was 88, and the youngest 80 years of age. The following were the respective ages, viz., two at 80 to 82, two at 83 to 85, three at 86 to 88, and 92 years. The same obituary contained the deaths of seven septuagenarians whose ages ranged from 70 to 78, giving an average of 74 years and more than eight months to each.

ST. THOMAS'S HOSPITAL.—(Plan for providing Refreshments for Out-Patients and Casualties.)—The out-patient department of St. Thomas's Hospital is very extensive, and the advice of the medical staff in attendance in this section of the Hospital is much sought after by a very large number of persons, the total attendances of out-patients and casualties during the last year being nearly 140,000; but this does not represent the total number of applicants for out-patients' letters, as many of these are not considered fit cases for hospital treatment. It requires the daily attendance, for many hours, of a large staff to examine and prescribe for these patients, some of whom come from considerable distances, and are necessarily detained at the Hospital, waiting their turn in rotation for medicine, etc., after being prescribed for by the medical staff. It frequently happens that these patients have left home hurriedly, without taking proper nourishment, and become faint from exhaustion before leaving the Hospital. In view of this the Treasurer and Committee have made arrangements for supplying them with refreshments—say tea, coffee, milk, rolls, cakes, etc.—at a small fixed charge, so that such as require it may obtain a simple meal at a small cost, and thus remove the excuse they now have of resorting to public-houses for food and drink before returning home. Somewhat similar arrangements have been adopted at Guy's Hospital.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

KING'S COLLEGE HOSPITAL.

MR. LISTER'S CLINIQUE, OCTOBER 9, 1878.

Operation for Scirrhus of the Mamma with Implication of Axillary Glands.

PATIENT was a woman of thirty-nine years; married. Mr. Lister pointed out that the growth was situated in the gland some distance above the nipple, and that there was not the retraction of that body which is generally found in scirrhus, but the adhesion to the skin and enlargement of some of the axillary glands, with the usual history and characteristics of the growth left little doubt as to its character. Owing to the tumour being situated somewhat high up, a larger incision than is usually made for excision of the mamma was necessary and the whole organ with the skin implicated was removed. Mr. Lister next made an incision from the existing wound towards the axilla, and, dissecting underneath the pectoralis minor, removed the infected glands. The edges of the wounds were then brought together with silver sutures. Metallic buttons were also used, which, being attached to the sutures, brought pressure upon the edges of the wounds, thus keeping them together without undue traction upon the wire.

In remarking upon the case, Mr. Lister said that it was formerly the custom not to meddle with a cancer when the glands had become infected, owing possibly to the belief that this was a sign, not of local only, but of general constitutional mischief. He had, however, no doubt that here there was nothing whatever beyond local infection. He pointed out the advantage of the button suture in a case like that under notice, where it seemed impossible, from the amount of skin removed, to get the edges together without much traction; but by the use of the buttons he was able to keep the edges in good apposition.

The operation was antiseptic throughout, and drainage was obtained by horse-hair and an indiarubber tube in axilla.

Acute Serous Abscess of Hip-Joint.

Patient is a fairly healthy-looking woman, twenty-four years of age. Before coming into the hospital she had an attack of acute rheumatism. When admitted she complained of intense pain in the right hip-joint. She lay on her back with the thigh flexed on the pelvis, and could not bear the slightest handling of the limb. An incision, with antiseptic precautions, was made along the front of the thigh a little below Poupart's ligament, and a large quantity of pure serous fluid without admixture of pus was evacuated. The limb was straightened and put on a long Liston's splint. It is now doing well. In commenting on the case, which he described as "an acute serous abscess," Mr. Lister remarked on its extreme rarity, this being only the second of the kind that had come under his notice. An addition to the splint used here is worth noting. It consists of a solid frame of wood something like a toast rack, lying at right angles to the splint, with two firm upright pieces, between which the lower end of the splint is placed. This prevents the rotation of the foot which is so apt to be troublesome when the long Liston is used.

Recent Hip-Joint Disease with much Apparent Shortening.

Patient, a lad of seventeen, has just been admitted. He states that about six months ago he had pain in the left hip-joint, worse at night, never referred to the knee, not of traumatic origin. There is apparent shortening of the left limb to the extent of about three inches and three-quarters. On examination there was found to be no anchylosis nor dislocation. The pelvis was considerably tilted up on the left side. Mr. Lister pointed out that, no matter in what position the limbs lay, if the same landmarks were taken on both sides, their real length could easily be ascertained. He then proceeded to take measurements from the anterior superior iliac spines to the inner malleolus on each side, holding the tape well up from the limbs so that their outline would not interfere with the result. The real shortening amounted to about three-quarters of an inch. In this case the treatment will be simple extension, by which he hopes the pelvis will be

brought down to its normal position, so that when the anchylosis which will probably occur does take place, the shortening will not be so great as to interfere with the usefulness of the limb.

Old-standing Fracture of Femur Ununited.

Patient is a middle-aged man of fair physique. Six years ago he sustained a fracture of the left femur along with other injuries. At present there is shortening of the left leg to the extent of about six inches. On examination there is found to be an ununited fracture of the femur about the lower third. There is considerable overriding of the bones. In this case Mr. Lister remarked that the amount of overriding was a good condition, as it was likely that by judicious extension the amount of shortening would be decreased. There was sure to be in such a case considerable absorption of both ends of the fractured bone. Subsequent to extension, other treatment will be adopted to bring about (if possible) union between the fragments.

BROMPTON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.

OLD-STANDING PLEURISY WITH EXTREME PLEURODYNIA, TREATED BY STRAPPING.

(Under the care of Dr. POWELL).

For the following notes we are indebted to Mr. Rich, Resident Clinical Assistant:—

Case 1.—Charles G., aged thirty-seven, admitted April 25, 1878. His present illness commenced five years ago with acute pain in the left side. He was then laid up for some weeks, and has had a hacking cough ever since, with frequent return of the pain. There had been no hæmoptysis. He has lost flesh, and has had night-sweats lately. On admission the patient had the appearance of great suffering, and complained of acute pain in the left side, restless nights, loss of appetite, and general depression; breath very short. Chest signs: The measurements from the spine to the centre of the sternum, both above and below the nipple, were three-quarters of an inch less on the left than on the right side. There was much less expansion of the left than of the right side, and there was decided flattening below the left nipple. Auscultation: On the left side there was cavernous respiration, with scanty gurgling at the apex, and loud friction-sound laterally and posteriorly at the lower half of the chest. There was respiratory crepitation in the axilla and at the base of the lung. On percussion there was diminished resonance generally over the whole side. Right side fairly normal; good vesicular murmur. Treatment: Tonics were administered, and cataplasms, stupes, blisters, and other counter-irritants were applied, but without benefit. On May 31 the left side was strapped from base to axilla with Leslie's holland strapping. In twenty-four hours the patient expressed himself as being much relieved, only feeling pain on very deep inspiration. In forty-eight hours the change was very decided. The patient had slept well during the night; his breath was less short, and he could cough and breathe without the slightest inconvenience. This improvement continued, his appetite returned, he gained flesh, and was able to hold himself up and take exercise. In fourteen days the strapping was removed. The chest-sounds were generally clearer and less obscured by the friction. The strapping was resumed, and in five days' time was replaced by a bandage, and the patient was sent to the country (June 18). On leaving he felt well. There was only slight cough in the morning, and some dry amphoric breathing at the left apex. No crepitation audible, and not the slightest pain.

Case 2.—Samuel H., aged sixteen, admitted June 25, 1878. Patient stated that about two years and a half previously, after an attack of measles, he began to have a cough. During the last eighteen months the expectoration had been thick and yellow. There had been no hæmoptysis nor diarrhœa. He had lost flesh considerably during the last eight months, and for the last four months night-sweats had been constant. His breath had been very short. On admission there was found to be marked flattening on the left side in the mammary and infra-clavicular region. On percussion the left side was found to be generally wanting in resonance. There was dry, blowing respiration posteriorly over the upper half of the scapula, and some pectoriloquy below the scapular spine. There was about three fingers' breadth of dulness at the extreme base. On the right side there was a fairly good vesicular murmur. Temperature 100·4°; pulse 112. July 12: There was a loud friction-sound on the left side, heard at the base posteriorly and laterally. Patient complained of extreme pain, was afraid to move, and had much dyspnœa. On the same date the side was strapped as in the previous case. In twenty-four hours patient expressed himself as being much relieved. There was no pain except on breathing deeply or on coughing, and he had slept well. In forty-eight hours there was no pain on breathing deeply or on coughing, and patient's general condition had considerably improved. The strapping was renewed in fourteen days, and was kept applied for three weeks, at the end of which time patient was perfectly free from pain and a bandage was applied. On leaving the hospital (August 26) the cough had almost disappeared. The friction-sounds were inaudible, the expansion of the left side was slight, and the contraction of the vomica at the apex was apparently progressing. Temperature 98·6°; pulse 90.

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Medical Times and Gazette.

SATURDAY, OCTOBER 19, 1878.

THE GENERAL MEDICAL COUNCIL.

We believe that when the President of the General Medical Council issued his summons for a meeting of that body on the 17th inst., he expressed an opinion—which was probably a hope—that the meeting would be a very short one. So far as he was concerned, and so far as he knew, the only business before the Council would be the consideration of regulations "to give effect to Sections 8, 9, and 10 of the Dentists Act, 1878"; and it appeared to him that this need not require a session of more than one or two days. In noticing the summons, last week, we drew attention to the resolution passed by the Council on July 3, the last day but one of their last session, by which it was declared, by a very large majority, "That the constitution of this Council needs revision; and that the Council does affirm and represent to the Government that, at its first

meeting after the present session of Parliament, it will consider what modifications of its constitution are demanded and are required, and will report to the Government accordingly." A more explicit and solemn engagement with the Government could hardly have been formed, and it seemed to us that, though the present meeting of the Council is a special, and no doubt a very unexpected one, it was hardly probable it would be allowed to pass without some one or more of the members bringing up the subject of the resolution above quoted. We are not surprised, therefore, to learn that Sir Dominic Corrigan has given notice of his intention to move—"That this Council is of opinion that it should not permit further delay to occur in so important a matter, but should proceed at once to the consideration of the constitution of the Council, and what changes may be requisite in accordance with the resolution of the Council of July 3, 1878, in fulfilment of its promise to Government, and in sustainment of its own good faith." After passing its resolution of July 3, the Council further decided to remit to the Executive Committee, "to prepare for it, before its next meeting, a report on the present constitution and working of the Council, and on the changes (if any) of constitution by which, in the opinion of the Executive Committee, the Council might be rendered more efficient for the duties which it has, or will have, to discharge"; and we understand that the Executive Committee have not yet been able to fully consider the subjects thus referred to them. No one appears to have had any idea that it would be necessary to call the Council together again so soon, and it is obvious enough that it would have been very difficult to get a meeting of the Executive Committee during the months of August and September. We do not know whether or not Sir Dominic Corrigan will find a seconder to his motion. If he does, the debate upon it may very easily occupy a considerable time; and should a majority of the Council agree that the revision of its constitution shall now be taken into consideration, it would be very rash to hazard any opinion as to how many days the sitting of the Council may last. We can only be sure that the session in that case would not be a short one. It seems most probable, however, that the Council will decide to wait for the report of the Executive Committee, and the more so as the resolution remitting the matter to that Committee requested that their report might "be in circulation among members of the Council at least one month before the meeting at which it shall be discussed." It is, indeed, very possible that some members of the Council may contend that this last clause of the resolution precludes their entering upon the subject now, as the clause has not been carried out; but it will be seen from the President's Address (which, by the courtesy of the President, we have the pleasure of publishing elsewhere in our present issue) that he leaves this question entirely in the hands of the Council, expressing, however, very clearly, his opinion that such a matter as the revision of the Council should only be entered into after full and searching inquiry, and with due deliberation, though without any unnecessary delay.

But should this subject be held over to some other meeting of the Council, which would have to be held for the purpose some time before the next session of Parliament, so that Government may be put in possession of the opinions of the Council early enough to take action thereon, still there are questions before the Council, relating to the working of the Dentists Act, the consideration of which may very easily be made to occupy a large amount of time. How is the expression "*bonâ fide* engaged in the practice of dentistry or dental surgery" to be defined? There are some very expert and pertinacious hair-splitters and revisers of phrases on the Council, and it will be interesting, though perhaps not very edifying, to see how long it will take that body to arrive at an agreement on a workable and legally safe definition of the phrase in question. Nine hundred "dentists" have been already registered, and we may suppose that they are all men about whose position, under the Act, there could be no doubt. But before the end of the year—that is, before the time when admission to the Dental Register will cost £5 instead of £2 as now—a crowd of chemists and other incompetent persons will demand to be registered as having been *bonâ fide* engaged in the practice of dentistry before the passing of the Act. Again, there are the questions of the registration of colonial and of foreign dentists, "with recognised certificates." The Act provides that "a recognised certificate" shall be "such certificate, diploma, membership, degree, licence, letters-testimonial, or other title, status, or document, as may be recognised for the time being by the General Council as entitling the holder thereof to practise dentistry or dental surgery in a British possession or in a foreign country, and as furnishing sufficient guarantees of the possession of the requisite knowledge and skill for the efficient practice of dentistry or dental surgery." How will the Council arrive at the knowledge required to enable them to judge of the worth of the documents that may be sent in by candidates for registration?

Finally, we suppose the curriculum of education for the dentists of the future must be settled, and this may prove to be anything but an easy matter. The Scotch and Irish bodies are hardly likely to agree with the curriculum set forth as requisite by the English College of Surgeons.

The length of the session will probably depend to a marked degree on the method with which the Council deals with the questions before it. It may elect to consider all matters in committee of the whole Council, without any preparation, and then debate and talk will have the fullest and freest licence. Or two or more select committees may be appointed, each having one or more subjects to consider and report upon to the Council; but even then it seems improbable that the session will be a very brief one.

CARBOLIC ACID POISONING.

Carbolic acid is having a hard time of it just now. The daily papers lately opened their columns to the insinuations of those who declared that it is practically useless as a disinfectant for general purposes, and so dangerous a poison and corrosive that its use ought to be restricted by law. On the other hand, some surgeons are abusing their best friend, because by absorption from the neighbourhood of wounds dressed with it antiseptically, poisonous symptoms—vomiting, severe collapse, and the discharge of dirty, dark-green urine—occasionally ensue.

We are not much concerned with the outcry raised a short time back by Mr. Wanklyn, because the length of time during which carbolic acid has held its own as a disinfectant is a sufficient proof that it has a real value, without referring to the exact experiments which have been made by various reliable authorities on this point. There is no doubt whatever that carbolic acid is a poison and a corrosive, but other substances in common use are one or both of these—for example, sulphuric acid, with which every housemaid and cook cleans copper articles; salts of sorrel, with which the housewife removes her ink-stains; and, not to prolong the list, Burnett's disinfecting fluid, which is a solution of chloride of zinc. It is certain also that people have been poisoned by taking carbolic acid in mistake for harmless liquids, and more than one case has been quite recently reported; but is their number large, considering the widespread use of the acid as a disinfectant? Its peculiar smell will, we believe, prevent more than occasional accidents due to hastiness, or, like the late

Malta poisoning case, to gross and unpardonable carelessness. The dangers of carbolic acid, as far as the public are concerned, may, we suggest, be further diminished, if not entirely removed, by colouring the commercial acid *blue*. At present it has a faint pink tinge, which could easily be concealed. The advantage of blue over green or red, and especially the latter, is that there are no blue medicines, and no blue wines or spirits; whereas there are one or two green medicines, and many are intentionally coloured red, while there are plenty of red wines, and one, if not more, green liqueurs. It may be objected to this suggestion that blue carbolic acid would injure clothes, etc., washed in it; but no doubt some such indifferent blue might be used as washerwomen already employ, and which is quite harmless. For sewage or closet disinfection the colour of the acid, of course, makes no difference.

So much for the general indictment against carbolic acid—a body which has probably saved, and is saving every day, more human lives than any other drugs, except perhaps quinine and opium.

Let us now turn to the other part of the subject, to which, of course, the statement just made refers—the use of carbolic acid in antiseptic surgery. Are its ill-effects here so great as to counterbalance its good ones? In some cases certainly yes, as is proved, without going farther, by the attack of Professor Küster and others on carbolic acid at the last Congress of German Surgeons at Berlin. Possibly the slow progress which antiseptic surgery has yet made in this country has something to do with our hearing fewer accusations against the acid here than we do from Germany, where its reception has been enthusiastic to a degree which must be very pleasing to Professor Lister. Perhaps, also, the greater use in Germany of jute and other bandages soaked in aqueous carbolic acid solution has made cases of poisoning by it there more frequent.

Anyhow, the results of the study of "carbolic acid intoxication," as it is called, deserve our attention; and we propose here to refer especially to the recent papers of Dr. Langenbuch, of the Lazarus Hospital, Berlin,(a) and of Dr. Sonnenburg,(b) on the subject.

Both these writers agree that the dangers of carbolic acid are chiefly seen in children and delicate women. Healthy adults mainly suffer from nausea, vomiting, and headache; while children get severe collapse, with subnormal temperatures of 36° to 34° Cent., scarcely perceptible pulse, pallor and cold sweat, and which may be preceded by a rise of temperature to 39° Cent., with restlessness and excitement. This condition may end in death, as in a case of Dr. Langenbuch's, where a girl of five years, who had had an abscess connected with the hip-joint opened and dressed antiseptically, died within forty-eight hours of undoubted carbolic acid collapse. Hence it is just in this class of cases that it is of importance to be able to find out early whether carbolic acid poisoning is setting in or not; and the researches of Baumann and Herter (*Zeitschrift für Phys. Chemie.*, i.) have shown that, *pari passu* with its onset, the salts of sulphuric acid disappear from the urine, until when the poisonous symptoms reach their height not a trace of them is present. At the same time the quantity of associated sulphuric acid (*gepaarte Schwefelsaüre*) is considerably increased. To detect the diminution of sulphates in the urine it is only necessary to remove any albumen present by boiling, to acidify with acetic acid, and add chloride of barium in excess. This reagent gives a milky cloud of sulphate of barium in the presence of sulphates, but a mere haze or no alteration at all if there is carbolic acid poisoning. Baumann has further shown that if sulphate of soda is internally administered to an animal whose system contains carbolic acid a harmless phenol-sulphuric acid is produced, so that that salt or any other soluble sulphate is a direct chemical antidote to carbolic acid. Sonnenburg further finds by experiments on men that not only do the symptoms of carbolic acid poisoning disappear more quickly if sulphate of soda is administered, but also that if this salt is at once given when the urine becomes dark-coloured, it exerts such an influence in restraining the further outbreak of poisonous symptoms that it is possible, unless there is great individual sensitiveness to carbolic acid, to continue the dressing as before. No doubt, however, it is better to manage the dressing so that there shall be no carbolic poisoning, and Dr. Langenbuch suggests the following measures which he has himself tested for doing this. When dealing with children and delicate women he avoids much previous disinfection of the skin by rubbing and brushing, and trusts to the spray during the operation for disinfection. He then wraps the skin of the parts round the field of operation in guttapercha tissue which has previously lain in 5 per cent. carbolic solution, and been carefully freed from excess of acid just before use by washing in 1 per cent. aqueous carbolic acid. The tissue adapts itself closely to the skin, and is perfectly free from irritating properties; hence it may be allowed to remain during the whole treatment, its object being to protect as much of the skin as possible from contact with the carbolic acid of the dressing. This dressing consists first of several layers of cotton-wool, and then of pieces of jute, both first disinfected in 5 per cent., and thoroughly washed out in 1 per cent. carbolic solution before using. The whole is fixed with gauze bandages wetted with 2 per cent. solution, and an elastic and very loosely drawn antiseptic bandage goes over all. From time to time the whole dressing is moderately moistened with carbolic solution, and it is kept wrapped up in a large indiarubber cloth.

Since the adoption of this modified method, Dr. Langenbuch states that "the *entente cordiale* between himself and carbolic acid has been completely restored." The danger with aqueous solutions of carbolic acid appears to arise more from absorption through the skin, especially by way of the sweat ducts, than through the surface of the wound, which is probably protected by the coagulation of serum-albumen by the acid. Possibly by soaking the dressings in carbolic oil, as Mr. Howse has long done at Guy's Hospital,(c) we may obviate the unpleasant consequences attending the use of watery solutions. We all know that the skin and the system at large will tolerate a 10 per cent. carbolic oil even over a tolerably wide surface, so that probably the acid does not permeate the skin so freely in this form. In any case the observations of Langenbuch, Baumann, and Sonnenburg are very interesting and instructive.

(a) "Klinischer Beitrag zur Lehre von der Carbol-intoxication," *Berliner Klin. Woch.*, No. 28, 1878.
(b) "Zur Diagnose und Therapie der Carbol-intoxication," *Deutsche Zeit. für Chir.*, IX., 356.

TOTAL EXTIRPATION OF THE UTERUS.

Recently, Professor Freund of Breslau has performed this operation in two cases of carcinoma, on patients whose ages were sixty-two and fifty years respectively, and his method is described at full length by himself in *Volkmann's Sammlung Klinischer Vorträge*, No. 133, and in the *Centralblatt für Gynäkologie*, 1878, No. 12; and the details of his second case, to which we shall here chiefly refer, are given by his assistant, Dr. Fränkel, in the *Berliner Klinische Wochenschrift*, No. 31, 1878. Both operations were successful, although long and tedious; the second lasted two hours and a half. The antiseptic method was strictly followed, except

(c) *Guy's Hospital Reports*, 1878, page 270.

that the spray was not allowed to enter the abdominal cavity. Dr. Fränkel, however, states that if a half per cent. spray instead of the usual two per cent. is used, it answers equally well, and does not irritate the peritoneum, besides being much pleasanter to the operator's hands. The following is an outline of the method adopted, but we do not pretend to enter into such details as must be known by anyone who attempts the operation for the first time. Previous performance of all its steps on the dead body is essential. The patient is prepared by a course of warm baths, a special nutritive and highly digestible dietary, and a trustworthy aperient, which is given twelve hours before the operation. The uterus is disinfected at the time of the operation with 10 per cent. carbolic acid, and, the patient lying with her head lower than her pelvis, an incision is made in the linea alba, a ligature is passed through the peritoneum of the anterior part of the pelvis to prevent its collapse, and the intestines filling the pelvis and covering the uterus are raised, pulled upwards, and held wrapped in a soft linen cloth soaked in warm carbolic acid solution until the operation is finished. This usage has no ill effect on the bowel, and Dr. Fränkel remarks that at the end of the second operation it was not in any way altered in appearance. To control the movements of the fundus uteri a thread is passed through it and held by an assistant. The broad ligaments of either side are now ligatured in three portions. "The upper ligature transfixes the Fallopian tube and the ligamentum ovarii; the middle one passes through the ligamentum ovarii side by side with the upper ligature, and returns through the round ligament; and the lower pierces the round ligament, and is carried twice through the vaginal wall—first through the antero-lateral part of the vaginal roof into the vagina, and then back through the postero-lateral part of the vaginal *cul-de-sac* behind the base of the lateral ligament into Douglas's pouch." The uterus is then removed through the roof of the true pelvis, the incision commencing in front, "two centimetres above the limits of the bladder, as marked by the point of a male catheter in that viscus, and running with a bend from the lower ligatures up to the broad ligaments, and then to the back of the uterus, two to three centimetres above the deepest point of the pouch of Douglas." In the second operation the bleeding from a few small branches of the right uterine and vaginal arteries was difficult to check, and nearly three-quarters of an hour were consumed in doing it. For future operations Professor Freund has devised an improved serrefin to control the vessels.

After drawing the ends of the ligatures into the vagina, the peritoneal opening is closed, and the abdominal incision, after replacement of the intestines, is brought together in the usual way; a firm antiseptic bandage is applied, and all the precautions usual after ovariotomy observed.

In the second case there was *absolutely no* after-reaction, and the highest temperature reached was 38·2° Cent. (100·7° Fahr.) on the second day, while the pulse never exceeded 84. The patient left her bed on the fourteenth day, and she is now, like the first patient whose uterus Professor Freund removed, fatter than previously, and able to work hard *in the fields*.

Thus far, thanks probably to Lister's method, the new attempts at removal of the whole uterus have perfectly succeeded. Whether the cancer will relapse or not, can, as Professor Freund says, only be decided "after a year and a day." The operation appears not to be nearly so complicated or severe as many cases of ovariotomy, and it is suited to all cases of cancer of the neck and body of the uterus, provided the "anterior part of the vaginal *cul-de-sac* (*das vordere Scheidengewölbe*) is completely healthy." Dr. Fränkel further believes that by its means we shall safely remove "malignant tumours of the fundus—sarcomata and cancers—and subserous and interstitial fibroids." He also believes that cases of irrepressible hæmorrhage due to uterine fibroids which cannot be enucleated will be better cured by total extirpation of the womb than by Hegar's plan of castration. In conclusion we can only recommend Professor Freund's experiences to the notice of our English colleagues, and say "Go thou and do likewise."

REPORT OF THE REGISTRAR-GENERAL FOR THE YEAR 1876.

The thirty-ninth annual Report of the Registrar-General for the year 1876 contains matter which is above the average in general interest. The Report opens with a brief account of the registered additions to the population of this country since July 1, 1837, when civil registration began. Looking back from the first complete year of registration to the last, the annual births were 463,787 in 1838, and 887,968 in 1876; and the new births actually recorded on the national registers from July 1, 1837, were 26,129,906. There were in the first year 30·3 births registered to every 1000 inhabitants; in the last year 36·6; and the Registrar-General is of opinion that the actual birth-rate of living children was 36 per 1000 during the thirty-nine years and a half of civil registration. At this rate, besides the number registered, 1,441,603 births must have remained unregistered, or about five in each 100. The population of the United Kingdom increased in the thirty-nine years 1837-76 at the rate of 29 per cent., and in the last ten years at the rate of 10 per cent. In referring to the increase of the capital of the United Kingdom, the Report gives some very interesting statistics as to the value of labour, but it also points out the advantages of health and long life. "The longer men live," it says, "and the stronger they are, the more work they can do. Epidemic diseases, in rendering life insecure, jeopardise wages, and as these diseases are most fatal in cities whither the people (to secure all the advantages of the division of labour) are always congregating, it is to increased sanitary precautions that we must look for preserving and increasing the economic value of the population." And here the utility of the Registrar-General's Department is instanced by the fact that in 1848-49, during the cholera epidemic in England and Wales, which proved fatal to 53,000 persons, its ravages in every corner of the kingdom were described, the conditions of its diffusions and fatality were brought to light, so that the further investigations of the slighter epidemics of 1854 and 1866 proved that this disease is, to some extent, under the control of science—at least, as far as this country is concerned. The mean lifetime by the English Life Table is 40·86 years; by the Healthy Life Table it is 49·0 years, which is attainable in every well-organised State. "It is fair to assume," the Report goes on to say, "that if a fifth part be added to the mean lifetime, at least a fifth part will be added to the worth of a living and labouring population, and upon this estimate £1,050,000,000 will be added to the economic value of the population of the kingdom."

In the year under notice the meteorological conditions were generally more favourable to health. During the preceding year, 1875, the mortality had been high (22·8 per 1000 of population); but the winter had been unusually severe, and cold winds with extremes of temperature had proved very fatal to infants and to elderly people. It must be noted that in 1876 there were unusual and frequent falls of snow in the first four months of the year; but the weather was milder, and the variations in the temperature, though frequent, were not so sudden. Although the deaths from small-pox and measles were more numerous than in the preceding year, it cannot be said that any epidemic was un-

usually prevalent, and the number of deaths registered was 510,315, out of an estimated population of 24,244,010; thus, the mortality was at the rate of 21·0 per 1000. This is the lowest death-rate during the last twenty years, and, with three exceptions, the lowest on record. Compared with the mean annual rates of mortality in the five preceding years, there was a reduction in the death-rate in 1876 in the town districts of 5 per cent., while the reduction in the rural registration districts was only 3·6 per cent. The death-rate in twelve counties was greater than that of the whole of England. As usual, Lancashire heads the lists of these; then come the West Riding of York, Nottinghamshire, Staffordshire, Leicestershire, Derbyshire, North Wales, Cheshire, Northumberland, Cumberland, and Warwickshire. The mortality in the remaining counties was below that of England, and ranged from 16·2 in the extra-metropolitan part of Surrey to 20·9 in Durham. Although the rates of infant mortality are still excessively high, the Report remarks that it is gratifying to observe an improvement in the returns for the year 1876, compared with the average in the five years 1870-74, for many towns; thus, the proportion fell in Liverpool from 239 per 1000 to 208, in Leicester from 226 to 200, in Bradford from 202 to 174, in Newcastle from 193 to 167, in Leeds from 205 to 180, in Sunderland from 176 to 152, and in Manchester from 202 to 180. The population of the United Kingdom is now estimated to have reached 33,000,000 (or only about 4,000,000 less than the enumerated population of France), 73 per cent. of which belong to England and Wales, 11 per cent. to Scotland, and 16 per cent. to Ireland. It may not be generally known that, by Act of Parliament, commanding officers of British ships not in her Majesty's service, and commanding officers of foreign vessels trading to or from any port of the United Kingdom, are compelled, under penalty, to transmit returns of all births and deaths occurring on board to the Registrar-General of Shipping and Seamen, who forwards copies to the Registrar-General; commanding officers of her Majesty's ships forward their returns direct to the office of the latter. These births and deaths are entered in a book kept for the purpose, called the Marine Register Book. The numbers recorded in it for the year 1876 were 469 births and 4208 deaths; and 364 births and 738 deaths (including three of soldiers, marines, or seamen from the Royal Navy) occurred among *passengers* on board merchant vessels at sea. In the ten years 1866-75, 27,119 lives were reported as lost in the merchant service by drowning, 16,588 by wreck, and 10,531 by accident; the average annual number drowned in those years was 2712, or 13·6 per 1000 strength. The proportionate number lost by wreck was 8·3, and by accident 5·3 per 1000.

It must be universally admitted that these Reports of the Registrar-General are most useful for reference, and he himself asserts that registration is now more complete than it ever was, and certainly more accurate, especially in the case of births; indeed, the birth-register is of so much use to the child all through life, that, in the Registrar-General's opinion, the neglect of any parent to obtain it is simply criminal.

THE WEEK.

TOPICS OF THE DAY.

We can at last announce that the movement for establishing hospitals for paying patients has now attained an assured position. In accordance with the decision arrived at by the influential meeting held at the Mansion House on June 27, 1877, under the presidency of the then Lord Mayor, an association has been duly incorporated by the Board of Trade to carry out the purposes declared to be desirable in the interests of the public. The Provisional Committee, appointed at the meeting above referred to, have considered it expedient to secure permanent offices (at 246, Regent-street), and to take steps for opening the first home hospital with as little delay as possible; and, matters having progressed so far, at a recent meeting of the Provisional Committee it was proposed by Sir Rutherford Alcock, K.C.B., and seconded by Dr. Quain, F.R.S.—"That the most grateful acknowledgments of the governors and members of the Home Hospitals Association are due, and are hereby given, to the late Lord Mayor, Sir Thomas White, and to the present Lord Mayor, the Right Hon. Thomas S. Owden, F.R.G.S., for the great sympathy they have extended to the scheme, and for the valuable assistance they have rendered in placing the resources of the Mansion House at the disposal of the Provisional Committee." The resolution was supported by Mr. Henry C. Burdett, and was unanimously adopted.

The following is reported from Connecticut by the New Haven *Palladium*:—"Miss Lucy Osborne, whose scalp, right ear, and part of the right cheek, were torn off in September, 1874, by machinery in which her hair caught, and who has since been at a New York hospital, is now at home. A new scalp has grown upon her head by the grafting thereon of minute bits of skin. The pieces were contributed from the arms of the hospital surgeons. The total number of pieces used in this operation was 12,000. One of the surgeons contributed from his person 1202 pieces, and another gave 865. The appearance of the scalp now is similar to that of a healed wound; of course there can be no growth of hair thereon. The eyes still present a slightly drawn appearance. The wounds of the cheek and ear have been neatly dressed, the former leaving scarcely a scar. In the first of the grafting process, bits of skin the size of nickel pieces were employed, but not with good success, and at the suggestion of an English surgeon much smaller pieces were substituted, and with excellent results. Miss Osborne is now twenty-two years old."

In despair of arriving at a satisfactory conclusion themselves, the Kensington Guardians at a recent meeting decided to refer the whole correspondence received by them relating to the case of the Rev. H. J. Dodwell, to the Lunacy Commissioners for an opinion. On the one hand, the Kensington authorities have received a communication from the Home Secretary, stating that the result of the medical inquiry into the mental condition of the Rev. H. J. Dodwell, at present confined in Broadmoor Criminal Lunatic Asylum in consequence of his attempt on the life of the Master of the Rolls, and who is chargeable as a pauper lunatic to the parish of Kensington, is such as to satisfy Mr. Cross that the reverend gentleman is of unsound mind, and unfit to be released from restraint. On the other hand, two letters have been written to the Guardians by the alleged lunatic himself, in which he emphatically asserts that he is not insane, but that he is being cruelly ill-treated in the Asylum, and that such treatment is calculated to drive him into insanity. He therefore prays the Guardians to exercise their powers, and send a deputation from their body, or a properly qualified medical man, to see if he is, as stated, really insane. It is by no means uncommon to lunatics to deny with emphasis and pertinacity that they are insane; and the Guardians might very well rest on the opinion—that of Drs. Maudsley and Blandford—which has satisfied Mr. Cross.

The adjourned inquest on the bodies of Henry Mason and Emma Wiesh, who had died from eating bread-pudding obtained at the Albert Dining Rooms, Barnsley, was resumed at that town last week. Opinions had been obtained from Mr. Meymott Tidy, London; Dr. Wallace, Analyst for Glasgow; Dr. Cameron, Analytical Officer for Dublin; and others. Eventually the jury decided that the deaths had been caused

by eating unwholesome pudding, but found that there was no evidence to show how it became unwholesome.

The Corporation of Cardiff has recently decided to purchase the works of the Cardiff Water Company for a sum of £300,000. The amount to be paid is calculated to be equal to twenty-five years' surplus revenue.

The Metropolitan Board of Works seems to feel overwhelmed by the labour and responsibility of carrying out the important duties entrusted to it; at least, this is the view conveyed by what took place at the meeting held last week. A deputation from the Greenwich District Board was introduced for the purpose of presenting a memorial praying for the adoption of a scheme under the Artisans' Dwellings' Improvement Act for dealing with an area known as Hughes' Field, Deptford. In considering the proposal, Mr. Selway moved the adoption of a report from the Works and General Purposes Committee, stating that they had considered as to the course to be followed with regard to the official representations from medical officers under the Improvement Act of 1875, upon which no action had as yet been taken; that they had instructed the engineer to prepare the particulars for draft schemes in respect to two areas in the parishes of St. Giles-in-the-Fields and All Saints, Poplar; and that, having regard to the large amount of work in hand in connexion with the eleven schemes for which Acts of Parliament had been obtained, it was not, in their opinion, desirable for the present to take further steps under the Act. Mr. Richardson moved, as an amendment, that the Deptford scheme be included with the St. Giles' and Poplar schemes, stating that the houses were so bad that he did not believe any member of the Board would shelter a horse in them, whilst their sanitary condition was worse than that of any other part of the town. The amendment was put and lost, it being considered undesirable to turn out more artisans and labourers before adequate accommodation could be provided for them.

A paragraph in the *Central Press* states that the London Cremation Society are fitting up a cremating apparatus "Gerini's Cremator," and in a short time it will be in working order. It will probably be fixed upon a plot of ground contiguous to Woking Convict Prison, Surrey. The Council of the London Cremation Society are apparently about to test the legality of the proceeding, as they consider that there is no statute existing against the practice of burning the dead in this country.

The Town Council of Shrewsbury are divided in opinion on the question of Liverpool obtaining its water-supply from the river Vyrniew. At a recent meeting of the body, several members spoke adversely to the scheme and in favour of supporting Worcester and other towns in opposing it; while others thought that Liverpool had taken a right course in going to the mountain district for a water-supply. Ultimately the matter was referred to the Water Committee to watch over, and report upon if necessary.

At the inaugural ceremony in connexion with the recent opening of the winter session of the University of Durham College of Medicine, Newcastle-on-Tyne, Earl Percy, M.P., in addressing the meeting, observed that he wished the advantages which this institution afforded were only more widely known than they at present appeared to be, and in concluding his address his Lordship spoke as follows:—"In a word (and this was what he wished to impress upon them), the physician must declare himself to be the enemy of vice as well as of disease. He must have a hatred of sin which had entailed sickness and death upon the race, and he must have a firm resolution to combat the enemy by every means which God had placed at his disposal. He might say, if any lower platform than this was assumed, it was a degrading one. The medical man who regarded his vocation as a mere trade, and the exercise of his abilities only as a means of making money, or a display of that talent which the artificer was proud to evince in connexion with his art—if he did this, he made terms with the enemy, and made sickness his employer. He might almost say that he owed the devil a debt for finding him the means of earning a livelihood."

After encountering many difficulties and much opposition, the Corporation of Windsor have at length completed their drainage scheme, and the sewage of the town is no longer discharged into the Thames. As we have before explained, the works are situate at the Ham, Old Windsor, near the Castle Sewage Farm. Hill's system of precipitation has been selected, and it is intended to discharge the effluent water into the river, as it is confidently asserted that it will be sufficiently pure to meet the requirements of the Thames Conservators. The Corporation are under agreement to purchase ten acres of land adjoining the works, and upon obtaining possession of it they will use it for the purpose of filtration, which will add another degree of purity to the water and reduce the expenditure for chemicals. The works, which have been carried out under the direction of Mr. Hawkesley, C.E., have cost about £40,000, the money having been borrowed from the Public Works Loan Commissioners, repayable in thirty years. The principal and interest will amount, it is calculated, to a rate of about 10d. in the pound.

The *London Gazette* of the 8th inst. announced that her Majesty had been pleased to appoint Joseph Lister, Esq., M.B., F.R.C.S., one of her Majesty's Surgeons Extraordinary. It will be remembered that when Mr. Lister accepted the invitation to leave Edinburgh and join the surgical staff of King's College, London, he had to resign the appointment of Surgeon in Ordinary to her Majesty in Scotland. It was to be expected that he would therefore, at the earliest opportunity, receive an appointment in her Majesty's medical household in England, and he accordingly naturally succeeds to the vacancy created by the death of the late Mr. John Hilton.

THE PATHOLOGICAL SOCIETY.

The session of this Society was opened on Tuesday evening with a very full meeting. The President, Dr. Murchison, in laying upon the table the first copy of the new volume of *Transactions*, expressed a hope that the present session might prove to be as successful as the last, which was represented by proceedings of so much value. A number of interesting specimens were then exhibited, and several discussions upon questions of special pathology were raised and sustained with spirit. Dr. Peacock exhibited an example of a rare cardiac lesion in a specimen of stenosis of the mouth of the pulmonary artery, which raised the question of the congenital nature of some cases of stenosis of the mitral orifice. Dr. Edwards, of Croydon, brought forward a specimen of osteo-myeloid tumour of the upper jaw. Drs. Tilbury and Charles Fox then communicated an exhaustive paper, illustrated by numerous microscopical specimens, on the minute anatomy and pathology of the disease of the skin known as molluscum contagiosum. Dr. Tilbury Fox also introduced a living specimen, which gave rise to the chief discussion of the evening. This was a remarkable condition of the integuments of the nates and thigh in a young man. On a nævoid base there appeared a warty-like hypertrophy of the skin, which was further peculiar in presenting vesicular or cystic elevations. Dr. Fox, who had watched some of the patches of disease from the first to the last stages of their development, and had made a careful microscopical examination of excised portions, described the

vesicular elevations of the skin as due to dilatation of the lymphatic structures, and proposed to call the condition "lymphangiectodes." Mr. Bryant and Mr. Hutchinson, on the contrary, regarded the condition as an example of warty cystic degeneration of "a nævus"; and Mr. Bryant contended that the vesicles or sinuses were dilated veins. Dr. Thin offered a rational explanation of the appearances by suggesting that the "vesicular" structures were dilated lymphatic spaces filled with the products of exudation from distended veins. Mr. Butlin having next read the sequel of a peculiar case of sarcoma, Dr. Thin proceeded to give an elaborate account of fresh researches on the histology of rodent ulcer. The most important conclusion at which Dr. Thin has arrived is, that rodent ulcer is anatomically as well as clinically a different disease from epithelioma: it is probably an adenoma of the sweat-glands. It was gratifying to find on the first evening of the session, when the specimens for exhibition must have been numerous and valuable, that there was no indication of any desire on the part of the office-bearers or members to prolong the meeting beyond the regular time. Last session the ordinary hour and a half was on several occasions extended to two hours; and one night the President did not leave the chair till a quarter to eleven! The frequent repetition of this proceeding was, to say the least of it, most unbusinesslike; and the result was anything but successful. The Society suffers and the speakers suffer, for it is impossible to give a satisfactory report of proceedings thus protracted. And the reports published in the journals are the only records of what is often the most important part of the Society's proceedings. An hour and a half of morbid anatomy is quite enough at any time, and more than enough at the end of a long day in the wards, in the out-patient room, or very likely in the post-mortem theatre itself. We trust that the President may succeed this year in curtailing the lengthy statements of cases read by some of the exhibitors; and that he will continue, as before, to set his face against the details of operations which certain of the surgical members dexterously seek to introduce whenever they show a specimen of tumour. The next meeting of the Society will be on November 5.

DEATH FROM CHLOROFORM IN DUBLIN.

An inquest was held at the Whitworth Hospital, Drumcondra, Dublin, on Wednesday, October 9, on the body of a married woman, thirty-eight years of age, who had died two days previously at the Hospital from the effects of chloroform administered during a surgical operation. The case was one of dislocation of both bones of the forearm of some weeks standing. Dr. Foy, Surgeon to the Hospital, having tried Sir Astley Cooper's method of reduction unsuccessfully, and having failed in all ordinary efforts to reduce the luxation, determined to perform the operation under chloroform. At Dr. Foy's request, and with the full consent of the patient, chloroform was administered by Dr. Henry Kennedy, Physician to the Hospital, who first carefully examined her heart and lungs. Dr. Kennedy administered the anæsthetic according to Sir James Simpson's method. The reflex irritability of the conjunctivæ ceased in eight minutes. There was no stertorous breathing. Dr. Foy then operated. The period of time occupied in the operation was about five minutes. The woman showed symptoms of vomiting. She was placed on her left side, but vomiting did not ensue. As she did not promptly recover from the effects of chloroform, Dr. Foy slapped her on the face with cold water, had all articles of dress loosened, and adopted Sylvester's method of artificial respiration; administered ammonia vapour and Hoffman's ether, and did everything else necessary, artificial respiration being continued for upwards of an hour, but without avail. Dr. James Edward Kelley, Surgeon to Jervis-street Hospital, made a post-mortem examination at the coroner's request. The heart was "flabby," and the wall of the right ventricle was attenuated. He attributed death to the inability of a weak heart to carry on the circulation through the lungs. The jury found the following verdict:— "That the deceased, Kate Devlin, aged thirty-eight years, died on Monday, October 7, while chloroform was being administered to her; and we find that there was no blame attachable to the medical men who were engaged in the administration of the said chloroform on the occasion."

OBSERVATIONS ON A DECAPITATED CRIMINAL.

Dr. N. Roritz, a resident at Nangoja, Japan, has described an execution with the sword which he was specially allowed to witness there (*Wiener Med. Wochenschrift*, No. 25, 1878), and some of the points to which he directed his attention are worth recording in a medico-legal point of view. At the moment the head was severed from the body, the branches of the carotid arteries on either side, which were severed above their bifurcation, spirted the blood, without visible pulsation, 2·60 metres, or nearly eight feet. As soon, however, as the main body of the blood had been ejected, the pulsation became visible, and it continued even until only drops of blood issued, that is, for eleven minutes and a half. The heart's sounds could be detected by means of the stethoscope for nine minutes. During even the tenth minute, forty-two pulsations of the carotids could be counted by all present. Immediately after the execution, rattling inspiratory sounds were distinctly heard; and they persisted, gradually decreasing in strength, for five minutes and half. The expiratory draught could still be felt on the moistened skin of Dr. Roritz's arm until the end of the sixth minute. The contents of the stomach were discharged at intervals from the moment of decapitation for about five minutes, the last portion being, as it were, squeezed out as if by a steady peristaltic movement, rather than forcibly ejected. All the muscles of the neck connected with the trunk contracted strongly several times, and twitchings of them were observed for two minutes and a half. The other trunk muscles were not seen to contract. The head could not be examined for twelve minutes, as it had to be washed and exhibited to the judge. It was then cold and pale, and the eyelids were half closed. The corneæ were opaque from old disease, and the reflex irritability of the iris could not be tested. Those parts, however, of the larynx which remained in connexion with the head continued to tremble and twitch for quite twenty-three minutes; and it seemed as if irritation of the spinal cord augmented them. There was no doubt that the direct contact of a stick with the larynx made the muscles contract more strongly. A post-mortem examination of the body was refused by the criminal's relatives.

THE NEW COUNTY HOSPITAL, LINCOLN.

On the 1st inst., the new County Hospital at Lincoln was opened with the usual ceremonial proceedings, and there seemed amongst those present only one opinion as to the thorough suitableness of the building for the purposes to which it is to be devoted. The new Hospital is built on an admirable site of about eight acres, a part of the hill range on which the Minster stands. It faces nearly due south, has a light soil and a rock foundation, and slopes gently from north to south, thus affording excellent facilities for the requisite sanitary arrangements. The group of buildings of which the institution consists comprises a central or administrative block, and two pavilions, all being connected by corridors or covered ways over ten feet wide. The back portions of the wings or pavilions are not as yet built to their complete design, but they can be added to

at any time to meet the requirements of the Hospital, without interfering with the parts already finished, or requiring any enlargement or alteration of the administrative offices. As at present constructed the Hospital provides accommodation for about 110 in-patients, but when the pavilions are completed there will be ward accommodation for about 180 patients. The dimensions of the wards and the general arrangements and appliances appear to be extremely good. The buildings were designed by Mr. Alexander Graham, of London, who deserves great credit and commendation for the result achieved; and Lincoln may be congratulated upon at length possessing a Hospital of which any county might justly feel proud. The outlay has been about £30,000, but the public has responded so liberally to the appeals of the collectors, that it is hoped the new building will have opened its doors entirely free of debt.

A DEATH ERRONEOUSLY ATTRIBUTED TO CHLORODYNE.

One of the Coroners of the County Dublin held an inquest on Thursday, October 10, at Harold's Cross, Dublin, on the body of a man aged twenty-seven years, who died on the night of the 8th inst., having been poisoned (as was alleged) by an overdose of chlorodyne. The widow of the deceased deposed that he had been in delicate health for some time, complaining of a cold on his chest, and that his saliva used to be tinged with blood. On Tuesday night he came home from business, and was coughing, and complained of a pain in his back. He could not sleep, and in consequence took a dose of chlorodyne in water. He then lay down, but in a few minutes was seized with a violent fit of coughing. He never spoke again. His wife lifted him to soothe his cough, but in a few moments he expired in her arms. Dr. Samuel Mitchell was summoned, but the man was dead when he arrived. He found the pupils dilated and immovable. When making an autopsy, Dr. Mitchell observed that the body was wasted, and blood was welling up from the thoracic cavity. His opinion was that death could be accounted for by internal hæmorrhage, probably from rupture of an aneurism of a vessel in the lungs. At first he had believed that death was due to an overdose of chlorodyne. The jury found the following verdict—"That the deceased, John West, came by his death suddenly on the night of the 8th inst. from pulmonary hæmorrhage."

THE LEEDS SCHOOL OF MEDICINE.

At the ceremony of opening the present winter session of the Leeds School of Medicine the introductory address was delivered by Dr. J. E. Eddison, Lecturer on Medicine, and Physician to the Leeds General Infirmary. Our limited space at this season prevents the insertion of a very eloquent and able exposition, in the course of which Dr. Eddison ridiculed the outcry which has recently been raised against the profession on the score of vivisection. Following the opening ceremony, the annual dinner took place in the evening at the Queen's Hotel, under the presidency of Dr. Eddison, the vice-chairs being occupied by Mr. T. P. Teale and Mr. Edward Atkinson.

THE ROYAL COLLEGE OF SURGEONS.

We are sorry to learn that one of the Board of Examiners in Anatomy and Physiology at the Royal College of Surgeons has been obliged, on account of ill-health, to resign his seat: it is said also that Mr. Savory retires from the Board of Examiners; and that there are consequently two vacancies to be filled up. Several of the medical schools, the staffs of which could supply perfectly competent examiners, are at present unrepresented on the Board, and it would be well if the Council could fill up the vacancies from those schools rather than from the schools already represented.

THE UNIVERSITY OF DUBLIN AND THE MEDICAL COUNCIL.

Dr. Apjohn, who has represented the University of Dublin in the General Medical Council since the creation of that body in 1875, has resigned his seat, and the Rev. Samuel Haughton, M.D., F.R.S., D.C.L., has been appointed to succeed him. Dr. Apjohn has been a quiet, working member, and as a steady worker, with a ripe acquaintance with the business and forms of the Council, he will be much missed; but the Council will certainly gain in debating power, positiveness, and combativeness by the accession of the active and energetic Medical Registrar of the School of Physic in Ireland.

MEETING OF THE GENERAL MEDICAL COUNCIL.

Held at their House, Oxford-street, W.

First Day—Thursday, October 17.

The Minutes of the last meeting having been confirmed, and the Rev. Samuel Haughton, M.D., introduced as the representative of the University of Dublin,

The President (Dr. Acland) proceeded to deliver his address. He said:—I greatly regret that I have been obliged to summon the Council for the third time this year, at a period which I fear is to some members inconvenient, and at a charge to our funds which we all must deplore. But no other course was open. Many communications have, it is true, been received by me from various quarters in regard to the subject of a meeting. Some were to the effect that a meeting was not required; some that it was necessary; some that, if convoked, it should be restricted to the consideration of the Dentists Act; and some that it should be at liberty to take up any subject within the scope of the Council's legal functions. It has been urged that the President has no power, even if it were desirable, to summon the Council for the purposes of the Dental Act; and that, if the Council had to meet for such a purpose, it must be called together by the Secretary of State for Home Affairs—who has, I venture to say, no function whatever in the matter. I should not advert to these different views of our duty were it not that, as the Council's responsibilities yearly increase, it is working out new precedents and usages. It appears incumbent on me, therefore, to state to you the view I take of the circumstances which have induced me to bring you together at this unusual period. They can be set forth very briefly. A Government Bill for the amendment of the Medical Act of 1858 was brought into the House of Lords early in the last session. After various important changes it passed that House. It was a Bill intended to meet all outstanding needs as regards the main duties assigned, or to be assigned, to the Medical Council of Education of the United Kingdom. It aimed at providing permanent principles for the future of national examination in medicine, for the education of midwives, for the education of dentists, for the just requirements of foreign and of colonial practitioners, besides sundry other details. The Council, which has discussed the subjects of the Bill in three consecutive sessions, is aware that there was no general consent up to the end of July as to the further changes which the Bill might require in the House of Commons. The Bill therefore was reluctantly withdrawn by the Government at the end of the session, after so much labour and care had been bestowed on it alike by the Government and yourselves. This result has not left the affairs of the Council as they were, nor as they had been left when Lord Ripon's Bill had been withdrawn under not dissimilar circumstances. A private Bill, confined to regulating the

education and registration of dentists, not being opposed, was passed. It assigns to this Council, as the larger Government Bill had done, duties as regards dentists which require nearly the same machinery as that for regulating the education and registration of medical practitioners. Opinions may and do differ as to whether it is to the advantage of the Council that new duties should come thus upon it, without completely remedying the defects in medical law which it has been so many years anxious to remove. But so it is. The outcome of the procedure of last session is, that the Legislature has imposed upon us the administration of the profession of dentists in Great Britain. We are required, without delay, to give the directions requisite for putting the Dentists Act in force. The Registrar has exercised great diligence in preparing everything for your judgment and your orders; and, acting under instruction of the Executive Committee, with the advice of the Solicitor of the Council, has already provisionally registered 900 persons who have satisfied the conditions of the Dentists Act. The business which the Council is specially required to consider under the Act relates, 1st, to the form and manner of registration; and 2nd, to the delegating of power to a committee, which has to be appointed under Clause 15 of the Dentists Act, or to the Executive Committee, by virtue of the provisions of the last part of Section IX. of the Medical Act of 1858. Orders once issued by the Council on these fundamental points, the detailed execution of the Act need not fall further on the full Council. The extent, indeed, to which it will do so rests with the pleasure of the Council, except as regards the actual order for the erasnre from the Dentists' Register of the name of a practitioner convicted of crime or guilty of disgraceful conduct. I should not have recapitulated these merely historical facts were it not that they opportunely relate to a motion of which notice has been given, that the meeting now take up the subject of the revision of the constitution of the Council. This subject has already been referred to the Executive Committee. The gravity of the duty imposed on that Committee does not seem less after the recital that has now been made. The functions of the Council are manifestly in a transitional state, and those members who have followed the new work imposed on it by the Dentists Act will probably, when they reflect on the future weight which must still, as time goes on, come upon the Medical Council of Great Britain, be the first to desire that a thorough and searching inquiry should be made under the order to make "a revision of the Council," as to what methods will increase its working power, diminish its expense, and give just influence to its authority. I wish I could on this occasion have passed the subject wholly by. I join with all those who have the interest and honour of British medicine at heart in the opinion that it is no light thing for us to tender advice to the Government as to what should be the constitution of a Council—whether the present constitution or some other—which, in the progressive state of human knowledge, of scientific thought, and of transitional education, is in future to sit in judgment on all of the universities of the land, and on all the institutions that have heretofore fostered and maintained the character of British medicine and surgery; to a body, moreover, to which are not seldom committed negotiations with the Government, and delicate questions relating to our medical brethren and the public, at home, in foreign countries, and in the colonies. If I were to venture on one observation as regards this duty of framing a report on the revision of the Council, it would be that, while the task of revision should be as speedily executed as is consistent with due deliberation and inquiry, it should, above all things, be thorough and complete, free from every prejudice, in a wholly national spirit, and such as, for years to come, to set the question thoroughly at rest. As I felt bound to allude to this question, so I am strongly tempted to enlarge upon it. But I forbear, as the subject is now in the hands of the Council, and any opinion on its merits would be wholly beside my province. Only one thing more, in conclusion, as regards this present meeting. Though it was clearly the legal duty of the President to summon this meeting for the consideration of the Dentists Act, it would as clearly be unconstitutional for him to attempt to impose limits on the will of the Council when once it has met. Whenever the Council has pronounced its will, it will be for us all to promote the fulfilment of its desires with as much speed as is consistent with success to its labours.

On the motion of Dr. Andrew Wood, the President's Address was ordered to be entered on the Minutes, and the Registrar having read the report on what had been done in regard to the registration of dentists, the Council proceeded to discuss the provisions of the Act.

FROM ABROAD.

Pott's Disease of the Spine.

At a meeting of the Medical Society of the State of New York (*New York Medical Record*, August 31), Dr. Schaffer read a paper upon this subject, in which he observed upon the rarity of the opportunities for making post-mortem examinations in the early stage of this disease. In fact, he had never seen a case of acute Pott's disease, and no one had described such. It is so typically chronic that it is always difficult to decide in each case exactly when the disease began. It may be divided into four stages—1, the prodromatous, which is indistinct and liable to escape attention; 2, the stage of pain, often described as the first stage, and usually preceded and accompanied by reflex spasms of the spinal muscles, due to irritation of the peripheral nerves; 3, the stage of deformity, due to the want of substance in the vertebræ and intervertebral bodies,—paralysis of the lower extremities has been classed among the symptoms of this stage; 4, the stage of abscess. Cases of Pott's disease may also be divided into suppurative and non-suppurative, the former occurring most frequently among children.

After reviewing the anatomy of the parts concerned in the disease, Dr. Schaffer observed that its most important symptoms were those which manifested themselves through the nervous system. He believed that he was the first who called attention to the fact that chronic disease of a joint might exist in any articular tissue but sparsely supplied with nerves, without producing any subjective symptoms. And the neural symptoms in Pott's disease are most important as indicating the bone as the primary lesion. The synovial membrane might be diseased for a long time before any symptoms would be developed, and the cartilages become diseased consequently on disease of the bone. Until the bone was involved, reflex muscular spasms did not appear; and reflex muscular spasms always indicate osteitis. Bone is a structure abundantly supplied with nerves, and when affected gives rise to neural symptoms—hence their importance. There is but little difference between this idiopathic spondylitis and idiopathic disease affecting any of the large joints.

With reference to treatment, Dr. Schaffer believed it to be impossible to apply continuous extension and counter-extension that could be maintained with any degree of success. He also believed that we have no assurance that the extension reached the bones. The change caused in the projection is owing to the effect produced upon the projection itself, is more apparent than real, and is due to the distensibility of the normal tissues and the obliteration of the compensatory curve. There is no actual lengthening of the column, except that permitted by the elastic ligaments. Moreover, lengthening out the column would be of no avail, because the space would not be filled by osseous matter, so

that the column would sink back again—relief of symptoms and curing the disease being two different things. Too much should not be expected from rapid improvement. The treatment by suspension and plaster dressing does not prevent motion at the points where the disease exists, and, although it might place the patient in a condition favourable to recovery, the result not infrequently was just the contrary. Dr. Schaffer had had considerable experience in the use of the plaster jacket and other methods of support, and he did not believe that any apparatus was capable of affording such uniformly good results as had been claimed for this. As a support it failed when the disease was above the seventh dorsal vertebra; and the bar running over the head, from which support was to be made when the disease was higher up, was inoperative as a means of extension, and ungainly to the sight when compared with the apparatus of Dr. Fayette Taylor. For disease above the seventh dorsal, Dr. Schaffer had discarded the plaster jacket; and in the treatment of disease when lower down (where disease is much more rare), sufficient support can be given by almost any apparatus. The objections to the plaster jacket are—the great weight of the dressing; the difficulties and dangers attending its application; the liability to produce chafing and excoriations, which may pass unrecognised until they become serious complications; the necessity of making suspension each time the apparatus is removed; and the great filth and the nidus which it affords to vermin. An antero-posterior support can be applied as early as the plaster, its advantages being ease of adjustment and removal and modification to suit the case, the concentration of support for the diseased portions of the spine through the medium of the transverse processes without interfering with the muscles of respiration, and its cleanliness. For those who can afford the steel apparatus there is no necessity for the plaster. The form of apparatus which Dr. Schaffer prefers is a combination of Taylor's brace and the gypsum dressing.

Dr. Louis Sayre observed that he differed essentially from the author of the paper as to the treatment of the disease. He had in his possession between seventy-five and a hundred braces which had been worn by patients in all its stages, and in all, when these were removed, the disease was still progressing; and in all the cases in which he had used the brace himself the deformity had steadily increased. It is true the patients had recovered, as they also would do when kept in a horizontal posture, and many of them without any treatment at all; but it was a recovery with deformity. So, also, recovery took place while wearing the brace, but the deformity steadily increased while under treatment. Dr. Sayre was of opinion that Pott's disease could be cured without deformity if gentle suspension and the plaster jacket were employed before deformity existed; and that, if deformity were present, it could be kept from increasing, and in many cases could be diminished, by the same means. The supposition that whatever repair had taken place was broken up every time the jacket was applied, or suspension made, was erroneous; and if chafing or excoriation is produced, it is due to an imprudent or improper application of the plaster dressing.

Nervous and Muscular Disorders in Chronic Alcoholism.

Professor W. H. Thomson recently delivered (*New York Medical Record*, September 7) a second lecture (see *Medical Times and Gazette*, August 31, page 257) on this subject at the University of the City of New York. Chronic alcoholism, he observed, is a very different morbid condition to acute, for not only may its worst results be found in patients who never had an attack of delirium tremens, or had even ever been thoroughly intoxicated, but the lesions accompanying each may contrast as widely as those of an acute pneumonia do with a fibroid phthisis. When the symptoms are of a nervous character, they often resemble so closely those of certain specific nervous diseases, that it is easy to be misled both as to the nature and treatment of the case. A practical point to be remembered is, that the majority of cases of nervous diseases caused by alcohol alone are curable. The prognosis is good compared with the same class of affections due to other causes, providing that we can find out in time that it is alcohol which is working the mischief, and can stop it. In hospital practice the statements of the patients with reference to the quantity of alcohol they take may be contradicted; but in private practice the statements of patients on this point are too readily received, and consequently the true cause of many obscure disorders is frequently overlooked. Chronic drinkers are characteristically deceitful in their statements about either the quantity or kind of their beverages; and one of the most mischievous kinds of drinking, that of constant tippling, may be carried on for years without the patient seeming either to others or to himself as a drunkard. In order, therefore, to recognise and test the influence of alcohol in the production of a particular nervous disorder, as loss of vision, paraplegia, etc., it is well to bear in mind some symptoms of chronic alcoholism, which may be observed or be elicited from the patient without his knowing what we are about.

"The hand of a drinker is often *sui generis*, large, fat, pulpy, with little or no grip; and, in distinction from a dropsical hand, often hot—differing also from ordinary œdema in that the swelling is on the palmar rather than the dorsal aspect. The appearance of the hand is also peculiar. The fingers are thickened throughout, without the depressions below the phalangeal articulations; and, if a ring is worn, it tightly constricts the finger. Even in those drinkers who are emaciated by alcohol, the hand, though thin also, is yet characteristically flabby and weak. The movements of the voluntary muscles in general present likewise characteristic features. One of the first, and ever afterwards constant, effects of the habitual use of alcohol is the development of slowness in muscular action. It requires a considerable exertion of the will to cause muscles long alcoholised to resemble their former selves. They act not so much like tired or wearied muscles, but like lazy ones, the indications being not that they are specially weakened or paralysed, but rather that some great inertia has to be overcome—a man, for instance, taking double the time he ought to rise from his chair. Real activity of any kind is incompatible with chronic drinking, and hence such persons are notoriously procrastinating and unreliable. But as the case progresses, true weakening developes, changing the symptoms from those of mere sluggishness into a general debility, characteristic, not of any definite disorder, but rather of old age. We might, indeed, correctly say that alcohol can induce old age as a disease, for in more than one case natural changes become diseases simply by occurring too soon. You have excellent illustrations of this fact if you note the gait of these middle-aged patients before you; their walk is neither ataxic nor paraplegic. A true paraplegic gait is shuffling, while the ataxic patient brings his heels down first and forcibly on the floor. But these men walk with an instinctive watch against stumbling, showing that carefulness in progression which belongs naturally to advanced age alone. But the reason is that these patients are positively afraid of falling, not because they are under the present influence of liquor, but because, with most cases of advanced chronic alcoholism, a sudden sensation of imminent danger of falling is a very frequent occurrence. This feeling is so peculiar, and at the same time its subjects are so unacquainted with its origin, that you can often detect the secret drinker by asking him if he is troubled with this particular symptom, which differs from true vertigo in being usually described as not accompanied by swimming or reeling, but rather as a sudden startling fear of dropping to the ground.

"To complete the external signs, whose significance we should take account of, whatever the patient may say, you will note a relaxed, congested uvula, accompanied by a chronic pharyngeal catarrh, producing in many cases a frequent husky cough without any but slight viscid expectoration. The conjunctivæ, if not congested, yet often have small beads of fat near the inner angle of the eye. The skin is soft and flabby, and on the abdomen of preternatural whiteness, where, too, it can be easily pinched up into folds, which are restored but slowly, owing to loss of normal elasticity. In the majority of instances, owing to gastric catarrh, the epigastrium is puffed out, and very often tender on pressure. But the most noteworthy change apparent on inspection is the increase of the curve of the abdomen below the umbilicus, best distinguished in thin persons, and due to a tendency of the intestines to sink down into the pelvis. This is one of the earliest symptoms of failing vitality, whether from age or otherwise, and is specially frequent in chronic drinkers. Sir James Paget speaks of these appearances of the skin and of the shape of the abdomen as rendering

the prognosis unfavourable for surgical operations, owing to the liability of such persons to succumb quickly to shock. Disturbed slumber, and an invariably unpleasant kind of dreaming, is so common among these patients that it is frequently their reason for first consulting you. In quite chronic cases, on dropping asleep they are prone to starting of the limbs, which in many cases is so constant as to be very annoying, and like the analogous starting of epileptics, where disease has followed injuries of the skull, may be indicative of cerebro-meningeal irritation, though it may occur also in cases of simple weakness of the spinal centres. Chronic drinkers never have good appetites. The most certain of all antidotes, or rather, I should say, the true opposite to alcohol, is food. In acute alcoholism there is no remedy which will compare in the treatment of delirium tremens with constant regulated doses of milk and lime-water. Nearly all cases of this affection are preceded by a total abstinence from food, sometimes for days together. On the other hand, they suffer the least, among those who habitually use stimulants, who take them only with their meals, because alcohol and its antidote are then taken together. I doubt if anyone is likely to become a drunkard if he never drinks except at meals, for generally the craving for drink may itself be stopped for some hours by taking food alone. As alcohol, however, is indulged in between meals, the sense of hunger grows weaker and weaker, and soon it is found that what seemed a fair appetite at the beginning of a meal does not last long enough to finish it, especially in the case of animal food. The breakfasts are particularly troublesome to dispose of, and hence the popularity of morning bitters to stimulate the appetite; but generally after awhile these lead to positive morning nausea and vomiting. The small amount of food which many of the votaries of Bacchus get along with is often as surprising as the starvation diet of some cases of hysteria."

With respect to treatment, Prof. Thompson observes—"I have seen apparently the gravest symptoms of nervous diseases gradually improve, and recovery, in great measure at least, take place, though sometimes not for many months, in the persons of old drinkers who had abandoned alcohol, when, if their symptoms had been due to other morbid processes, such improvement would have scarcely been possible. It is true that we can never tell before death to what extent the nervous tissues have been damaged by this poison; and, of course, I do not mean to intimate that portions of nervous tissue may not often be as irretrievably cirrhosed by alcohol as liver or kidney tissues so frequently are. But, nevertheless, whether owing to a greater degree of reparative power on the part of nerve-tissue, or to a less amount of direct irritation by alcohol than occurs in the case of the liver or kidney, I feel assured that loss of nerve-function can be oftener restored in these patients than would seem probable, when we consider the organic changes that may be present. The first requisite for this happy result of course is to take no more alcohol. There is no use of talking any further on this point. If the patient will not stop that, then let him go on to universal sclerosis. But we may materially aid the restoration, especially when mental as well as spinal functions are affected, by the persevering use of small doses of corrosive sublimate in conjunction with the nerve restoratives, cod-liver oil and phosphorus; for I have no question whatever that mercury exerts a positive remedial effect upon the sclerotic forms of degeneration. Nitrate of silver in quarter-grain doses, with the same of extract of belladonna, should be used as long as prudent, and then the oxide of zinc in three-grain doses ter die may be substituted for the silver, with better success than zinc shows in the treatment of any other nervous disease, its benefit in alcoholic muscular tissues being quite unmistakable.

"In conclusion, I may remark that there is one practical point to note as respects the great wasting of the voluntary muscles in chronic alcoholism. You can readily see that in every one of the patients before you the muscles of the arm scarcely rise in their beds with the most forcible contraction. Part of this atrophy may be simply an expression of the starvation of all the tissues from lack of food, partly also to their damaged stomachs and livers, and probably also to chronic self-poisoning from damaged excreting glands. But still, the general characters of the wasting so closely resemble the atrophy of muscles which occurs in certain nervous diseases, that the affection must, I think, be regarded as mainly secondary to the changes in the nervous system. You find in them an analogous condition to the disease called progressive muscular atrophy, where perfectly healthy bundles of muscular fibre run side by side with others in all stages of degeneration. Hence the restoration of muscles from alcoholic degeneration is very slow, and does not begin until some time after the disappearance of the nervous symptoms. This you should explain to your patients, in order to prevent them from having resort to gymnastic exercises and other forms of active muscular exertion commonly recommended for improving muscular power. The alcoholic tremor is greatly aggravated by the slightest overtaxing of the weakened muscles, and hence it is not safe to allow of any severe exertion until after the nervous symptoms have quite disappeared."

REVIEWS.

The Pathology of Pulmonary Consumption. Three Lectures by T. Henry Green, M.D., F.R.C.P., Physician to Charing-cross Hospital, and Assistant-Physician to the Hospital for Consumption and Diseases of the Chest, Brompton. Illustrated. London: H. Renshaw. Pp. 103.

The substance of the little volume before us originally appeared in these columns some years ago, and in their amended form were delivered at Brompton Hospital in the course of last year. The subject mainly handled, and handled most ably, is the Histology of Consumption, though, of course, other topics are dealt with. Thus the subjects embraced are as follows:—1. Tubercle and Acute Tuberculosis; 2. The Histological Changes met with in the Lungs in Phthisis; 3. The Pathology of Phthisis; 4. The Varieties of Phthisis; and 5. The Influence of Pathology upon the Treatment of Phthisis. Turning at once to the part which will most interest many of our readers, we find that Dr. Green tells us that these tubercles may be said to consist of three kinds of structure—(1) cellular elements accumulating within the alveoli, such as are met with in the so-called broncho- or catarrhal pneumonia; (2) a cellular infiltration and thickening of the alveolar walls; and (3) a reticulated tissue associated with large multi-nucleated branched cells. These three kinds of structure are combined in various proportions. Thus in certain comparatively rare forms the intra-alveolar elements seem most abundant, but in most the walls of the alveoli are also implicated. In the former there is an amount of granular material, which Dr. Green thinks is the product of some retrograde metamorphosis of the epithelium. More commonly the nodules are partly made up of the materials just mentioned, with thickened and cell-infiltrated walls. This the author looks upon as the most constant phenomenon in the pathological histology of phthisis. But in certain cases, where probably the disease is in a more advanced stage, the alveolar cavities often contain large multi-nucleated masses of protoplasm—the so-called giant cells. These so-called cells have come to occupy a place in the pathology of phthisis to which they are in all probability unentitled. Dr. Green says himself that they may be entirely absent in well-marked cases. Nevertheless, he is inclined to adopt the view advocated by Klein, that these (comparatively speaking) huge masses of protoplasm are either the produce of the fusion of several epithelial cells, or of the excessive development of one. Surely this is giving a wrong view of the characteristics of these bodies. The tendency of the pulmonary epithelial cells, early in the history of the new formation, as indicated by Dr. Green himself, is too plainly in an opposite direction—to decay and death, instead of taking on an activity altogether unknown to them in health. To call such masses "cells" is, besides, an abuse of the term. If any term could be applied to them, it would be that of cell-territory, for the so-called nuclei within them are much more like the cells best known to us, and are of a size and character more distinctly defined than are ordinary leucocytes. Much more probably these bodies are connected with the lymphoid structures, stimulated to overgrowth from various causes, which give rise to that seeming adenoid growth, such a constant feature in pulmonary or other variety of tubercle. In a certain way Dr. Green's views amount to this, but not quite. Thus, he holds that in the exceedingly acute process of tubercle-formation there is rapid cell-growth and speedy death. In that form

now under discussion there is more time given for the influence of the irritative process to have its due effect. New growths are hence slower in their formation, but they do not perish so readily. The main feature, he holds, in the production of this (comparatively speaking) low-growing new formation is the scrofulous taint. This taint acts in various ways—one of these being notably the proneness of the products of scrofulous inflammation to decay, but also by a kind of starvation, in part, at least, due to the non-development of bloodvessels in the new growth, but also to the strangling powers which the new growth possesses on bloodvessels already in existence.

We cannot follow Dr. Green through the whole of his treatise, short though it be, for every page shows that we have here the result of much work and much reflection. We can only heartily recommend it to our readers; it is not long, will be easily mastered, and to most it will give not only new ideas but material for the formation of more.

Notes on Physiology for the Use of Students preparing for Examination. By Henry Ashby, M.B., Physician to the General Hospital for Sick Children, Manchester; formerly Demonstrator of Anatomy and Physiology, Liverpool. London: Longmans. Pp. 238.

Of the multitude of guides and the like amiable conductors to medical knowledge this is the most recent, and seems good of its kind. It is well known that there is no royal road to learning, but such works have their uses, especially for revision; but woe betide the man that trusts solely in them: he leans upon a broken reed. As might, perhaps, have been expected from the composite nature of Mr. Ashby's former duties, the book contains almost as much anatomy as physiology.

Dr. John George Garson, L.R.C.S. Edin., has just been appointed Anatomical Assistant in the Museum of the Royal College of Surgeons, in the vacancy occasioned by the resignation of Mr. Walter Pye, of St. Mary's Hospital.

The Paris Faculty of Medicine.—The following are to be the subjects of the winter courses of lectures in 1878-79, commencing in November, the lectures being delivered three times a week. *Medical and Biological Physics,* Prof. Gavarret: General physics, electricity, acoustics, and the action of physical agents in the phenomena of life. *Medical Pathology,* Prof. Jaccoud: Diseases of the apparatus of innervation. *Anatomy,* Prof. Sappey: The apparatus of locomotion, circulation, and innervation. *General Pathology and Therapeutics,* Prof. Chauffard: General Characteristics and Classification of Acute Diseases; Semeiology of the Febrile Condition. *Medical and Biological Chemistry,* Prof. Wurtz: The Metalloids, the Chemical History of the Blood, and the Phenomena of Respiration. *Surgical Pathology,* Prof. Trélat: The Rectum, Genital Organs, and the Limbs. *Operations and Apparatus,* Prof. Le Fort: Therapeutics of the Diseases of Joints, Vessels, etc., and Special Operations on the Head, Eyes, and Face. *Histology,* Prof. Robin: The Cellular and Non-cellular Anatomical Elements and the Humours. *History of Medicine and Surgery,* Prof. Parrot: A Chronological Review of Medical Doctrines from Hippocrates to Harvey; and the History of the Heart and Circulation. *Clinical Medicine,* daily, by Profs. G. Sée at the Hotel Dieu, Laségue at the Pitié, Hardy at the Charité, and Potain at the Necker. *Clinical Lectures on Mental Pathology,* Prof. Ball. *Clinical Surgery,* daily, by Profs. Gosselin at the Charité, Richet at the Hotel Dieu, Broca at the Hopital des Cliniques, and Verneuil at the Pitié. *Clinical Midwifery,* daily, by Prof. Depaul at the Hopital des Cliniques. Supplementary courses of lectures to be given also on Practical Legal Medicine (by M. Brouardel), Diseases of Children, Ophthalmology, Syphilitic Diseases, Diseases of the Urinary Organs, and Diseases of the Skin. The following is the division of studies for the winter session:—First year, Medical Chemistry and Medical Physics and Anatomy. Second year, Anatomy, Histology, and Dissections. Third year, Anatomy, Histology, and Dissections, Operations, Internal and External Pathology, Medical and Surgical Clinics. Fourth year, Internal and External Pathology, General Pathology, Operations, and Medical, Surgical, and Obstetrical Clinics.—*Gaz. Méd.,* October 12.

PROVINCIAL CORRESPONDENCE.

MANCHESTER.

October 16.

Opening of Session at Medical School—Annual Dinner—Meeting of Medical Society—Dr. Ross's Demonstration on the Spinal Cord—Changes in Infirmary Staff.

The School of Medicine has reopened, after the "long vacation," with unmistakable signs of vitality, and with so large an accession of first year's students that the leading position which Manchester has long taken amongst provincial schools will this year be easily maintained. Up to the evening of yesterday, when the registration closed, the total number of students who had entered their names was 181; of these seventy-two are new entries—a number which exceeds that of any previous year, and bears ample testimony to the increasing popularity of this important School. Manchester had a considerable, I might almost say a great, reputation even when the school premises were a model of forbidding dinginess, when all the dissecting had to be done by gas-light, when the teaching was in the hands of a favoured few, the elect of a small proprietary, and when almost without exception the teachers were engaged in busy general practice. Since the School has become a department of Owens College its reputation has year by year steadily increased. Anatomy, physiology, and chemistry are now taught by special professors who devote their whole time to scientific teaching and research. The appointment of professors and lecturers rests with the Council and Senate of Owens College, so that personal considerations are allowed less weight, and the old spirit of monopoly is gradually vanishing. Changes such as these require time before their influence can be fully developed and estimated, but even now there has been aroused a spirit of energetic devotion to the work of teaching, which, as already pointed out, is telling appreciably on the numbers. The amalgamation was not altogether a smooth and easy process: so-called vested interests stood sadly in the way; but whether regarded from the point of view of the Owens College on the one hand, or of the Medical School on the other, the step was one the wisdom of which is continually becoming more apparent and undeniable.

The introductory lecture was again omitted—a circumstance no well-wisher of the School will seriously deplore. At the suggestion of the Dean of the School, the medical dinner, which has usually occurred in November, was this year fixed for October 4, so as to take the place of the introductory lecture in so far as the latter afforded an annual opportunity for bringing together past and present students. It was also thought that it would prove less of a distraction at the beginning than it would in the middle of the session. The dinner was excellently served at the Queen's Hotel, and, although the proportion of present students was perhaps smaller than usual, passed off most pleasantly. The President of the year was Dr. Arthur Gamgee; and on his right and left sat the Principal of Owens College (Dr. Greenwood), the Registrar (Mr. J. Holme Nicholson, B.A.), and Professors Roscoe and Schorlemmer, the invited guests of the Committee. In proposing "Prosperity to the Medical School of Manchester," the Chairman gave the toast an extended significance by including in the phrase "medical school" all the institutions in and around the city which were helping in the development of medical education and the advancement of the science of medicine. He predicted for the Manchester School of Medicine, as thus understood, a very bright future, and this for various reasons. In the first place, it was associated with a great institution, which he might safely say had for many years past discharged for the North of England the functions of a university. It was essential that medicine should rest on a foundation of learning, and such a foundation existed in Owens College. They were also connected with a great hospital (the Royal Infirmary), and they had around them a large number of medical institutions (he might specially name the Manchester Medical Society with its magnificent library), which were at the service of the School. He trusted to see a school of medicine inaugurated in Manchester, in which so much original work would be done as would form an important contribution to the progress of the profession.

The programme of the opening meeting of the Medical Society attracted a larger attendance of members than any upon record. During the earlier part of the evening there were several interesting communications. Mr. Thos. Jones exhibited a young girl with extroversion of the bladder, and gave an account of the various operations that have been suggested or undertaken for the relief of that condition. Mr. Bradley showed a patient whose tongue he had successfully removed by Mr. Walter Whitehead's operation of excision with scissors, already described in a former letter (see *Medical Times and Gazette*, December 15, 1877, page 657). Dr. Lloyd Roberts laid on the table an enormous intra-uterine fibroid which he had removed at St. Mary's Hospital by a protracted and difficult operation, consisting partly of excision and partly of enucleation, which he briefly and graphically described. Several cases of cerebral tumour were also exhibited by Drs. Dreschfeld and Ross, and commented upon with special reference to the localisation of the lesion from the symptoms during life. The main attraction of the evening, however, the *pièce de résistance*, was a demonstration by Dr. James Ross of a series of his own exquisite sections of the spinal cord, shown on a screen by means of the oxyhydrogen light. Beginning with sections from different portions of the healthy cord in the adult, he next showed specimens from the cord of a five-months fœtus to illustrate the order of development of the various tracts of fibres, and then examples of various diseased conditions, ascending and descending sclerosis, the posterior sclerosis found in locomotor ataxy, and disseminated sclerosis, concluding with some beautiful sections from a case of infantile paralysis, showing with admirable clearness the characteristic changes in the anterior cornua. The child had been a patient at the Sick Children's Hospital, Pendlebury, under the care of Dr. Humphreys, who had kindly placed a portion of the spinal cord at Dr. Ross's disposal, and given permission for the sections to be exhibited. A very hearty and well-deserved vote of thanks to Dr. Ross was carried by acclamation. The unanimous feeling of the members was that in bringing before them these selected samples from his work-room, he had in a very pleasant manner assisted them in grasping some of the main results of recent investigation.

The vacancy caused in the medical staff at the Royal Infirmary by the death of Dr. Wilkinson, the senior Physician, has been filled by the appointment of Dr. Leech. It thus became necessary to elect an Assistant-Physician to supply his place. The strong claims of Dr. Ross were so generally allowed by the profession that no other candidate ventured to send in an application, and accordingly he was duly elected on Monday last. By this appointment the institution will be as large a gainer as the candidate himself.

The Breasts of Non-nursing Mothers.—At a discussion, which took place in the Obstetrical Section of the New York Academy of Medicine, upon what should be done for the breasts in cases in which the child was still-born or the mother did not suckle her infant, all the speakers agreed that the best practice was to do nothing whatever to the breasts, and especially to avoid "drawing" them. This negative practice is very distasteful to the friends and nurses, but by strictly observing it all inconvenience is got rid of within twenty-four or forty-eight hours.—*New York Med. Record*, August 31.

Post-mortem Consultations.—In the *Banner of Light*, the recognised organ of the Spiritualists, published at Boston, there appears the advertisement of a certain Mrs. Danskin, of Baltimore, from which we learn that the late distinguished Benjamin Rush is still pursuing the vocation upon which he reflected so much honour during his terrestrial career, and that he seems to have entered upon a kind of professional partnership with this lady. Her card reads as follows:—"Mrs. Danskin, during fifteen years past, has been the pupil and medium for the spirit of Dr. Benjamin Rush. Many cases pronounced hopeless have been permanently cured through her instrumentality. She is clairaudient and clairvoyant. She reads the interior condition of the patient, whether present or at a distance, and Dr. Rush treats the case with a scientific skill which has been greatly enhanced by his fifty years' experience in the world of spirits. Application by letter, enclosing two dollars and two stamps, will receive prompt attention."—*New York Med. Record*, Aug. 31.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, October 2.

Charles West, M.D., F.R.C.P., President, in the Chair.

The following gentlemen were elected Fellows of the Society:—William Burton, L.R.C.P. Edin., and H. Macnaughton Jones, M.D.

Dr. Herman exhibited a child, showing one of the possible results of the use of forceps. A little behind the right frontal eminence was what felt like an irregular gap in the bone, about two inches long by about half an inch wide. This was occupied by a pulsating swelling. The superficial veins in the neighbourhood were larger than on the opposite side. Running obliquely across the skin over its lower part was the scar of a laceration, which, according to the medical man who delivered the child, had been undoubtedly caused by the forceps. The child's mother said that a piece of bone had subsequently come away from the wound.

The President, Dr. Edis, Dr. Playfair, Dr. Hayes, and Dr. John Williams made remarks.

The Treatment of Pregnancy complicated with Cancerous Disease of the Genital Canal.

Dr. Herman read a paper on the above subject. He first narrated two cases which had come under his own care. In one, labour was obstructed by a cancerous tumour of the rectum. The patient was delivered by cephalotripsy, and died from peritonitis. In the other the cervix uteri was fixed by cancerous disease; abortion was induced at the end of the fifth month; the patient lived seven months afterwards, marked relief to the symptoms having followed the abortion. Then followed an analysis of 180 recorded cases, collected from different sources, and classified. From them he drew the following conclusions:—1. That whatever influence cancer of the uterus may have upon conception is adverse to its occurrence. This was inferred from the small number of cases in which the patient was suffering from cancer at the time conception took place, as compared with the frequency of the disease. 2. That cancer of the uterus tends to produce the intra-uterine death and premature expulsion of the fœtus. This conclusion followed from the large proportion of premature births, and of not only still-born, but decomposing children. 3. That the growth of cancer of the uterus is, as a rule, accelerated during pregnancy. This was supported by *à priori* arguments from general pathology, by the analogy of the breast, and by the improvement which often followed the termination of the pregnancy. 4. That with cancerous disease affecting the whole circumference of the os uteri, labour may be quick and easy, and the patient may recover well and live for months afterwards. 5. That when delivery under such conditions is accomplished by natural efforts, expansion of the cervix usually takes place by fissuring. 6. That this fissuring does not usually augment the risk to the mother. 7. That imitation of this natural process, by making incisions, neither increases the danger at the time nor accelerates the progress of the disease subsequently, and that it often greatly facilitates delivery. 8. That the cases in which the cancer forms a tumour of great size or hardness are the ones in which delivery by natural efforts will not take place. 9. That where the above characters are absent no definite criteria can be drawn from the local conditions by which to foretell the behaviour of the os uteri during labour. 10. That where delivery of a living child *per vias naturales* is impossible, such limited experience as we have shows that there is but little difference, as to the risk to the mother, between craniotomy and Cæsarian section. 11. That a part of the cervix uteri may with safety be removed, either during pregnancy or during labour. These last eight conclusions were supported by the evidence of recorded cases. The author then considered from these data the practice to be followed. He assumed that the life of the mother was the first consideration, and that the production of abortion was justifiable if maternal life could be saved or prolonged thereby. The following were the rules of practice which he thought indicated—1. That where it is possible to remove the disease, either during pregnancy or at the time of labour, it ought to be done. 2. That where this cannot be done the safety of the mother is best consulted by bringing the pregnancy to an end as soon as possible.

3. That when labour has actually come on, expansion of the os uteri should be aided by making numerous small incisions in its circumference. 4. That dilatation of the cervix uteri being in progress, if uterine action should be deficient, and it should become necessary to accelerate labour, the use of the forceps is, as a rule, better than turning. 5. That when dilatation of the cervix cannot take place, even after incisions have been made, either from rigidity or magnitude of the tumour, Cæsarian section should be performed.

The PRESIDENT considered that the conclusions which Dr. Herman had arrived at were sound and practical. As evidence of the rapidity of the growth of the disease during pregnancy, he remembered a case under his own care, many years ago, at St. Bartholomew's Hospital, of a woman suffering from incipient soft cancer of the uterus. After the husband's return, following a long absence, pregnancy occurred, and rapid increase of the growth ensued. Abortion between the fifth and sixth months resulted.

Dr. MATTHEWS DUNCAN complimented the author upon his paper, which he considered of extreme value as comprising a larger collection of cases for founding direct conclusions than had hitherto been used. He would call attention to the well-known frequency of miscarriages in cases of pregnancy complicated with cancer, because this paper afforded valuable evidence that these miscarriages were, in a large proportion, owing to the death of the fœtus. This was particularly interesting at present as illustrating a matter which was attracting great attention—the influence of anæmia and other cachexies in causing intra-uterine death.

Dr. GERVIS referred to the value of the local application of perchloride of iron solution to the incisions. Dr. Herman had advised both to check the immediate hæmorrhage and to lessen the chance of subsequent septic infection. He also thought that Dr. Herman had somewhat undervalued the efficacy of the hydrostatic dilators in assisting delivery in cases of rigidity of the cervix from carcinomatous infiltration.

Dr. HEYWOOD SMITH mentioned a case where an indurated malignant cervix had come away during labour as a ring around the child's neck, the mother making a good recovery.

Dr. BRAXTON HICKS had never used incisions, but had found that the administration of chloroform and the dilating bags were of great value in overcoming the rigidity. He considered the bags preferable either to forceps or turning.

Dr. GODSON called attention to the rapidity with which cancer spreads during involution. He had seen many advanced cases shortly after delivery, in which no symptom of the disease existed previous to parturition. His experience was in support of Cæsarian section in preference to craniotomy; in two cases in which he had performed the latter operation in consequence of cancer, the patients had died within a few days of their delivery. Both children appeared healthy, and might, under other circumstances, have been born alive.

Dr. EDIS remarked that as to the cancerous cachexia proving detrimental to the life of the child, he had recorded one case before the Society where labour came on spontaneously at full term in a patient with extensive malignant disease of the cervix uteri, and where delivery of a healthy living child was effected by the aid of the forceps. The mother succumbed with pyæmic symptoms, but the child is still living.

Dr. GALABIN related the history of a very extreme case as an addition to the evidence which had been brought forward to show that hydrostatic dilators might in some instances afford valuable service.

Dr. HERMAN replied.

A case of Absence of the Uterus in a young married woman was communicated by Mr. GEORGE MOWAT, of Swansea.

Dr. Routh, Dr. Edis, and Dr. John Williams made some remarks.

The meeting adjourned.

CLINICAL SOCIETY OF LONDON.

FRIDAY, OCTOBER 11.

GEORGE W. CALLENDER, F.R.S., President, in the Chair.

FRACTURE OF BOTH HUMERI, ETC.

MR. J. W. HULKE read notes of a case of fracture of both humeri, rupture of the left brachial artery, abolished conductivity of the left radial and median nerves, broken ilia, and laceration of the quadriceps extensor cruris just above the patella. The injuries were caused by a revolving wheel which caught a man's sleeve and whirled him round, it was thought, fifty times before the machine was stopped. The patient recovered, with little trace of permanent injury, except some limitation of flexion of left elbow-joint. The bearings of the case on nerve-stretching as a surgical practice, as well as on the question of primary amputation, were the grounds on which it was brought before the Society.

The PRESIDENT, referring to the subject of nerve-stretching, called to mind a case under the care of Mr. Coote, where the nerve had suffered a good deal, but perhaps the stretching had gone too far, for there was no return of motion or sensation. Sloughing followed, and in the end secondary amputation had to be performed.

Mr. HEATH said the speedy return of the pulsation was noteworthy as regarded the tearing across of the arteries. He had reported a case of gunshot wound in the arm of a youth aged nineteen. The brachial artery was fairly divided, but pulsation returned in three days. In his own case, Dr. Poore had examined the patient when he recovered. The use of the ulnar nerve returned, but the median, which had been completely divided, failed to improve.

Mr. H. MARSH thought the youth of the patient had something to do with the rapid return of the sensation. In children this was very speedy.

The PRESIDENT asked if the return of sensation was due to the recovery of the nerves, or to the power of sensation spreading from other situations.

Mr. HULKE, in reply, said there could be no doubt of the restoration of the nerves. He also referred to another case. A lad of nineteen, epileptic, fell through a shop-window and cut his arm nearly to the bone. When seen next day the arm was black and cold; the artery was bare, and its divided ends lying at some distance from each other. When the bandage was removed, the distal end of the cut vessel was seen to pulsate distinctly. This took place within twenty-four hours of the injury. The treatment of the case laid before the Society was not strictly antiseptic, but perfect cleanliness was carefully observed.

A CASE OF SUPRA-PUBIC LITHOTOMY.

Mr. JONATHAN HUTCHINSON read notes of this case, which was that of a man aged about twenty-six, who had suffered from symptoms of stone for about six months. When admitted into hospital his condition was urgent, the bladder being exceedingly irritable, and the urine containing pus and blood. He was considerably emaciated. There was no difficulty in recognising that the stone was a very large one, and careful consideration was given to the question of the best means of extracting it. It was finally decided to prefer the supra-pubic method. No difficulty was encountered in the operation; the bladder was easily reached; and, the wound having been adequately enlarged, the stone was seized in the largest pair of forceps. Its size necessitated a little delay in extraction to allow the soft parts to yield. After its removal an indiarubber tube was passed through the urethra and retained in the bladder. It was hoped by this means to drain away the urine without any wetting of the bed. The fundus of the bladder was found much thickened and quite rigid by calcareous deposit. For the first week after the operation the man did exceedingly well; he then began to lose flesh, and subsequently had repeated rigors. The urine contained pus, and was constantly ammoniacal. Although great attention was given to the bladder it was found impossible to keep it empty and avoid overflow on the edges of the wound. The patient died of pyæmia about five weeks after the operation. At the necropsy the bladder was found very much thickened by inflammation, and its mucous membrane ulcerated and coated with concretion. The kidneys contained abscesses, and there were small pyæmic deposits in the liver and lungs. The calculus removed was very hard and heavy, of lithic acid, weighing nearly six ounces and a half, and measuring nine inches in circumference at the greatest and six at the least width. Mr. Hutchinson showed also the cast of a calculus of almost exactly the same size and weight as his own, which had been removed at the London Hospital by the late Mr. John Adams about ten years ago. In this instance, the unusual size of the stone was unexpected, and the ordinary lateral operation was adopted. The patient, who was a healthy young man, recovered well. Whilst this case proved that, in isolated cases, stones of upwards of six ounces in weight might be removed

without unusual modifications of the lateral method, he still thought that general experience was in favour of special measures when the dimensions of the stone were so large. We had to choose between the high operation, bilateral section of the prostate, and recto-perineal lithotomy. On the whole, although it was not wise to allow a single case to influence the mind too much, he was inclined, by what he had observed in his own, to think that the high operation had special disadvantages in respect to the impeded exit of urine, and in another case he thought he should prefer to try the recto-perineal method, with free incision in the median line. It was doubtful, however, whether any modification of the method would have made any difference in the result, as the man was very ill, and his bladder in a state of advanced disease.

Mr. NORTON said that inasmuch as the welling of the urine above the pelvis seemed to be the most troublesome feature, would it not be well to make an opening through the perineum as well as above the pubes?

Mr. GANT suggested that Dupuytren's bilateral section through the prostate might be the best plan of removing such a stone.

Mr. HEATH mentioned the case of a boy who was the subject of stone. Mr. Erichsen tried the ordinary operation, but failed. After the boy had recovered from the effects of the operation, he fell into Sir H. Thompson's hands, who operated above the pubes. The result he did not remember. He had often seen Sir H. Thompson make a supra-pubic puncture where there was troublesome disease of the prostate, but there was often considerable difficulty in reaching the bladder. Did Mr. Hutchinson find this to be the case? He referred to a pamphlet where it was said that distending the rectum did good in making the bladder project above the pubes. He had tried recto-vesical puncture in hopeless cases of crushed spine. Much trouble was saved, and the patient comforted. Recently there had been a six-ounce stone extracted from a well-known gentleman in the ordinary way, with recovery. But dragging, as in Mr. Adams' case, must injure the soft parts. He would divide rather than tear the tissues. He also referred to the plan, advocated by Mr. Macnamara, of breaking up the stone by a powerful lithotrite, and then cutting to remove the fragments. In France they sometimes broke the stone through the perineal opening.

Mr. HULKE said the flow of urine was at the worst only an inconvenience. There was no following extravasation or cellulitis. He had carefully examined the matter some years ago, and found there was little risk to be apprehended. The plan of breaking up the stone had been practised by a good many. The great difficulty lay in introducing the crusher. He described one very clever instrument employed abroad for this purpose.

Mr. BARKER referred to a case where Sir Henry Thompson had operated. There was great difficulty in seizing the stone, but not in reaching the bladder, by the supra-pubic operation.

The PRESIDENT mentioned several cases where he required to puncture the bladder above the pubes for impermeable stricture. In all there was great difficulty in reaching the bladder. The fingers in the rectum did no good. The great difficulty was in the welling up of the urine. This he managed to avoid by making the catheter act as a syphon. Usually the end of the catheter got blocked by tilting up against the walls of the bladder. This he avoided by cutting a number of holes in the end of the catheter.

Mr. HUTCHINSON, in reply to the various speakers, said he had considered the propriety of puncturing the bladder by the rectum, but had declined it, hoping that the tube in the urethra would serve the purpose. He had tried every plan of syphon action, but had failed. Too many holes would not suit: air would be admitted, and the syphon cease to act. There was no contraction of the bladder in his case: it was rigid everywhere except at the top. He pulled the stone through very gradually. Death was more due to ill-health than to anything else. In former cases he had several times cut the right side of the prostate on finding the stone of unexpected size; but he did not think that bilateral section gave sufficient room for the extraction of such a stone as this without undue bruising. He was strongly in favour of making a large opening for a large stone, and still thought that, on the whole, the recto-perineal method might be the best. The constant wetting was the only nuisance.

BULLET-WOUND OF THE SKULL.

Mr. CLEMENT LUCAS related this case, which had come under his care at Guy's Hospital in February last. A solicitor's clerk, aged twenty-one, after some misunderstanding with his *fiancée*, declared that he would shoot himself. Two days subsequently he was found drunk and disorderly, and was locked up by the police. Soon afterwards shots were heard, and he was found lying on the ground in his cell in a pool of blood, with a revolver by his side. The revolver was a small one, which carried pin-fire cartridges. Five chambers had been discharged, and one cartridge, carrying a small conical bullet, remained unfired. Two bullets, which had been fired at the iron door of the cell, were picked up on the floor; two were afterwards extracted from the skull; and one remained unaccounted for. He was brought to the hospital in a semi-conscious state. Almost in the centre of the forehead were two small circular holes, with slightly inverted edges. Except at the immediate edge of each aperture, there was no blackening of the skin, indicating that the muzzle of the pistol was applied directly to the forehead. The skin surrounding the bullet-holes was raised into a rounded eminence. When seen by Mr. Lucas, he had so far recovered consciousness as to be able to stand without assistance. Some bleeding occurred from the nose, and was taken as evidence that the frontal sinuses had been opened. Chloroform was administered, and a crucial incision made over the wounds. On the flaps being turned back, a blackened cavity was opened beneath the skin, formed by the expansion of the powder after it had penetrated the integument. At the bottom of this cavity a somewhat reniform aperture was seen in the bone, and lying upon the internal table were the two flattened bullets shown to the meeting. After removing numerous fragments belonging to the external table and diploë, the splintered internal table was also removed, in large, sharp-edged, angular fragments. The dura mater was then seen at the bottom of the wound, bulging on either side of the longitudinal sinus, and pulsating. At one spot there was, unfortunately, a small aperture. The wound was dressed antiseptically. On the following morning, February 3, he was quite conscious; sensation and motion were perfect; but he complained of great pain at the back of the neck. His temperature at 11 a.m. was 99°; but in the evening it rose to 99·8°, and his pulse to 96. He was confined to milk as diet, and ice was applied to his head. On February 4 there was some œdema of the eyelids. The wound was dressed. His temperature in the evening rose to 102·1°; his pulse was 100, full, and regular. February 5: his eyelids were swollen so that he was unable to open his eyes. Towards evening he fell into a drowsy, semi-unconscious state, and his breathing became almost stertorous. In the evening his temperature was 102·2° and pulse 98; his respirations 25; and his general condition much worse. February 6: The patient was quite unconscious and very restless. He passed urine under him, and in the night had slight general convulsions. His right arm was rigid. The right leg was apparently paralysed; the left rather rigid. The wound was discharging grumous matter. In the morning his temperature was 104°; pulse 104; and respirations 34. In the evening the temperature rose to 104·8°; pulse 104; and respirations 34. February 7: He remained unconscious, and passed his motions and urine under him. The muscles of the right arm were very rigid, those of the left paralysed. During the day the temperature rose rapidly—at 1 p.m. it was 104°; at 5 p.m. 105·8°. At 7.40 p.m. he was placed in a bath, the water being 90°, and the patient's temperature 105·6° in the axilla, and 108·6° in the rectum. The bath was cooled by means of ice to 73°, when he was removed, after having been immersed twenty-seven minutes. The temperature was then found to be 103·4° in the axilla, and 107·2° in the rectum. After removal to bed, he was thought to be improved, his conjunctivæ being more sensitive and his pulse steadier; he was also able to swallow. The temperature continued to fall for about an hour after the bath; at 9.10 p.m. it was only 100·9°, but it soon after began to rise again. At 10.30 it was 104·1°, and at 12.15, 105°. He died about 3 a.m. on February 8. At the post-mortem examination, the aperture in the frontal bone was immediately above the frontal sinuses, which were opened by its lower edge. The small aperture in the dura mater was covered with sloughy granulations. The frontal sinuses contained pus. The internal table of the skull was broken away some distance further than the external. There was general suppurative meningitis extending over the surface of the right hemisphere and the interior half of the left, and under the base of the brain into the right Sylvian fissure nearly to the quadrate space. The

anterior part of each orbital lobe was bruised, ecchymosed, and softened; elsewhere, the brain was healthy. The other organs were all healthy, except the lungs, which were congested and œdematous, and the spleen, which was rather soft.

Mr. Hutchinson remarked on the existence of hemiplegia on one side and arachnitis on the other. He thought that in these cases there was usually some damage to the brain-substance itself—encephalitis as well as arachnitis.

Mr. Hulke recalled a case under the care of Mr. Lawson, where the bullet or leaden plug was found at the bottom of a large ragged hole in the forehead, in a mass of blood and brain. This man never had a bad symptom. He thought there was damage to the brain-tissue in all cases of hemiplegia.

Mr. Heath mentioned a case where a man put a pistol close to his head. He was not killed, but he was rendered completely blind. No bullet could be found, but there was a slight prominence on the opposite side of the head from the orifice of entrance. In this patient there were two kinds of squint. The man's health was still good.

Mr. Barker mentioned a case which he had seen, where a Chassepôt bullet had struck the forehead and buried itself in the brain. After living for months the patient died convulsed and finally comatose.

Mr. Hulke said Larrey had written of the case of a man who survived after a bullet passing clean through the brain, so that a probe could pass through.

Mr. Howse had had a case somewhat similar, only the result was fatal. Here the bullet passed right through. He cut down and found the bullet.

Mr. Hutchinson referred to an interesting specimen in the Leeds Museum, being the skull of a woman who was not known to have received any injury, but in whose sphenoidal fissure a bullet was found when she died of fever.

The President said much injury might be done to the brain and yet nothing particular happen. Injury to the convolutions did not seem greatly to matter if the *débris* was carefully removed. He referred to two cases, one of which he promised to bring before the Society.

Mr. Norton spoke of the case of a person, now alive, on whom craniotomy had been performed and who was put on one side for dead. He was not more stupid than the bulk of agricultural labourers.

Mr. Lucas said that in his case the paralysis was not complete, but there was rigidity. The anterior lobes of the brain might be injured without any marked result following.

Yorkshire Association of Medical Officers of Health.—The third annual meeting of the Yorkshire Association of Medical Officers of Health was held at Harrogate on the 25th ult., in the Board-room of the Harrogate Improvement Commissioners, lent for the occasion. Mr. S. W. North, of York, President of the Association, occupied the chair; and among the members present were Messrs. J. Britton (Halifax), E. B. Hicks (Easingwold), J. F. Holden (Hull), W. Short (Harrogate), W. S. Wade (Wakefield), J. Hardwicke (Rotherham), A. Roberts (Keighley), H. C. Libbey (Horsforth), C. Husband (Ripon), W. Renton (Knaresborough), J. Taylerson (Whitby), and Drs. Parsons (Goole), the Secretary and Treasurer, Scott (Ilkley), Barry (Settle), Arbuckle (Thorne), Deville (Harrogate), and Sedgwick (Boroughbridge), etc. The officers of the Association were all duly re-elected, and Huddersfield was selected as the next place of meeting. After some discussion it was also determined that in future the Secretary should make arrangements for the members to dine together at their own expense. This resolution was adopted to relieve the medical officer of the town visited from having to entertain the whole Association, which, from its increased numbers, was found to be a serious tax. After some unimportant business, the ordinary meeting for association work was at an end, and a general meeting followed, which was largely attended. The first paper read was one by Dr. Parsons on "Iron in Potable Waters, with a Ready Method for its Estimation," and this was followed by another contributed by Dr. Deville on "The Defects of British Health-Resorts, and Suggestions for their Amendment." A lengthy and rather warm discussion took place at the termination of the reading of this latter paper; and then, with a vote of thanks to the Harrogate Commissioners for the use of the room, the proceedings terminated.

OBITUARY.

ARTHUR BROWN STEELE, L.K.Q.C.P., M.R.C.S.

The above well-known member of the Liverpool medical profession died on the 9th inst. at the age of fifty-eight. Nearly thirty years ago Dr. Steele was appointed one of the resident Surgeons of the large Liverpool Workhouse Infirmary, having previously occupied a similar post at the Nottingham Union Hospital. After serving for some time as resident Surgeon, he was appointed by the Select Vestry to one of the parochial districts, the duties of medical officer to which he continued to discharge up to 1868. A year or two after resigning this post he was appointed one of the public vaccinators, and he continued to hold this appointment up to the time of his death, though failing health had for some little time compelled him to perform the duties by deputy.

It was principally, however, in connexion with other work that Dr. Steele was known. He was one of the most active local supporters of the British Medical Association, taking a warm interest in all its proceedings, having for some years been Secretary, and still later President, of the Lancashire and Cheshire Branch, and having been presented two years ago with a piece of plate and a purse of money by the members in recognition of his long-continued and valuable services.

For a good many years Dr. Steele lectured on obstetrics at the Royal Infirmary School of Medicine, and two years ago was elected Obstetric Physician to the Infirmary, relinquishing the position of Surgeon to the Ladies' Charity and Lying-in Hospital, which he had held for over twenty years.

He was a man of quick and lively intelligence; a ready and fluent speaker, expressing his ideas with remarkable eloquence; and a sound lecturer on the subject of his chair. His ability as a speaker, and the soundness of his knowledge in the special branch of medical practice to which he more particularly devoted himself, made him a valued member of the Medical Institution, during the discussions at which his presence was seen, and his voice regularly heard, for many successive years, until, indeed, his late failure of health rendered it impossible for him any longer to attend. He was successively Treasurer and Vice-President of this Institution. He had been the subject for several years of chronic renal disease, to which he at length succumbed. The respect in which he was held was manifested by the very large gathering of medical men who followed him to the grave.

EDWARD DENIS DE VITRÉ, M.D. Edin., M.R.C.P. Lond.

Dr. de Vitré, who died at Lancaster on the 4th inst., was perhaps most widely known as the chief promoter of the establishment of the Royal Albert Institution for Idiots and Imbeciles of the Northern Counties. He enjoyed, however, in the days when railways did not so much as now obliterate considerations of distance, an extensive consulting practice; and his courteous manner and cheerful presence made him an ever genial professional adviser. Born in 1806 at Carlisle, and educated at Edinburgh, where he graduated M.D. in 1827, he settled at Lancaster as a physician in 1832. Here he soon took a prominent position, both in public and professional life; and in 1840 he was appointed Visiting Physician to the Lancaster County Asylum, an office which he held until placed upon the Commission of the Peace for the county. In 1864 he became interested in the project for establishing an asylum for idiots in the North of England; and to a considerable extent in consequence of the broad views held by him, the comprehensive institution at Lancaster for 600 idiots and imbeciles of the northern counties, which bears the name of the late Prince Consort, was founded. We have recently commented upon the operations of this institution, and it will suffice for us now to say that Dr. de Vitré lived to see it settled upon a firm basis, and producing satisfactory practical results. Dr. de Vitré was twice Mayor of Lancaster, and, besides being Chairman of the Central Committee of the Royal Albert Asylum, was Chairman of the Visiting Justices of the County Asylum at Lancaster. He died after a protracted illness, borne with much resignation, and of his departure we may truly say, with reference to his energy and philanthropy, that he is one of those who "rest from their labours, and their works do follow them."

MEDICAL NEWS.

QUEEN'S UNIVERSITY IN IRELAND.—At the annual meeting of the Senate for the conferring of degrees, held in St. Patrick's Hall, Dublin Castle, on Friday, October 11, 1878, the following degrees in Medicine and Surgery, and diplomas in Midwifery, were conferred by his Grace the Duke of Leinster, Chancellor of the University:—

Doctor in Medicine.—October, 1878.—First Honour Class: James H. Gibson, Belfast; Lysander Maybury, Galway; C. Yelverton Pearson, Cork. Second Honour Class: John W. Byers, M.A., Belfast; Isaac C. M'Learn, Belfast; James Young, Belfast. Upper Pass Division: Edward Little, Belfast; Stephen Little, Belfast; John F. Tuohy, Cork; William Whitford, Belfast. Lower Pass Division; T. Gelston Atkins, B.A., Cork; Theophilus Bacon, Galway; Henry Bingham, Belfast; Daniel Burdon, Cork; James P. Hanrahan, Cork; John J. Hartnett, Cork; William R. Henderson, Belfast; Richard Jennings, Cork; John Reid Johnston, Belfast; Alfred Henry Keogh, Galway; Andrew T. Love, B.A., Belfast; Brien P. Sarsfield M'Dermott, Galway; John M'Kinlay, Galway; William M'Namara, Galway; Edward Magner, Cork; Thomas H. May, Belfast; Daniel Riordan, Galway; William Rowney, Belfast; William Smyth, Belfast; James Steel, Belfast; William Stokes, Galway; Ralph Worrall, Belfast. June, 1878.—Charles Warke Allison, B.A., Belfast; Alfred Constantine Bennett, Cork; John Thomas Collier, Belfast; Patrick Oswald Considine, Belfast; William Fleck, Belfast; Alfred Osmond Geoghegan, Galway; Robert Evans Hadden, Cork; Charles Hall, Belfast; J. Courtney Haslett, Belfast; Francis Thomas Heuston, Galway; Charles Kevin, Belfast; Pershouse Wm. L. Langley, Belfast; Joshua Lytle, Belfast; Daniel Roderick O'Connor, Cork; James Wigmore, Cork.

Master in Surgery.—October, 1878.—John Courtney Haslett, M.D., Belfast; T. Gelston Atkins, B.A., Cork; Theophilus Bacon, Galway; Daniel Burdon, Cork; John William Byers, M.A., Belfast; James Hill Gibson, Belfast; James P. Hanrahan, Cork; John Joseph Hartnett, Cork; William Robert Henderson, Belfast; Richard Jennings, Cork; John Reid Johnston, Belfast; Alfred Henry Keogh, Galway; Edward Little, Belfast; Stephen Little, Belfast; Andrew Thomas Lowe, B.A., Belfast; Brien P. Sarsfield M'Dermott, Galway; Isaac Crawford M'Learn, Belfast; William M'Namara, B.A., Galway; Edward Magner, Cork; Lysander Maybury, Galway; C. Yelverton Pearson, Cork; William Rowney, Belfast; William Whitford, Belfast; James Young, Belfast. June, 1878.—Patrick Maurice Carleton, M.D., Belfast; Isaac C. Dundee, M.D., Galway; J. Martin Kennedy, M.D., Belfast; Alfred C. Bennett, Cork; William Fleck, Belfast; Robert Evans Hadden, Cork; Francis Thomas Heuston, Galway; Charles Kevin, Belfast; Pershouse W. L. Langley, Belfast; Joshua Lyle, Belfast; Daniel Roderick O'Connor, Cork.

Midwifery.—October, 1878.—Thomas Gelston Atkins, B.A., Cork; Daniel Fegan, M.D., Belfast; Richard Jennings, Cork; Alfred Henry Keogh, Belfast; Edward Little, Belfast; Stephen Little, Belfast: John M'Kinlay, Galway; Lysander Maybury, Galway; Thomas O'Sullivan, M.D., Galway; C. Yelverton Pearson, Cork; William Smith, Belfast; John F. Tuohy, Cork; William Whitford, Belfast. June, 1878.—Alfred C. Bennett, Cork; John Thomas Collier, Belfast; Robert Evans Hadden, Cork; Charles Kevin, Belfast; J. Fritz Beck, M.A., M.D., Belfast.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At a special examination meeting held on Tuesday, October 1, the licences in Medicine and in Midwifery were granted to—

Beany, James George, F.R.C.S. Edin.

At the ordinary monthly examinations held on Monday, Tuesday, Wednesday, and Thursday, October 7, 8, 9, and 10, the following candidates were successful:—

For the licence to practise Medicine:—

Ashe, Isaac.	Irvin, Joseph Henry.
Burgess, John Joseph C.	Williams, Richard.

For the licence to practise Midwifery—

Ashe, Isaac.	Irvin, Joseph Henry.
Burgess, John Joseph C.	Williams, Richard.

APOTHECARIES' HALL, LONDON.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, October 10:—

Harris, Frederick Alfred, St. Thomas's Hospital.
Monté, Peter, Young-street, Kensington.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Lukes, Charles Pardey, St. Bartholomew's Hospital.
Jones, John, Charing-cross Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to all new Appointments that take place.

PAXON, HERBERT E., M.R.C.S. Eng., L.S.A. — House-Surgeon and Assistant-Secretary to the West Herts Infirmary, Hemel Hempstead, *vice* Sutton, resigned.

POORE, GEORGE VIVIAN, M.D.—Physician to the Law Union Insurance Company.

ROSS, JAMES, M.D., M.R.C.P.—Assistant-Physician to the Royal Infirmary, Manchester, *vice* Dr. J. Leech, M.D., M.R.C.P., appointed Physician.

WELLS, ALFRED G., M.R.C.S. Eng., L.S.A. Lond.—House-Surgeon to the Essex and Colchester Hospital, *vice* M. G. Biggs, resigned.

BIRTHS.

ALLEN.—On October 9, at 41, Wellington-square, Hastings, the wife of Dr. B. H. Allen, M.D., of a daughter.

HARRISON.—On October 9, at Failand Lodge, Clifton, the wife of A. J. Harrison, M.B., M.R.C.S., J.P., of a daughter.

LACEY.—On October 5, at Plumstead, Woolwich, the wife of T. Warner Lacey, M.R.C.S., prematurely, of twin sons, who survived their birth only a short time.

POWELL.—On October 10, at Woolwich, the wife of Surgeon J. Powell, L.R.C.P. Edin., Army Medical Department, of a son.

RANKING.—On October 8, at Mount Ephraim-road, Tunbridge Wells, the wife of John E. Ranking, M.B., prematurely, of twin sons, who survived their birth only a few minutes.

WEBB.—On October 5, at Kingsbridge, South Devon, the wife of William Henry Webb, M.R.C.S., of a son.

MARRIAGES.

FULLER—HACKNEY.—On October 10, at Twickenham, Thomas Fuller, of Old Deer Park, Richmond, to Sarah Augusta, daughter of John Hackney, M.R.C.S., of Chepstow-villas, Twickenham.

PRICE—FENTON.—On October 10, at St. Margaret's, Westminster, Arthur Price, M.R.C.S., of Waterloo-bridge, to Ada Maude, eldest daughter of George Fenton, M.R.C.S., of Westminster.

DEATHS.

DAVIS, EDWARD, M.R.C.S., at Donnington Villa, Boston-road, Brentford, on October 13, aged 56.

FIRTH, G. W. W., F.R.C.S. Eng., J.P., at his residence, St. Giles, Norwich, on October 14.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

CHELTENHAM GENERAL HOSPITAL.—Resident Surgeon to the Branch Dispensary. Candidates must be on the "Medical Register" as qualified to practise medicine and surgery. Applications, with copies of testimonials, to the Resident Secretary at the Hospital.

LANCASTER UNION.—Medical Officer of the Southern District of the Union. Applications, with testimonials, to J. Grant, Clerk, from whom further information may be obtained.

ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY, WIGAN.—Senior House-Surgeon. Applications, with testimonials, to the Secretary, on or before November 1.

UNIVERSITY COLLEGE HOSPITAL.—Resident Medical Officer. Applications, with testimonials and statements of age and qualifications, to Talfourd Ely, University College, Gower-street, London, W.C., on or before October 29.

WONFORD HOUSE HOSPITAL FOR THE INSANE, NEAR EXETER.—Resident Medical Superintendent, who will also act as Secretary. Candidates must be registered both in medicine and in surgery, and have had experience in the care and treatment of the insane. Age not less than thirty. Salary £350 per annum, with board, lodging, washing, and attendance. Testimonials of this year's date (not more than six) to the Committee of Management, Wonford House, Exeter, on or before October 19, endorsed M. S.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Bingham Union.—Mr. J. W. Eaton has resigned the Workhouse; salary £20 per annum.

Market Harborough Union.—Dr. Crane has resigned the Sixth District; area 1814; population 248; salary 10 per annum.

Witham Union.—Mr. E. G. Varenne has resigned the Kelvedon District; area 14,021; population 4352; salary per case.

APPOINTMENTS.

Alton Union.—Robert Ephinstone, L.R.C.P. Edin., M.R.C.S. Eng., L.S.A., to the Third District.

Auckland Union.—Albert V. Williamson, L.R.C.P. & S. Edin., to the Escomb District.

Burton-on-Trent Union.—Daniel H. Bastable, L.R.C.S. Ire., L.K. & Q.C.P. Ire., to the Lullington District.

Dunmow Union.—Charles H. Brooking, M.D. St. And., M.R.C.S. Eng., L.S.A., to the Stebbing District.

Narberth Union.—Edmund H. Allen, L.R.C.S. Ire., L.K. & Q.C.P. Ire., to the Begelly District.

Shepton Mallet Union.—James T. Hyatt, M.R.C.S. Eng., L.R.C.P. Edin., to the Third Division of the Third District.

Stockport Union.—G. E. W. Turner, M.R.C.S. Eng., L.S.A., L.R.C.P. Edin., to the Workhouse and Stockport District.

MR. JOHN SIMON, C.B., F.R.S.—The bust of this distinguished member of our profession, recently exhibited in the Royal Academy, has just been presented by the subscribers to the Council of the Royal College of Surgeons, of which institution the learned gentleman is President.

THE "Peel Exhibitions," awarded at the First University Examination in Medicine, were granted to Thomas Sinclair, of Queen's College, Belfast, first, £20 a year for two years; and Havelock H. R. Charles, of Queen's College, Cork, second, £15 a year for two years.

St. Mary's Hospital Medical School.—Mr. P. P. Whitcombe, of Epsom College, has gained the Scholarship in Natural Science; Mr. C. S. Spong, also of Epsom College, the Exhibition in Natural Science; and Mr. U. K. Dutt the Extra Scholarship in Natural Science.

Sore Nipples.—Dr. Compton has found the following mixture act very favourably as a local application, employing it just after the child had suckled, and wiping it off before suckling was renewed:—℞. Tr. benzoin co., glycerinæ, āā: M.—*New York Med. Record*, August 31.

Enormous Consumption of Quinine in the Russian Army.—The Russian military hospitals have consumed, during 1877, 6000 kilogrammes of the sulphate and 3000 kilogrammes of the chlorhydrate of quinine. Enormous as this consumption is, it will be exceeded by that of the current year.—*Lyon Méd.*, October 12.

Carbolic Acid as an External Application in Small-pox.—A correspondent of the *Indian Med. Gazette*, September, states that in a recent epidemic of severe confluent small-pox he used carbolic acid in oil (one part to twenty) as an inunction to the general surface, with the happiest effect. It soothed the patients greatly, kept off flies, and seemed to diminish pitting.

The President of the Liverpool Medical Institution, Dr. A. T. H. Waters, invited the members to a *conversazione* on Thursday evening, the 10th inst. Tea and coffee were served in the library. Later in the evening, Dr. Waters gave an extremely valuable address on "The Value of Temperature Observations in Disease," in the large theatre, to the members, numbering some eighty or ninety, who were present.

A Diamond Wedding.—In the little town of Kollmar, in Holstein, a rare event has just taken place in the celebration of a diamond wedding—*i.e.*, the seventy-fifth anniversary of the marriage of a living couple. Two other such weddings are expected, and as many as ten such have occurred in Kollmar during the last fourteen years.—*Lyon Méd.*, October 13.

Dr. J. Milner Fothergill has been elected an Associate-Fellow of the College of Physicians of Philadelphia in the vacancy caused by the death of the late Dr. Fleetwood Churchill. We understand that the foreign associates of the College are limited to twenty in the number; and that the present English associates, besides Dr. Fothergill, are Sir Robert Christison, Sir James Paget, and Drs. Acland, J. W. Ogle, W. B. Peacock, and Hughlings-Jackson.

Naval Medical Supplemental Fund.—At the quarterly meeting of the directors of the Naval Medical Compassionate Fund, held on the 8th inst., Dr. J. W. Johnston, Inspector-General, in the chair, the sum of £100 was distributed among the various claimants. At a special meeting subsequently held, Mr. Philip Francis, of the Admiralty, was appointed Secretary in lieu of Mr. G. G. Scott, resigned.

The Berlin University.—The winter session commences on October 16 and continues to March 29. The teaching power of the University numbers 218 teachers, of whom seventy-five belong to the Medical Faculty, viz.—thirteen ordinary professors, eighteen extraordinary professors, and forty-four privat-docenten. There are announced for the Medical Faculty during the session 169 courses of lectures, of which seventy-five are "privatim" and thirty-six "privatissime."—*St. Pet. Med. Woch.*, September 28.

Royal College of Surgeons of Edinburgh.—At the annual meeting of this College, held on the 16th inst., the following office-bearers were elected for the ensuing year:—*President:* Patrick Heron Watson, M.D. *Secretary and Treasurer:* Joseph Bell. *Librarian:* David Wilson, M.D. *President's Council:* Andrew Wood, M.D., James D. Gillespie, M.D., James Spence, William Walker, Henry D. Littlejohn, M.D., John Smith, M.D.; *ex-officio*, Joseph Bell. *Examiners:* Archibald Inglis, M.D., Peter D. Handyside, M.D., James D. Gillespie, M.D., Henry D. Littlejohn, M.D., Patrick H. Watson, M.D., David Wilson, M.D., John Smith, M.D., D. M. C. L. Argyll Robertson, M.D., Joseph Bell, John Duncan, M.D., Robert J. Blair Cunynghame, M.D., Alexander G. Miller, M.D. *Assessors to Examiners:* William Brown, James Spence, William Walker, James S. Combe, M.D. *Conservator of Museum:* Robert J. Blair Cunynghame, M.D. *Clerk:* James Robertson. *Officer:* John Dickie. *Assistant to Conservator:* James Grandison.

Sanitary Expenditure in Dublin.—At the weekly meeting of the Executive Committee of the Dublin Sanitary Association, on Thursday, October 10, a letter from the Local Government Board for Ireland was read, stating that it was not intended to take evidence as to the general sanitary condition of Dublin at the forthcoming inquiry into the application of the Corporation for an alteration in the incidence of charge with reference to the expenditure for sanitary purposes in the city. The inquiry was to begin on the 15th inst.

Employment of Warts in Skin-grafting.—Dr. Leale, of New York, relates in the *Med. Record* (September 7), a case of extensive ulceration of the dorsum of the foot, which, after having been long treated by various means (epithelial scrapings among them), was rapidly and permanently cured by binding over it the fragments of two large warts, which were removed from his hand. "Warts of the hand," he says, "can be utilised, and with better results than small pieces of normal skin for skin-grafting, in consequence of their being easily separated into numerous cylindrical rods of great vascularity, and containing a large proportion of hypertrophied epithelium, which, when planted in healthy granulating tissue, readily adapt themselves to the new soil, receiving direct nourishment, and quickly growing as starting-points for a new and smooth epithelial covering."

The Father of Ovariotomy and an "Ovarian Jubilee."—The M'Dowell monument, about to be erected at Danville, Ky., will consist of a shaft of granite thirty feet high; the style will be Doric. On its base will be the following inscription:—"Beneath this shaft rests Ephraim M'Dowell, M.D., the Father of Ovariotomy, who, by originating a great surgical operation, became a benefactor of his race, known and honoured throughout the civilised world." On the right side of the base is to be a laurel wreath, with the inscription—"A grateful profession reveres his memory and treasures his example." On the left side will be inscribed the dates of his birth, studentship at Edinburgh, and first ovariotomy (1809). On the posterior of the face will be the inscription—"Erected by the Kentucky State Medical Society, A.D. 1879." An "Ovarian Jubilee," says the *Detroit Lancet*, is expected at the next annual meeting of the Society.—*Boston Journal*, August 22.

Supernumerary Breasts.—The following are the conclusions which Dr. Godfrain arrives at in a carefully worked-out thesis upon this subject:—1. Supernumerary breasts are rare. 2. They are of the same structure as the normal breast. 3. They are met with most frequently two in number, less often one, and rarely three. 4. Their most common seat is the axilla, and this site is explained by the frequent existence of axillary prolongations of the gland. 5. Some of the supernumerary breasts have, as points of departure, a pediculisation, and a migration of the glandular lobules—analogous to the migratory tumours of the breast. 6. These supernumerary breasts may exist with or without nipples, and in the former case the milk secreted resembles that of the normal breast. 7. The above characters of the supernumerary breasts enable us to distinguish them from tumours; but in some cases, in which consecutive alterations take place, their diagnosis may become very difficult or even impossible.—*Bull. de Thérap.*, September 15

Queen's University in Ireland.—At the annual conferring of degrees, on October 11, his Grace the Duke of Leinster, Chancellor of the University, stated that the number of students reported as having attended the Queen's Colleges of Belfast, Cork, and Galway in the academic year just closed was 886, against 844 in the previous year. He also announced that in the Faculty of Medicine seventy-seven candidates had sought the degree of Doctor in Medicine, and of these forty-seven had satisfied the severe requirements of the examiners. Thirty-five candidates out of sixty-five had passed for the degree of Master in Surgery, and fifteen out of forty-five had been deemed qualified for the diploma in Midwifery. One hundred and sixty-one candidates presented themselves at the second University examination in Medicine, of whom one hundred had satisfied the examiners; and in one case the answering of the candidate, Mr. Cotter, in anatomy and physiology was so exceptionally good that it was specially reported to the Senate by his examiners. One hundred and thirty-one candidates out of 187 had been successful at the first University examination in the same Faculty.

AID TO PHYSICIANS IN THE YELLOW FEVER DISTRICTS.—The Medical Society of the County of New York has organised a subscription in aid of the suffering physicians in the yellow fever districts—a large number of whom, it is believed, stand in great need of help, as their incomes during the prevalence of such an epidemic as this are temporarily cut off. The officers of the Society have been constituted a committee for receiving the subscriptions, and will have the power to forward moneys to certain physicians in the fever-stricken towns, to whom its ultimate distribution among distressed doctors is to be entrusted. The fund to be raised is to be devoted exclusively to aiding physicians and surgeons and their families.—*New York Med. Record*, September 7. [Any of our readers who may be desirous of contributing to this worthy object can communicate with Dr. John C. Peters, President; Dr. Isaac Taylor, Vice-President; Dr. Farnham, Treasurer; or Dr. Castle, Corresponding Secretary of the Society.]

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Mr. F. E. Gabb, Belize.—Received with thanks.

Dr. Imray, Dominica.—The printed notice on the wrapper of the journal has no significance unless a date is added.

Anti-Quackery calls attention to the disgusting pamphlet of a member of the Royal College of Surgeons, which was removed from the ladies' waiting-room at the Great Western Railway; we recommend him to send it to the Secretary of the College, and are only surprised that the authorities of the railway should offend public decency by allowing such a pamphlet to be placed in any of their waiting-rooms.

A Remonstrance.—A deficiency of water-supply to a hospital for several days, and on one day none at all, from apparently no sufficient or reasonable cause, is a default on the part of a public company which deserves notice. Serious complaints were made at the last meeting of the Metropolitan Asylums Board, by the Stockwell Hospital Committee, as to the supply of water to that establishment. It appears that on three or four days lately the Hospital had almost been without water; and on one day there was not a drop to be obtained, either for washing or bathing purposes. The Committee felt, from the unsuccessful results of previous representations to the secretary of the water company, that it was useless to apply to him again on the subject. The chairman truly observed—"It was a sad thing that a hospital for infectious diseases, or any hospital, in fact, should be without, or even short of, water." In the course of the discussion which ensued it was suggested whether the company were not liable for breach of contract; but ultimately it was decided, in the first instance, that a letter be written, bearing the signature of the chairman, "of a general character, but strong," for not supplying water for which they were paid.

The Poison "Cúrare."—This poison has recently been made the subject of a scientific inquiry in Brazil. Hitherto the preparation of it has been a sealed "trade secret" by the Indian manufacturers on the Amazon. An Indian expert, however, has been induced by Professor Jovert to show him the plants and mode of preparation, and the Professor himself has succeeded in making it, and ascertaining also the physiological action of each ingredient. Of these, one is the powdered outer bark of a *Strychnos*, another the outer bark of the *Cocculus toxiferus* of Weddell.

Sanitary State of Plymouth.—Mr. Mansergh, C.E., has at length made his report on the public sewers and house-drains of Plymouth. It is an important, carefully prepared, and elaborate statement. He presumes that the abnormally high death-rate of Plymouth last summer, caused both by typhoid fever and diphtheria, was the primary cause of his being consulted on the subject. He remarks that typhoid fever and diphtheria are not only "dirt diseases," but the former, and probably the latter, is reproduced by the agency of sewer-gas. He first shows the probability of sewer-air carrying infection from one part of a town to another, and clearly proves that at Plymouth almost the only outlet of such poisonous air is into the houses; and being of opinion that the ventilation of the sewers is the antidote for the present dangerous state of things, sets forth in detail the best means of carrying it into effect. The means advised is putting in ground ventilators at frequent intervals; but grave doubts are expressed as to the efficiency of many of the sewers. He estimates the cost of the suggested alterations and improvements at about £5000.

Pauperism: its Influence on Children.—The memorial stone of the schools which the Guardians of Birmingham are building for workhouse children, to remove them from the influence of pauperism, was laid last week at Marston-green. The buildings include three schools, fourteen cottage homes, master's residences, workshops, and infirmary. The cost will be £20,000, exclusive of the site..

A Memorial Fountain.—The representatives of the late Sir Francis Goldsmid, M.P., have resolved upon erecting a fountain to his memory in Dock-street, Whitechapel. It will not entail any cost upon the local authorities.

Penny Wise, Pound Foolish.—The Brierley Hill Local Board have resolved that the salary of the Medical Officer of Health be reduced from £50 to £30 a year, and that the Board advertise for a medical man to fill the vacancy occasioned by the resignation of Mr. Ellis.

A Timely Suggestion.—Dr. Mackinder, medical officer of the workhouse, drew the attention of the Gainsborough Board of Guardians, at their last meeting, to a scheme for re-arranging the sick wards, etc. He said that as the Board of Health were building a hospital for infectious diseases, the Guardians should anticipate that they would send their patients there instead of to the workhouse hospital. The latter building was standing idle at present, and he suggested that it should be utilised for sick cases now in the workhouse, the present accommodation there to be reserved for the infirm and ordinary invalids who required nothing but extra diet. An improved class of beds was also necessary. The expense would be inconsiderable, and the ultimate result would be better treatment and quicker recovery. The doctor's suggestions were appreciated, and a committee is to be appointed to consider the matter.

Alleged Neglect and Mismanagement at Bolton Workhouse.—The Poor-law Guardians of the Bolton Union have held an inquiry into the conduct of the workhouse by the governor and matron. The inquiry was held in consequence of a letter received from Dr. Latour, Resident Assistant Medical Officer, in which he complained of want of cleanliness in the female ward, of inattention by the master and matron to his requests, and of discourtesy on the part of the chairman of the Workhouse Committee. Dr. Latour sent a copy of his letter to the Local Government Board, who requested the Guardians to consider it, and ascertain how far the statements were well founded. A further allegation was made by members of the Board, that since the appointment of the present master and matron of the workhouse at least thirty officers had left, and now Dr. Latour had tendered his resignation. The inquiry lasted several days. Dr. Latour, on being examined, declared that, for want of accommodation, children suffering from itch had been sent into the fever ward, and that he had been pressed by the Committee to sign orders for beer for able-bodied paupers, while necessaries he had asked for had been refused, and things had been sent to the workhouse that were unfit for food. He urged that it was hardly a proper thing for the Committee to adjourn to the master's drawing-room, as they had been in the habit of doing, for the purpose of considering complaints which had been recorded against him in the report-book. The master denied that there had been any want of attention to the cleanliness of the house, and said that if he and his wife had received from the officers that courtesy which they had a right to expect, the same would have been returned. As to the thirty-two officers who had left the institution, he said sixteen resigned from causes over which he had no control, five left to improve themselves, one was superannuated, three were not suitable for their situations, five were discharged for drunkenness, and four were dismissed for immorality. The Board will report the result of their investigation of the subject to the Local Government Board.

Baby-Farming.—We are glad to observe that the Metropolitan Board of Works do not intend the Infant Life Protection Act shall be a dead letter. Baby-farmers for a long time carried on their calling with an apparent immunity from legislative restrictions and penalties, but the defects of previous legislation on the question have been remedied, and the necessary protective powers provided. A woman named Ann Leach has been fined 40s. and costs, at the Clerkenwell Police-court, for unlawfully taking in to nurse more than two infants, without previously obtaining authority to do so. In default of payment, the alternative was one month's hard labour. The Metropolitan Board of Works prosecuted.

A New Food Industry.—The new American "dried egg industry" is stated to be a great success. The eggs having been examined, to ascertain if they are good, are then thrown into a receiver, where they are broken, and by a centrifugal operation the white and yolk are separated from the shell, in a manner similar to that in which liquid honey is separated from the comb. The liquid is then dried by heat by a special process, and the result is a substance much resembling sugar, which is put in barrels, and is ready for transit at any point, preserving completely all its good qualities. It has been found equal, for ordinary uses, to eggs freshly laid, after having been taken twice across the equator in ships.

Open Spaces.—There have been several gratifying proofs lately exhibited by the "upper ten thousand" and the wealthy, to provide facilities and local areas for the recreation and well-being of the people in perpetuity. We have now to record two more such instances. The Duke of Norfolk has set apart three pieces of land as recreation-grounds for the inhabitants of Sheffield; the land is situated in districts which are thickly populated with working people. A public park of forty-five acres extent, and valued at between £20,000 and £25,000, the gift of Mr. John Talbot Llewellyn, the High Sheriff of Glamorganshire, has been opened by the Mayor and Corporation of Swansea for the use of the people. It is situated about three miles from the town.

Child-birth in the Air.—The *Rappel* of Paris announces the birth of a boy, a few days since, under very novel circumstances. In the "captive balloon," on the 13th inst., a young lady was taken ill. A doctor from Tarbes, who happened to be in the car, saw her safely delivered of a boy before the balloon reached the ground, when a cab took the mother and child to an hotel. The husband (son of one of the leading Manchester manufacturers) presented the doctor with 500 fr. for his services; and the *Rappel* commends balloon ascents to doctors in want of patients.

COMMUNICATIONS have been received from—

Dr. A. J. Balmanno Squire, London; Dr. Gavin Milroy, Richmond, Surrey; Mr. W. E. Poole, London; Mr. J. Chatto, London; Dr. J. Milner Fothergill, London; Mr. B. R. Wheatley, London; Dr. Octavius Sturges, London; Dr. J. Hughlings-Jackson, London; Dr. T. M. Bruce, London; Dr. Edward Sparks, London; Mr. Arthur H. Laver, Sheffield; Mr. C. J. Cullingworth, Manchester; Mr. D. Colquhoun, London; Mr. W. Harrison Cripps, London; Mr. T. M. Stone, London; Dr. J. Matthews Duncan, London; Mr. G. Sutton, London; Mr. Lake, Sheffield Infirmary; Mr. Gaskoin, London; Dr. Dunglison, Philadelphia; Dr. H. Jackson, Leeds; Mr. Walker, St. Thomas's Hospital; Dr. Carter, Liverpool; Dr. J. W. Moore, Dublin; Dr. S. Mackenzie, London; Mr. Marsh, London; The Secretary of the Naval Medical Supplemental Fund; Mr. C. Lucas, London; Dr. Godson, London; Mr. A. H. Allen, Sheffield; Dr. Shuttleworth, Lancaster; The Dean of the Faculty of Medicine of University College, London.

BOOKS AND PAMPHLETS RECEIVED—

James R. Lane, F.R.C.S., Lectures on Syphilis—Dr. Sylvester Marsh, Section-cutting, a Practical Guide to the Preparation and Mounting of Sections for the Microscope—Charles Roberts, F.R.C.S., A Manual of Anthropometry—Dr. Martin Kirchner, Die Entdeckung des Blutkreislaufs—John F. Knott, An Essay on the Pathology of the Œsophagus.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux - Gazette Médicale—Le Progrès Médicale—Bulletin de l'Académie de Médecine—Pharmacentical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Cincinnati Lancet and Clinic—Gazette Hebdomadaire—Giornale Internazionale delle Scienze Mediche—Night and Day—Canada Lancet—Dublin Journal of Medical Science—Students' Journal and Hospital Gazette—Revue des Sciences Médicales—New York Medical Journal—Boston Journal of Chemistry.

APPOINTMENTS FOR THE WEEK.

October 19. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

21. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Mr. Erasmus Wilson (the President) will deliver a short Opening Address. Dr. Lauder Brunton, "On Venous Pulsation."

22. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Royal Medical and Chirurgical Society, 8½ p.m. Report of the Scientific Committee appointed to examine into the Relation existing between Membranous Croup and Diphtheria.

23. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 1½ p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

Hunterian Society (London Institution), 8 p.m. Mr. Clement Lucas will show a Patient after Operation for Genu Valgum by Ogston's Method. Dr. Ernest Sansom, "On some of the Common Disorders of Children."

24. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

25. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

Clinical Society, 8½ p.m. Mr. Callender—1. "Effects of the Elastic Bandage" (living specimen); 2. "Cases of Stricture of the Urethra treated by the aid of Supra-pubic Incision into the Bladder." Mr. Howse, "Supra-pubic Incisions for the Relief of Traumatic Stricture." Sir James Paget, "Profuse Discharge of a Watery Fluid from One Nostril." Dr. Farquharson, "Quinine Rash."

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 12, 1878.

BIRTHS.

Births of Boys, 1171; Girls, 1187; Total, 2358.
Average of 10 corresponding years 1868-77, 2249·5.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	692	726	1418
Average of the ten years 1868-77	672·1	654·2	1326·3
Average corrected to increased population ...	...	...	1419
Deaths of people aged 80 and upwards ...	...	...	59

Note.—The births and deaths registered last week may be compared with the average numbers in the corresponding weeks of the ten years 1868-77 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	6	1	1	7	...	4	...	4
North ...	751729	1	...	8	2	13	...	11	...	12
Central ...	334369	...	1	2	2	6	...	6	...	...
East	639111	2	4	7	3	11	1	4	1	14
South	967692	2	2	15	9	15	...	6	1	7
Total	3254260	5	13	33	17	52	1	31	2	37

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·542 in.
Mean temperature	53·9°
Highest point of thermometer	69·1°
Lowest point of thermometer	42·7°
Mean dew-point temperature	50·1°
General direction of wind	S.W.
Whole amount of rain in the week	0·54 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, October 12, 1878, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1878.*	Persons to an Acre. (1878.)	Births Registered during the week ending Oct. 12.	Deaths Registered during the week ending Oct. 12.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3577304	47·5	2358	1418	69·1	42·7	56·9	13·83	0·54	1·37
Brighton	103923	44·1	63	40	68·0	44·0	57·2	14·00	0·99	2·51
Portsmouth ...	129461	28·9	68	57	...	...	...	...	...	...
Norwich	84620	11·3	58	32	66·0	45·2	56·7	13·72	0·29	0·74
Plymouth	73599	52·8	45	38	68·0	39·0	56·8	13·78	0·72	1·83
Bristol	206419	46·4	135	58	70·9	39·8	56·1	13·39	1·40	3·56
Wolverhampton ...	74240	21·9	43	29	68·6	42·6	54·9	12·72	0·85	2·16
Birmingham ...	383117	45·6	301	205	...	...	...	...	...	...
Leicester	121473	38·0	93	38	68·0	41·0	55·3	12·95	0·62	1·57
Nottingham ...	165267	16·6	122	58	71·0	39·8	56·6	13·67	0·28	0·71
Liverpool	532681	102·2	412	263	65·0	44·4	54·9	12·72	0·76	1·93
Manchester ...	360514	84·0	236	152	...	...	...	...	...	...
Salford	170251	32·9	111	85	69·0	41·7	55·7	13·17	1·20	3·05
Oldham	107366	23·0	72	51	...	...	...	...	...	...
Bradford	185088	25·6	143	64	67·0	47·2	56·1	13·39	0·85	2·16
Leeds	304948	14·1	232	127	66·0	47·0	56·7	13·72	0·60	1·52
Sheffield	289537	14·7	215	119	67·0	45·5	56·5	13·61	0·70	1·78
Hull	143139	39·4	107	54	67·0	42·0	56·1	13·39	0·27	0·69
Sunderland ...	112459	40·6	83	51	68·0	49·0	58·4	14·66	0·29	0·74
Newcastle-on-Tyne	144570	26·9	111	73	...	...	...	...	...	...
Edinburgh	222371	53·1	140	69	65·2	45·5	56·0	13·33	0·56	1·42
Glasgow	566940	94·0	376	230	63·0	47·2	56·3	13·50	0·89	2·26
Dublin	314666	31·3	156	156	69·6	41·6	56·1	13·39	1·07	2·72
Total of 23 Towns in United Kingdom	8373953	38·0	5730	3467	71·0	39·0	56·3	13·50	0·72	1·83

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·54 in. The lowest reading was 29·11 in. on Thursday morning, and the highest 30·16 in. by the end of the week.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1878 by the addition of seven years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. Nottingham, Salford, and Oldham, however, form exceptions to this rule, as the estimates for these three towns have been revised with the aid of local information as to the rate of increase of inhabited houses. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

THE ACQUISITION AND DISTRIBUTION OF SANITARY KNOWLEDGE.

BEING THE INAUGURAL ADDRESS TO THE SOCIETY OF MEDICAL OFFICERS OF HEALTH AT THE OPENING OF THE SESSION 1878-79.

By THOMAS STEVENSON, M.D., F.R.C.P.

I HAVE felt no little difficulty in making choice of a topic on which to address you; not that there is not an abundance of subjects on which I might discourse, but it is not easy to choose one on which to offer remarks that a society like this, composed for the most part of sanitarians thoroughly well versed in the theory and practice of sanitation, would not find trite and uninteresting from their lack of novelty. My predecessors in this chair, in which by your kind indulgence I am placed for the second time, have on so many occasions delivered addresses with a force and grace which I can but feebly imitate, that I feel no little diffidence in endeavouring to interest you. I hope, nevertheless, that a brief hour will not be unprofitably spent if I speak to you of "The Acquisition and Distribution of Sanitary Knowledge"; and my remarks will chiefly have reference to the acquisition and distribution of sanitary knowledge by the medical profession.

I need hardly say that it is of the highest importance that the knowledge of sanitary matters diffused among the people at large be sound; and this can hardly be the case unless medical men, or at least persons well versed in the principles of sound physiology and medicine, be the chief agents in its dissemination. One has only to read the articles on hygiene written in the best of our non-medical newspapers to see how liable even able writers are, when not grounded in medicine, to fall into errors. And yet we meet—happily less frequently than was formerly the case—with medical men who are very imperfectly acquainted with sanitary science, and too little or not at all impressed with its value. The time is not far distant, I hope, when such ignorance will be inexcusable, and be considered alike by the public and the profession to be incompatible with competence to practise any branch of the medical profession.

It could only have been from an imperfect state of physiology, and consequently from an imperfect state of medicine and medical education, that until within a recent period most diseases were practically regarded by all but a few enlightened physicians as something arising within the living body itself and independent of external conditions, except a few such obvious ones as temperature and moisture of the atmosphere. I hope this is not too strong a statement: I am speaking of the belief which governed practice—the practice of the ordinary practitioner of medicine—and not of the more enlightened doctrine and practice of the few. Moreover, inconsistently enough, epidemic diseases were looked upon as distinct entities foisted on the patient from without. But when more enlightened views began to prevail, and the influences exercised by impure air, filthy water, foul soil, and all those external conditions which we now recognise as all-important factors in the origination and propagation of morbid processes—when these, I say, came to be admitted causes of disease, and the science of sanitation arose, hygiene might have been expected to have received a more extended and cordial recognition in the curriculum of medical education than has actually been the case. Perhaps the wide range of knowledge required has had a deterrent effect, for it is not too much to say that the science of sanitation covers the whole range of medicine and something more; and the sanitarian who is truly worthy of that name must not only be well read in medicine, physiology, and pathology, but he must also be acquainted with physics, chemistry in its applications to the arts, rudimentary geology, and statistics. Now, it can scarcely be said with truth that medical education covers, and certainly the requirements of the ordinary examining boards do not demand, an acquaintance with all these subjects. I am not speaking without knowledge when I assert that many excellent medical men (men of ability, and in other respects good practitioners) go into practice with a very inadequate knowledge of physics, none of geology or the properties of soils, and ignorant of the true use of statistics. It is clear to me that we need an extension of medical education to supply and meet these deficiencies; and moreover, that hygiene ought to form an obligatory part of the professional education of every medical practitioner. At present it seems to me to be often a matter of pure chance as to whether the patient or the medical attendant be the best informed as to the hygienic or unsanitary influences at work upon the latter; and perhaps the advantage in knowledge in this respect is not always clearly on the side of the doctor. State medicine is now a well-recognised term; and surely, if there be any meaning in the term, it involves the idea that the State has a right to demand of the medical profession adequate proof that all its members shall have a competent knowledge of all that so much concerns the national welfare, and falling within the peculiar province of the physician.

I wish, then, to urge upon you, and through you upon my medical *confrères* generally, and upon the public, the need which exists of making the systematic study of hygiene and public health an obligatory and very essential portion of medical study. And not only must this be so, but the systematic study of State medicine must be as distinctly recognised a branch of medical study as, say for instance, obstetrics or forensic medicine. Prevention being proverbially better than cure, and prevention being in such a number of instances easier than cure, it might not be so quixotic as some might think it to advance the proposition that preventive medicine has prior claims to those of curative medicine. But indeed the two cannot well be divorced without injury alike to both these branches of the art of medicine. A few general observations on hygiene in a course of lectures on the practice of medicine, and an occasional bedside remark, some six or eight lectures on the subject of public health, and perhaps a single question in an examination paper, do not afford in my opinion, and I hope do not afford in your opinion, a sufficient preparation for one who may at any time be called upon to advise on the most serious junctures which arise within the department of public health. I believe it to be our duty, not only as medical men, not only as health officers in our individual capacities, but also as a society, to see to this, and to proclaim with no dubious voice that a change is necessary, and that something more is demanded in medical education to meet the growing needs of an ever-growing branch of medicine.

Now, I by no means wish to undervalue the good which is likely to result from the institution of examinations for certificates of proficiency in State medicine by our universities. Great good has resulted, and more will no doubt result, year by year, from the action thus taken to advance the cause of hygiene; but this action is not enough, and what is now needed as supplementary to the action of the universities is that hygiene should be an obligatory branch of the education of every medical practitioner; so that no one might be allowed to enter upon practice without there being some satisfactory guarantee that he—and may I say she?—has at least a certain minimum knowledge of what is so all-important to the State as well as to the individual.

Those medical students and incipient practitioners of medicine who intend to seek for appointments as medical officers of health, complain, with some justice, that the special knowledge which they require—and which, by-the-bye, ought not to be so special—has to be acquired by means of private instruction. We know, on the other hand, that those selected medical men who go to India to perform public medical duties have to undergo a secondary course of training at Netley to fit them for their responsible duties. Our Indian subjects thus have an advantage bestowed upon them which is denied us in this country.

But perhaps I have said enough on the need there is of making the study of public health and hygiene an obligatory part of every medical man's education; and I may be allowed to give my views as to the best mode of giving this education.

The principles of preventive medicine may either be inculcated along with those of curative medicine—which appears on the face of it to be the most rational course of procedure,—or they may form the subject of a special course of instruction. And this would perhaps have to follow, when logically it ought to precede, the study of curative medicine. But indeed I am of opinion that curative and preventive medicine are inseparable, and in any consistent scheme form but divisions, artificially made, of one great

whole. Cure is what is demanded by the patient and his friends, and what, no doubt, the physician himself makes his primary and great aim. Hence causation of disease, and the means of averting it, are deemed secondary considerations. Were the patient the only person concerned, this might well be; but seeing that he or she is, as a rule, the member of at least a family or household, and that the same cause has been perhaps insidiously at work undermining the health of other members of the household, from another point of view causation and prevention become as important matters as cure. From a scientific point of view, then, as well as from a more practical standpoint, we must, I think, lay it down as indisputable that curative and preventive medicine ought to be studied together as being indeed inseparable; and thus the more purely scientific studies which engage the attention of the medical student during the earlier part of his career must be made to have as direct a bearing upon hygiene as they at present have upon the practice of medicine.

Now bear with me a little while, and I hope I shall not weary you whilst I proceed to enter a little more into particulars, and discuss the mode in which, as I conceive, the present subjects of medical education require a little adaptation to meet the wants of that almost new order of men, the sanitarians.

The range of subjects which it is desirable that the student of State medicine should be well acquainted with, is admirably laid down in the regulations for examination in subjects relating to public health of the University of London, and they are these:—*Chemistry* and *microscopy*, in relation to the examination of air, water, and food; *meteorology* and *geology*, as far as they bear on the duties of health officers, viz., general knowledge of meteorological conditions, reading and correction of instruments, general knowledge of soils—their conformation and chemical composition; *vital statistics*, in reference to the methods employed for the determination of the health of a community, birth-rate, death-rate, disease-rate, duration and expectancy of life, present amount of mortality and its causes in different communities; *hygiene*—general principles of of hygiene; *special topics*—soil, construction of dwellings, conservancy of cities, unhealthy trades, supply of food to cities and examination of food, disposal of sewage, water-supply; *medicine*, in reference to the origin, spread, and method of prevention of diseases generally, but especially those of the epidemic class; *sanitary engineering*, as far as regards the arrangements connected with water-supply, sewerage, and ventilation, a knowledge of the reading of plans, sections, scales, etc.; *sanitary law*, as far as it relates to the duties of officer of health, a knowledge of the powers given under the various Sanitary Acts, as defined in the instructions issued by the Local Government Board, and of the methods of procedure in special cases. I have quoted from the Calendar for 1877; the Calendar for the current year lays down an extended range of subjects.

Now here is an extended curriculum, yet one perhaps not at all too severe for the health officer of the future; and it will be the duty of our schools of medicine to provide, at no distant date, adequate instruction in at least most of the branches of study here indicated. The ordinary practitioner, however, does not need, and could not of course attempt, the whole, or anything like the whole, of this. Nevertheless, he ought to have a fair acquaintance with some of the general, and even some of the special, topics I have detailed to you.

Beginning with the more elementary studies, we know that the study of hygiene is so intimately bound up with that of physiology and pathology, that it is not too much to assert that if those two subjects be not taught with a direct aim to the inculcation of the principles of hygiene there is a defect in the teaching; and the same may be said of chemistry—at least, of applied chemistry. The time is perhaps not far distant when purely scientific elementary chemistry will become a part of the school education of every man of liberal education; and even before this is brought about, elementary chemistry will be relegated to the preliminary medical studies in which students must pass before entering upon their more purely medical studies. Meantime, chemistry has made such rapid advances, and has fallen so much into the hands of pure chemists, that the medical and more useful aspects of the science are in some measure lost sight of, especially in the text-books and manuals of chemistry. It is said that science must be studied for its own sake, and without reference to its direct or collateral uses, or to the pecuniary advantages which may accrue to the possessor of scientific knowledge. There is a good deal of clap-trap, as well as a strong element of truth, in this statement. There are some persons whom taste induces, and fortune permits, thus to cultivate science for its own sake; and I wish there were more of such persons. I know, however, that many of those who proclaim the above view with persistent reiteration have either comfortable sinecure posts, or at all events draw ample pecuniary emoluments from science. Those who aim at the practice of a profession, and in that profession need the aid of chemistry—as, *e.g.*, practising chemists and physicians—are often sneered at, and looked down upon, by the purely scientific professor. This is hardly fair, for the medical man and the sanitarian may fulfil very useful functions without being entirely devoted to scientific pursuits. They merely require that amount of purely scientific information which will enable them to practise their profession with the utmost advantage to themselves and to their clients. But in truth there is no reason why the study of chemistry should not be made at the same time thoroughly scientific, deeply interesting, and in the highest degree useful. As firm a grasp of the principles of the science may be imparted by instruction in the commonest and most useful substances used in medicine as by the study of the complex products of the art of the most enlightened and advanced of modern chemists. Since the sanitarian needs so much more extended, or rather so much fuller, a knowledge of chemistry in its applications to the arts than the ordinary practitioner of medicine—and it is my desire to see every ordinary medical man converted in a certain degree into a sanitarian also—I wish to express my opinion that the study of at least medical chemistry should be extended and made more practical. I mean that the elementary and more purely theoretical course should be followed by a course of applied chemistry; and also that the useful applications and the physiological bearings of chemical details should receive greater attention in the study of chemistry. At one time an elementary text-book of chemistry was a treatise which might be read with interest and advantage by those who have a very slight interest in the science; and the chapters on air, water, and food were replete with useful information, which was invested with a halo of quasi-romance. Alas! this is now rarely the case. A few days ago I took up Fownes's well-known manual, and found that exactly the same amount of space was now devoted to the *naphthols*, an obscure and small class of bodies, as to the atmosphere; and that the chapters on physiological chemistry were entirely omitted from the last edition. And what medical man of my own and of an antecedent generation does not remember Dr. Neil Arnott's beautifully written manual of Natural Philosophy, so charming in its lucid descriptions of the ordinary phenomena of daily life, and make regretful comparisons between it and more modern, and so-called more scientific, treatises on the same subject. In fact, science has made such rapid strides of late that it, or rather the books which treat of science, have for a time lost a great deal of their former simplicity; and from time to time a teacher is required to arise among us, who, whilst sacrificing none of the spirit of modern advance, can impart lucidity and simplicity to the description of the fundamentals and most important of the details of his science.

A complete curriculum of study of public health should, however, embrace, in the first place, a thorough knowledge of elementary physics. This need not be carried very far, but it should be above everything thorough, and should be made practical. The principles of hydrostatics and pneumatics are indispensable, so as to make the student familiar with the flow of liquids, the action of pumps and other engines, and with the motions of air, so as to enable him to solve problems in ventilation. Superadded to this would of course be instruction in meteorology, especially in the principles and use of instruments such as the thermometer, barometer, hydrometer, the so-called ozometer, and instruments for measuring atmospheric electricity. Meteorology is daily becoming more assuredly a recognised science, and unacquaintance with its leading principles less excusable in a medical man. Following upon physics would of course be chemistry, not only in its purely scientific aspects, but physiological chemistry (at least the physiological chemistry

of the air we breathe, the soil we live upon, and the water we drink) and the chemistry of food.

The student needs, then, to have superadded to a course of instruction in the principles of chemistry, by means of lectures and the ordinary course of practical chemistry, a special course of practical instruction in applied chemistry, if he is to become a health officer. This perhaps would not be necessary for those students who have no intention of accepting such a post; but even these require to have instilled into them by means of experimental lectures, or better by means of demonstrations in the laboratory, the essentials of the practical examination of water, air, and perhaps of food. Such a course need not be an extended one, for the object would be not to turn all students into chemists or microscopists, but to assist the study of applied chemistry by the eye and the test-tube.

When we come to discuss the amount of knowledge demanded of the health officer in order to enable him efficiently to discharge the responsible duties of his office, we touch upon a very moot point, and one on which there is room for, and no doubt actually are, great differences of opinion. There are health officers and health officers: those who discharge a few duties in a small area; and those who are precluded from ordinary practice, have large areas assigned them, receive salaries often inadequate enough, but still reckoned by hundreds of pounds a year. Now, it is only fair that these latter gentlemen should be expected to present a higher type of knowledge and skill than the former; and it has been very much the fashion to require them to produce evidence of their chemical skill. I am afraid that the testimony produced has not always been of the highest value. Speaking for myself as a teacher of chemistry, I can say that it has only been in rare and peculiar cases that I have been able to testify to the skill in manipulation of a would-be medical officer of health, although frequently pressed to give such testimony. The experience of other teachers, however, appears not always to have coincided with my own, and just now there is a tendency to regard practical skill in water analysis, according to some simple and uniform method, as the chemical desideratum in a medical officer of health. I doubt whether it is wise in all cases to entrust these analyses to the medical officer, who can in only a few instances be expected to acquire and keep up the requisite amount of skill required for some of the determinations in an accurate water analysis; and it is probable that in most instances it would be wiser to call in the aid of the now almost omnipresent public analyst, whose services can generally be obtained at a reasonable cost by the sanitary authority. It would be well, however, for all results arrived at by the chemist to receive a detailed medical criticism on the part of the health officer, for he is far more competent to form a sound judgment upon the influence on health of a water-supply than a pure and non-medical chemist, the analytical data being furnished by the latter.

Some of the remarks which I have made respecting chemistry apply in a much less degree to physiology. I say in a lesser degree, because human physiology, or the study of normal man, is most intimately related to the study of abnormal man. Physiology, and its correlative science pathology, are intimately allied with preventive medicine —much more so than with curative medicine. And so of necessity it has come to pass that our teachers of physiology are compelled to study in some measure the laws of health as applied to communities as well as to individuals. Great difficulties are nowadays placed in the way of the study of practical physiology by the suppression of vivisection so-called; and hence there is too great a tendency to confine the study of "practical physiology" in the student's curriculum to the examination of dead tissues, to the neglect of the study of the functions of respiration, oxygenation, digestion, and excretion, in which we as sanitarians are more obviously interested. Practical physiology and physiological chemistry, and the chemistry of food, air, and water, are intimately allied, and should be studied at the same time; and they should be studied with especial reference to their bearings upon health and disease.

We see, then, that in the department of physiology there will be wide scope for study on the part of the would-be health officer; and also that there is room for improvement in the study by the ordinary student of medicine. All the possible influences bearing upon health must be taken into account; and hand-in-hand with this must go pathology; for, as in curative so in preventive medicine, a clue to a true physiology will often be formed by the study of morbid actions. Some of the greatest of modern advances in preventive medicine have, moreover, been made by those who have made pathology a special study; and among those who have thus very largely benefited medicine I may be allowed to mention the name of one of our members, Dr. Burdon Sanderson.

It is, however, in the teaching of medicine proper that a reform is perhaps most needed. And, in saying this, I do not mean in the slightest degree to cast a slur upon the present teachers of medicine in our great medical schools. It would ill become me, who am not a practising physician, to insinuate that. I know full well with what difficulties the whole matter is beset; how wide is the range—not to travel beyond diagnosis, prognosis, and treatment—to be taught; and how little is the time in which to teach the science and art of medicine. I find, too, that year by year more is done in lectures on the practice of medicine to remedy the omission. I was informed a few days ago by the lecturer on medicine at one of the large metropolitan schools of medicine, that he now devotes six lectures of his course to public health or hygiene; and I know that he is not singular in this. I can but express a hope that the good example thus set may meet with many imitators, and that ere long diagnosis, prognosis, treatment, and pathology, whilst losing none of their importance, may find universally associated with them in their exposition, and in fitting proportion, etiology, prevention, and the right application of statistical methods of inquiry. At one time it was customary for some even eminent medical men to sneer at statistics as a method of inquiry which might be made to prove anything according to the preconceived fancy of the statistician. This could only have arisen from a want of knowledge of the proper mode of collecting and using numbers for statistical purposes. No one, I believe, nowadays, who has taken the trouble to inquire into the right mode of collecting and using figures, will doubt that the statistical method is a sure and excellent one. But I need say no more on this to a body of men who require no convincing of the truth of the assertion; and having gently, and I hope not unnecessarily, touched upon a delicate topic—the teaching of medicine proper—I will pass on to other matters. Doubtless, some will think me rash in having "stepped in where angels fear to tread," and be astonished at one who is not a practising physician presuming to point out what he considers a defect in medical teaching. But I have a right to criticise the teaching of medicine and all its allied sciences from the special standpoint of the sanitarian; and I am not yet convinced that any one department of medical teaching is anything like perfect.

As supplementary to the ordinary courses of clinical, medical, and surgical practice, I think every medical student should be required to attend for a brief period at a special hospital or hospitals where specific zymotic diseases are treated—such, for instance, as the London Fever Hospital, and the Small-pox Hospital, or at the hospitals provided by the Sick Asylums Board. Failing this, attendance at such hospitals should be formally and specially recognised. Any instruction which might be given at such hospitals ought not only to aim at diagnosis, prognosis, and treatment, but contagion and its prevention, the rise, cause, and decline of epidemics, disinfection, and the best means of preventing the spread of epidemic diseases, might be touched upon with peculiar appropriateness.

It is remarkable that in one subordinate department of public health special evidence of fitness is required: I refer to vaccination. Evidence of instruction in this is required to vaccination. Evidence of instruction in this is required from a duly qualified teacher of vaccination; something more than mere theoretical knowledge, or even than the practical knowledge which may be acquired by every medical student and assistant in the discharge of his ordinary duties. It would be well, I think, were this principle extended to the whole range of practical preventive medicine; and since under existing arrangements practical instruction in sanitation can hardly be acquired within the walls of a general hospital, from which for the most part contagious epidemic diseases are rightly excluded, arrangements might be made for the attendance of the student for a brief period on the practical teaching of a *bonâ fide* medical officer of health. After a theoretical course of lectures on public health, and perhaps a short course of laboratory instruction directed to those special chemical manipulations, use of physical

instruments, such as anemometers, barometers, thermometers, and other meteorological instruments, such a course of (if I may use the term) clinical, or rather house-visiting, instruction from a competent health officer would be very beneficial. Pupils of this kind, who would pay a small fee for instruction, would be, I doubt not, gladly welcomed by the health officer; and I feel quite sure that not only those who intend to undertake public health appointments, but the best of our medical students as a body, would gladly embrace such opportunities were they offered to them, and duly acknowledged by any examining boards. These practical courses would soon get to be recognised by the Local Government Board, which must often feel sorely at a loss for some available test of proficiency for the post of medical officer of health, and local sanitary authorities would come to demand such a test as a *sine quâ non* in making sanitary appointments. At present there is no standard of knowledge by which candidates for public health appointments can be tested, without we consider the newly established university diploma in State medicine as such. What is needed to give them effect is that some definite standard of sanitary requirements should be demanded of all aspirants to the medical profession. When the various examining bodies and the medical profession at large settle their differences and agree to one uniform minimum standard of requirements, we may hope that hygiene will receive its due share of attention.

And now, gentlemen, having said as much as time will permit on the acquisition of sanitary knowledge by our profession, I must say a few words respecting its distribution by the members of the medical profession.

In the distribution of sanitary knowledge the members of the medical profession, and above all medical officers of health, ought to play a leading part. It is from them that almost all sanitary knowledge must in the first instance proceed. When the time shall come, as I believe it will come, and at no distant date, when all the members of our profession are well instructed in the principles and in the practice of sanitation, they will see it to be their duty, to a greater degree than at present, to inculcate upon their patients the observation of the general laws of health, and their particular observance. A medical practitioner will then feel it to be his bounden duty to inquire into all the surroundings of his patient, and the probable or possible circumstances which may have brought about or contributed to the illness. He will know that it is as important to inquire into conditions of atmosphere to which his patient has been subjected, as regards purity, temperature, dryness, etc., as to inquire what has been his dietary; that the state of the water drunk is as important as the quantity of wine or spirits imbibed; and that it is perhaps as important to ascertain the state of the drainage of the house where a patient resides, or of the office in which he spends his days, as to look at his tongue, to auscultate his chest, or to examine his excreta. The want of sufficient exercise; the alternations from heated and vitiated air to cold and too bracing air, too suddenly made; the overcrowded bedroom; the deficient cleansing of the skin by means of baths; the wearing of underclothing till saturated with the secretions of the skin, whilst it may be that simultaneously the outer garments give no clue to this; the foul state of the emanations from the water-closet, drains, and basement of a house, —are factors in the production and prolongation of illnesses that are too much neglected by the great bulk of the medical profession. The neglect of these things, and the necessity of remedying them, may be brought home to our patients without giving undue offence; and in any case it is the duty of the physician not only to inquire, but to see that every unsanitary influence is done away with. Too often I have known unsanitary conditions to be ascertained when too late, only by a process of exclusion, and when every other hypothesis to account for illness has been exhausted. "Oh, it must be the drains!" is said when the *malaise*, the bowel disturbance, the slight pyrexia, the furred tongue, have passed into imminent or confirmed typhoid.

It is surprising, notwithstanding the large amount of useful information on sanitary matters distributed by means of the newspapers, popular periodicals, and cheap literature generally, how ignorant even the majority of educated persons are respecting the simplest rules of hygiene. This arises, I believe, mainly from the fact that education has been, and even still is, defective, in that elementary physiology and the elements of the collateral and auxiliary sciences, such as physics and chemistry, are untaught. Most people know that they have a stomach, heart, and lungs, and every decently-dressed person thinks he has got brains; but the liver has not yet ceased to be the accredited organ—the *fons et origo*—of most maladies. That poor viscus is a very scapegoat for doctor and patient; as if it could act, *per se*, wantonly and causelessly. If it could only speak, it would doubtless often say not only that what it has too often been credited with was due to the gluttony, the vice, and the folly of ts possessor, but to ignorant inattention to, and neglect of, the most simple and obvious requirements of health—inattention and neglect which would have ceased had there been anyone at hand to point out the risk run, and its probable consequences.

We should hail, then, with satisfaction the laudable endeavours made by sanitary associations and by individuals to extend a knowledge of the laws of health and of preventive medicine among all classes of society; and, as the young mind is most susceptible to, and retentive of, impressions made upon it, we should hail with especial satisfaction the introduction of the study of physiology into schools. I regard this as a most important step, and one intimately bound up with the future welfare of the people. Nor would I have it simply a book-knowledge: it need not be such, for the butcher's shop and the shambles afford ample material for very practical teaching. Nor need we fear that boys, if made familiar with the slaughter-house, will necessarily be made cruel. The curiosity which impels boys, and even many girls, to take a delight in gazing upon the internal anatomy of a slaughtered animal is a laudable one, and if rightly directed may be turned to very profitable account. It need not necessarily be followed by a tendency to cruelty; and I confess that I have no sympathy with that squeamishness which regards as depravity the apparently innate desire of male youth to satiate its curiosity with scenes of slaughter. Would that some enterprising and philanthropic person would make it his task to give a few demonstrations to the children attending our elementary schools on the chief organs of the bodies of our domestic animals, and explain their functions!

But to return from this digression. Let us consider how the ordinary members of the medical profession, who are not at the same time professed sanitarians, may aid the distribution or diffusion of sanitary knowledge. Of course, for a long time to come, the chief effort must be made to spread sanitary knowledge among the more educated classes; for it is almost hopeless at present to reach the more degraded of the population of our towns and villages. For the present these must have everything done for them. First of all we may influence our patients, and guide them in the matter of choice of their dwellings. It is very common, and ought to be more common, for a family when about to move, or when a son or daughter is about to marry and to leave the parental roof, to consult the medical attendant as to the choice of a house. Now, in such a case the medical attendant ought not to wait to be asked, but should tender his advice as to the choice of a house and as to its salubrity and sanitary arrangements; or if the removal be to a distance, urge his clients to seek the assistance of some more easily available member of the profession. And I need hardly repeat that it is the duty of every medical man to inform himself as to what are the conditions which determine the salubrity or insalubrity of a dwelling-house. The advice of a medical man might be expected to be at least as valuable as that of the average surveyor in such a case, and his advice should not be merely dogmatic. It should be conveyed in such a manner as to instruct the householder as to what are the conditions on which salubrity and insalubrity, respectively, depend. Then, again, when he becomes the regular attendant of a new family the doctor should make himself familiar with all the sanitary arrangements of the house and their deficiencies and defects, so that in case of illness he may be at once aware of the possible causes of obscure illness. These things may be done without officiousness, and will inspire respect and confidence, as showing that the medical man is alive to his responsibilities. Again, in respect of the physical training of children, the use and abuse of exertion, the right amount and proper choice of food, the choice of healthy and unhealthy occupations, the avoidance of particular sources of danger in particular callings—all are matters falling, I think, within the province of

every medical man; and all of us should be prepared to tender advice on them.

It has been suggested that there should be an order of sanitary physicians, ready on payment of a small fee to undertake the responsible duty of making a sanitary inspection of a house. Well and good; but why should not the medical officer of health be called in and asked to do the work in special cases when there are difficulties which the ordinary medical attendant cannot surmount? His advice would perhaps be cheaper in the end at a moderate fee than that of a less experienced man at a small fee; but indeed the ordinary medical attendant ought to be sufficiently well versed in ordinary sanitation as to be able to appreciate ordinary sanitary arrangements and unsanitary defects.

The occasion of infectious disease in a house—even a mild case of measles—will afford great scope for instruction, for by explaining to the parents how diseases are spread, how contagion is propagated, how the spread of disease may be checked or prevented, the right use and the abuse of disinfectants, and so on, we may give *bonâ fide* clinical instruction which will take root and effect in a manner that no amount of reading, no amount of distribution of sanitary leaflets (which are too often consigned to the waste-paper basket unread, or when read are speedily forgotten, because at the time of their perusal there happens to be no present means of putting them in force) will effect; and a case of comparatively unimportant infectious disease in a house may be made by the medical attendant a school for instruction which will be of the highest value in the event of a future visitation of more serious disease.

It is surprising to find how receptive ordinary educated persons are of sanitary instruction if actually illustrated by the facts coming under their own notice; and how interested they become, and anxious to remedy the defects, when once convinced of their existence. The public is, as a rule, careless of unsanitary conditions only because it is unconvinced of the influence which those defects (to us) obviously have upon health. The British public does not trouble itself much about those invaluable blue-books which have been published and contain the reports of the Medical Officer of the Privy Council and his staff; and I question very much whether it reads many of the reports of the medical officers of health. Too many of the medical men of this country are only half-hearted, or have no heart at all, in the progress of sanitary measures. Some, and I fear not a few, are hostile, supposing that this progress will injure their practice. And if those who I unhesitatingly assert ought to be in the van of sanitary reform, place themselves in the rear, can we wonder that less informed laymen and laywomen look upon sanitation with indifference!

Arthritis Secondary to Lymphangitis.—Prof. Verneuil drew the attention of the Académie de Médecine to a variety of arthritis which has not been described in classical works, and yet cannot be so very rare, as he has met with five cases of it in his own practice. The arthritis in question supervenes on a lymphangitis (generally producing abscess) of the lower extremity. It usually occurs in cachectic individuals with damaged constitutions. The communication of the lymphangitis with the subcutaneous bursæ easily explains the accident. The prognosis would seem to be a very bad one, for of the five cases referred to, four proved fatal, purulent arthritis having appeared in three of these. Prof. Verneuil is inclined to recommend the early opening of abscesses occurring from lymphangitis in the vicinity of joints.—*Gaz. Hebd.*, October 18.

Cure of a Spina Bifida by the Elastic Ligature.—Dr. Cavagnis, of the Bergamo Hospital, relates (*Annali Universali*, July) the case of an infant twenty-four days old brought to him with a spina bifida, two-thirds the size of an egg, situated in the lumbar region. He passed an elastic tube four millimetres in diameter twice round the base of the tumour, with a moderate amount of constriction. In two days the constriction was greatly increased. The tumour became at first violaceous, and then pale and flaccid, its apex ulcerating. On the fourth day the tubing was removed. Three days later the child returned to the country, an ordinary ulceration occupying the place of the former tumour. The healing of this was soon completed, and a report of the case fifteen months later represented the cure as complete, only a slight depression being visible.

ORIGINAL COMMUNICATIONS.

THE ORIGIN OF SOME MOTOR DISORDERS.

By OCTAVIUS STURGES, M.D.,
Physician to the Westminster Hospital.

(*Continued from page* 456.)

Although it be true, as has been said, that we are unable to fix the measure of response or the degree of subordination of the muscular system and are, in fact, warranted in asking a very ample scope for both, it is to be considered, at the same time, that we know, in general terms at least, the *kind* of motive which affects the voluntary muscles in particular ways. Thus, for example, muscular spasm is connected with anger rather than joy, muscular relaxation belongs to despair, muscular restlessness to suspense, palsy to excessive fear and so on. When therefore these sensations, severally, are mentally apprehended we may expect, (or require,) that the corresponding muscular phenomena should ensue. Yet with what readiness or slowness or with what degree of perfection the response should come there are no means whatever of knowing beforehand. Emotion is expressed by some in gestures which others deem extravagant. Nay, the ordinary run and tenour of life producing complacency in some, indifference in others, and in a few the utmost weariness or disgust will move the body accordingly in a great variety of ways. Muscular response, therefore, as to its degree and readiness has to be estimated from the point of view of each individual, and will be ascribed variously, now to the excessive strain of the circumstances and now to the excessive impressibility of the subject.

It is to be observed further that the muscular conduct of the individual varies with his growth. In childhood muscular use is imperfect and its government has hardly begun. The tendency to movement is general, the limbs taking part as much as the face. Such movement is quick, changeful, and ill directed. It wants cadence and deliberation. Muscular consensus is faulty and precarious. There is no habit of posture. The self-consciousness is as yet absent which, by-and-by, will bring with it great difficulty in controlling the face. At this period, therefore, the easy escape of the muscles from will-control under mental excitement is indicated by general over-movement which is the natural outlet for all childish emotion.

As childhood passes into youth the limbs begin to adopt by preference certain attitudes and modes of movement and to associate these with particular moods and occasions. Then begins that higher training of the muscular system which brings at first dexterity but presently the incapacity for new employment. And as the muscles learn to concur readily and instinctively in certain tasks so, invariably, does their method of working tend to be rhythmical. Direct attention is no longer needed to secure harmonious working. The limb-movements when left to themselves do not now fall into disorder as with children but into rhythm—a rhythm whose rate may change with the general current of the thoughts but which is perfectly even until some hitch in the task disturbs it and calls back the mind.

With the advance of years the muscular habits become fixed and hardened to a deforming and sometimes disabling extent. The gait and position are now so little variable as to be highly characteristic, while in place of the restlessness of childhood or the changeful attitudes and ready emotion of youth is a habit of stillness and the acquirement of deliberate and measured movement. There is no better illustration of the kind of disability which age and use bring than that afforded by the incapacity of middle and later life for new employment. It is indeed almost to be accounted a hardship that when leisure has been earned and long observation has given an increased love and fuller discernment of natural beauty the time has come for most when no application can train the muscles to a new nse. The acquisition, for instance, of dexterity in art, which was never more easy for the mind, has become impossible for the fingers.

It need hardly be said that these successive gradations in movement directed as they are by the growth of experience and habit are in large measure influenced as to their general character by mental conditions proper to the time of life. Thus the growing consciousness of youth, and especially of

female youth, that the features are an open index of the mind adds greatly to the difficulty of controlling the facial muscles. At the same time an indistinct perception of the new life now impending of which the pleasures and penalties are very dimly discerned imparts unstillness and indecision to the whole carriage. In later life mental influences are still at work. The elderly man is less quick in movement and less various in attitude not only because his limbs are constrained to certain uses but also because fewer things occur to stir him and no sensations arise but such as are already familiar. The operation of experience has taught him to direct the frequently recurring hopes and expectations of life, which in youth wear many disguises, into certain well-worn channels. His horizon becomes distinct and limited as each year takes from the number of his delusions. The body is still partly because there is little to move it; its attitudes are distinct and habitual partly because the tone of mind is settled and even.

Observe, however, how real emotion breaks down or at least narrows the difference which age makes. The start of surprise, the palsy of fear, the restlessness of suspense, the convulsion of laughter are conditions to which all are subject. They can neither be provided against nor controlled and vary rather with the temperament than with the time of life.

It will perhaps be allowable to illustrate what has been said by supposing an experiment which although not actually performed as such or capable of being verified upon frogs is yet so continually before us in detached parts that no one will be found to question it. It is as follows:—Take a sufficient number of men and women(a) of sound mind and limb, and subject these to a series of circumstances of gradually increasing gravity. That is to say, let the surroundings be at first easy and comfortable, presently such as cause anxiety, and by-and-by alarming. A rising tide, a storm at sea and a thousand other things make such circumstances. Now with every change in this situation we know perfectly well that the men and the women would respond differently to the same degree of strain, of which all alike apprehended the meaning and the consequences. And while the manner of response of each sex respectively would be roughly similar, no two individuals would be moved precisely in the same way. Muscular incontrol, spasm and the general relaxation of syncope would be seen early amongst the women. There would concur with it on the part of the men at first only increased muscular alertness, but soon an altered carriage, more fixed features, more constrained movement, less power of modulation of voice, but as yet no undisguised expression of emotion. And supposing the strain still further increased until the circumstances became appalling we should see then (and should now by an inevitable sympathy begin to share in the phenomena) a gradual paralysis or a rigid spasm creeping over the men, unfitting many for active exertion and crippling and deforming the acts of the best. And if it were not terror but some other source of emotion thus gradually culminating, joy or grief or suspense, we should have then a different set of phenomena in similar gradations where those of the same sex and age agreed generally in their conduct yet with individual differences.

So that we may say on the whole, taking all temperaments and both sexes and the actual circumstances of life, that the variability of muscular conduct is very wide, and that while everyone knows both for himself and his neighbours that disorder is never absent, no one can say offhand to what degree such disorder may grow by appropriate cultivation. The features or the limbs when moved by passion are not less true to the laws of their government than when obeying the highest commands of the will. It is easy to say that health is represented by that state which is the best and which exhibits the muscular system in the completest and most serviceable order. Nevertheless, if we will but consider it, the calm and deliberate muscular movement which accomplishes precisely what is wanted and no more, is far enough removed from any *natural* condition that we know of. Even supposing that circumstances of ease and comfort were the normal state of humanity, which is but a sentimental view of the matter, yet still a perfect and unvarying accuracy of movement would indicate a degree of mental strength and culture such as few actually attain and which is only possible in a highly artificial state of society where security is so firmly assured that the natural instinct which prompts involuntary movement and convulsive starting has been suffered to die out.

At the same time while we insist that the range of muscular conduct shall not be unduly narrowed, and find spasm and tremor and immobility within the strict rule of its working upon proper occasion, motor disorder is not to be admitted indefinitely. There is the place for it but there must also be the proper incentive and every instance of the kind needs its own justification. The pathologist is quite right therefore in requiring that some definite cause should be shown for imperfections of movement which are new to the individual or which are persistent instead of temporary or which in any other way depart from the common rule of such phenomena. He is wrong only in limiting his search to such material changes as can be recognised as morbid, forgetting that the elements of motor disorder are invariably present, that their mode of development is perfectly well known, and that it is not their origin which is to be sought but the causes of their prominence.

We come now to consider the bearing of these observations upon certain familiar motor affections of men, women and children. It will be seen immediately that much diversity of opinion exists as to the legitimate application of principles which in their bare statement may appear almost too obvious for lengthened discourse.

(To be continued.)

(a) The illustration to be complete should include children but from their imperfect apprehension in regard to the nature of the circumstances supposed their case would be different.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

LONDON HOSPITAL.

REMARKS ON THE COMPARISON AND CONTRAST BETWIXT TETANUS AND A CERTAIN EPILEPTIFORM SEIZURE.

By Dr. HUGHLINGS-JACKSON.

Dr. Hughlings-Jackson frequently remarks on the resemblance and differences of the commonest variety of cerebral convulsions beginning unilaterally (in one hand) and the paroxysms of surgical tetanus. In each there manifestly is an abnormal (an excessive) nervous discharge—liberation of energy by nerve-cells. So far for the resemblance betwixt the two. In the former the discharge is unquestionably of some part of one cerebral hemisphere; it is suggested that in the latter it is of some part (of the middle lobe) of the cerebellum. In the former, consciousness is lost—*i.e.*, when the discharge is strong enough, when the convulsions have become widespread; in the latter, consciousness is not affected at any stage. The contrast as to order of spreading and distribution of spasm is very interesting. The two seizures are, so to speak, corresponding opposites. In the former the spasm begins in the most unilaterally acting parts; in the latter, in parts which are bilaterally acting, although one side may be acting more than the other, as in turning the head to one side, or during inclinations of the trunk. In the former the spasm *becomes* bilateral—*i.e.*, if the discharge be strong enough; in the latter, as much as there is of it is bilateral to start with. Putting some of these remarks roughly in another way, we may say that the spasm in the former affects one of the limbs first; the spasm in the latter affects the trunk first. In the former it spreads from one limb to the trunk; in the latter, from both sides of the trunk to the limbs of both sides. In the former the spasm goes from the fingers up the arm; in the latter, when it does reach the limbs it increases down towards the fingers and toes.

There are still other ways of considering the differences. In the former the spasm affects first that part (the hand) which has the greater number of different movements at the greater number of distinct intervals; the latter affects, first, parts which have the fewer different movements, and most of whose movements are more nearly repetitions (although in various degrees) of one movement: the movements glide into one another. In other words, and using for the moment terms borrowed from pathology to describe normal condi-

tions of movement, we may say that the former affects first a part (hand) the healthy movements of which are chiefly "clonic"; in the latter, movements which in health are chiefly "tonic." (The movements by which the spine is braced up in the sitting and walking of the healthy constitute a quasi-physiological tetanus.) The spasm itself, in either case, can only be a development, however morbid it may be, of the healthy movements, and the morbidness is in the rapid excessive development of many movements at once. The spasm of the former is tonic, quickly followed by clonic (it is chiefly clonic); in the latter it is altogether tonic, except, perhaps we should say, for that distant resemblance to clonic spasm shown by occasional increases and wider spreadings of the otherwise continuous tonic spasm.

There are, however, three chief varieties of unilaterally-beginning convulsions from cerebral disease—(1) those beginning in the hand; (2) those beginning in the face, or tongue, or both; (3) those beginning in the foot. Probably, therefore, we ought, for thorough and exact contrast, to seek cases of tetanus varying as to the exact part first seized.

Showing that tetanus is an "inverted" cerebral convulsion would not prove it to be owing to cerebellar discharge. Dr. Hughlings-Jackson has, however, never seen anything like a tetanus-seizure from disease of any part of the cerebrum, with one exception. On the other hand, he has reported cases of tumour of the middle lobe of the cerebellum in which seizures practically identical with "surgical tetanus" were noted by himself and by Dr. Stephen Mackenzie. Cases of tetanus in which nothing is discovered post-mortem have, of course, no bearing on the morbid anatomy of this affection.

The exceptional case above alluded to was that of a boy, an account of whose illness and the autopsy was read at the last meeting of the last session of the Harveian Society. In this case there was a vast cerebral tumour of the left side of the brain; there had been hemiplegia, of slow onset, for more than a year; there was blindness from double optic neuritis. The tetanus-like seizures only occurred on the day of the lad's death. There was very large effusion of serum into the lateral ventricles, which, with the tumour, doubtless caused great enlargement of the head, another symptom present in the case. Now, in this case no disease of the cerebellum was discovered. The specimen was examined by Dr. Gowers.

Dr. Hughlings-Jackson has himself drawn attention to some objections which may be taken against the opinion he entertains—that the tumour of the middle lobe of the cerebellum (*i.e.*, instability of nerve-cells round about the tumour) caused the tetanus-like paroxysms in the cases alluded to. In such cases the subjacent medulla oblongata may have been compressed or otherwise altered. Again, the tumour may have affected the adjacent corpora quadrigemina (they are deformed by pressure in some cases). The latter is important, as Ferrier has produced tetanus-like states from faradisation of these bodies, but not from faradisation of the cerebellum.

REMARKS ON THE CEREBELLUM.

By Dr. HUGHLINGS-JACKSON.

The foregoing may be supplemented by the following remarks. The generally accepted doctrine as to the chief function of the cerebellum is that it co-ordinates the impressions and movements of locomotion. This is equivalent to saying that it represents the impressions and movements of locomotion, or, if we only assert that it is the *chief* centre for locomotor co-ordination, the most special and complex of them. For there is no faculty of co-ordination over and above a representation of impressions and movements themselves. What, then, are the impressions and movements of locomotion which are tacitly asserted to be represented in the cerebellum by those who hold the opinion that it is the co-ordinating centre for locomotion? We will, however, speak only of the movements. In the strictest sense we should probably take in all the movements of the body, or, more correctly speaking, movements of all parts of the body. If this be so, those who say that the cerebellum is the organ for co-ordinating the movements of locomotion say that it represents movements of all parts of the body; Dr. Hughlings-Jackson believes that the cerebrum also represents movements of all parts of the body. There is no reason why the very same muscles should not be represented in different kinds of movement in each centre.

Artificially limiting ourselves to the most conspicuous of the movements of locomotion, we see that they are of the spine, legs, and arms. It is to be borne in mind that the muscles of the spine are necessarily in action in locomotion, and in action first. No one can begin to walk until his spine be braced up, and during walking the trunk goes through a very complex motion. Marey says:—"These movements are very complex; they are effected at the same time in every direction, and give to the trajectory which a point of the body describes in space, some very complicated sinuosities." And if we say that these movements of the trunk when walking is begun are in one sense produced by the action of the leg, yet without appropriate stiffenings of the spinal muscles the body would fall over in the direction the legs impelled it in. In correspondence we find that the spinal movements are those first to suffer in destroying disease of the cerebellum. The kind of disorderly walking in an early stage of disease of the cerebellum is not paraplegic; it is not the stagger of locomotor ataxy; it is a reel, a drunken-like walk. In an early stage the movements of the legs, tested when the patient is sitting, are powerful. The legs at that stage, it is true, act very erratically when the patient walks, but this is because the spinal movements being weak, the trunk tends to fall this way and that; the erratic movements of the legs are really "intelligent" attempts to "run after" and prop up the trunk in its various inclinings, which the now weak spinal movements cannot moderate. Similarly in some cases of unsteady movements of the arm, the chief fault is in the muscles which should fix the scapula.

Just as there is no faculty of co-ordination, nor any co-ordination, except in the sense of representation of movements in definite relation one to another with corresponding impressions, so there is no loss nor disorder of co-ordination except in the sense of a loss of function or over-function, more or less, of the representing nervous arrangements. We here speak of loss of function—destruction—of some of them. In an early stage of cerebellar disease there is veritable paralysis or paresis of the spinal movements; the disorderly movements of the legs are secondary effects of that paralysis or paresis. If so, the essential fault is like that in hemiplegia or in any other paralysis; it is a sign of loss of function of some nervous arrangements for some movements. We must not think of hemiplegia simply as a loss of power of muscles, but as a loss of a number of movements of the face, arm, and leg. Similarly, in the cerebellar reel there is loss of a number of movements of the spinal column. If so, we must not class the cerebellar reel with such disorders of co-ordination as chorea; for in the latter there is over-function of the nervous arrangements—morbidly increased discharges. Looked at superficially, they are different: the reel only exists when the patient is trying to walk; the choreal movements occur at any time. The true analogue of the reel is such a symptom as hemiplegia, not chorea, it being understood that we do not compare with the hemiplegia the erratic movements of the legs, but the loss of those movements which render these movements necessary—render necessary wider and more sudden excursions of the legs.

Probably also different spinal movements suffer, or suffer more, in different cases, according to the exact seat of the cerebellar lesion.

If we observe very rapid locomotion we see how wide the muscular action is: the trunk is bent forwards; respiration is suspended for short periods; the arms, which are evidently in action in walking—and, as Duchenne and Marey have insisted, not merely in pendulum action—are in running in very strong action; they are in wide action, the activity extending even to the fingers (professional runners carry cork in their hands to prevent their nails hurting their palms); the muscles of the face and jaws are in action; circulation must necessarily be affected. To say, then, that the cerebellum represents the muscles of locomotion is equivalent to saying that it represents movements of all, or nearly all, parts of the body. And if so, tetanus, however wide the spasm, may plausibly be put down to discharge of some part of this organ, as a discharge of the most special and complex of the nervous arrangements for locomotion. The order of spreading of the spasm of muscles in tetanus follows, if not closely yet generally, the order in which the muscles get into increasing activity in locomotion, from walking to swift running. Thus, then, the cerebellar reel pairs off with cerebral hemiplegia, and tetanus (cerebellar convulsions?)

with the unilaterally beginning epileptiform seizure (cerebral convulsion).

In some cases of hemiplegia there is rigidity of the paralysed muscles; there is a double condition, a negative and a positive one; there are together paralysis and spasm. The hypothesis suggested is that the paralysis is owing to the cerebral lesion, and the spasm to unantagonised cerebellar influence; there is cerebral paralysis of the same muscles which are subjects of cerebellar spasm.

Again, in cases of cerebellar lesion there ensues after a time rigidity of the parts paralysed or partially paralysed by that lesion. For, besides the tetanus-like *paroxysm* of which we have spoken, a permanent rigidity of the muscles of the spine, arms, and legs may come on as a late stage. In a severe case the head is thrown back, the legs are stiffened in extension, and the feet are extended and slightly incurved; the elbows are kept near the side, the forearm is flexed on the upper arm, and the fingers are elenched.

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Medical Times and Gazette.

SATURDAY, OCTOBER 26, 1878.

THE GENERAL MEDICAL COUNCIL.

The members of the General Medical Council have succeeded in bringing their twenty-seventh session to a close with a degree of despatch that, from one point of view, is certainly very creditable. Much less time has been spent in wasteful discussion and verbal criticism than we have sometimes, with regret, had to notice. But whether the business before the Council has been despatched in altogether a creditable and satisfactory way is, to say the least, open to doubt, for some of the most important subjects of the programme of business have only been got rid of by being remitted to the Executive Committee.

The President's Address, which we published last week, was followed by the reading of an interesting report by the Registrar, on Dental Registration, showing what had hitherto been done in regard to the registration of dentists. The Executive Committee had, at a meeting held on August 7, under the advice of the Solicitor to the Council, authorised the Registrar to prepare and open a Dentists' Register; and on the day the Council met (October 17), 930 dentists had been provisionally registered, "all of whom had duly satisfied the conditions for registration laid down by the Dentists Act." Of these, we may observe here, only eighty-six were registered under Clause A of Section 6 of the Act—that is, as "licentiates in dental surgery, or dentistry, of any of the medical authorities"; and the eighty-six were all licentiates in dentistry of the Royal College of Surgeons of England. Five applicants had claimed to be registered as licentiates of dentistry of the Royal College of Surgeons in Ireland, but none of them had produced or sent to the Registrar "the document conferring or evidencing the licence or qualification"; and as this is, according to the Act, an indispensable condition for registration, these applications had necessarily been held over by the Registrar. It is, we have reason to suspect, somewhat more than doubtful whether the dental licence of the Irish College is as yet actually in existence; and from some things that were said about the granting of it, it seems possible that there may be some difficulty about getting it registered when it is obtained. The vast majority of applicants appear to have had no "qualification" whatever, excepting that of having been "*bonâ fide* engaged in the practice of dentistry at the passing of the Act." Of these, 566 declared themselves to have been practising dentistry separately; and 274 dentistry in conjunction with the practice of pharmacy: these latter we may assume to be chemists and druggists.

The Registrar's Report was ordered to be entered on the Minutes, and the Council then resolved itself into a Committee of the whole Council for the consideration of the measures requisite for carrying into effect the Dentists Act. The first resolution proposed prescribed the form of Register for Dentists, and some ingenuity was shown in finding reasons for differing in opinion as to whether the Register should be drawn with four columns or five. A form of register containing four columns is prescribed by the Act—the first, second, and third columns being for the "name," the "address," and the "date of registration"; and the fourth for the "description and date of qualification." But the Act further empowers the Council, "if they think fit," to make orders for the registration, in the Dentists' Register, "of any additional diplomas, memberships, degrees, licences, or letters held by a person registered therein, which appear to the Council to be granted after examination by any of the medical authorities in respect of a higher degree of knowledge than is required to obtain a certificate of fitness under the Act"; and thereon two questions were raised—first, whether under this clause the Council are "entitled to register in a separate column the qualifications in medicine and surgery under the Medical Act (1858) held by registered dentists, or only higher qualifications in dentistry"; and, second, whether, if only the latter can be registered, it would not be absurd or useless to provide a column for the registration of such higher qualifications, inasmuch as the Council do not at present know that any such qualifications are in existence. The first difficulty was got over by referring the question to the solicitor to the Council, with a view to obtaining the opinion of counsel upon it; while with regard to the second it was held by some of the members that dentists should be invited and tempted to obtain, if possible, higher qualifications than the minimum one required by the Act, and that the absence of a column for such evidences of a higher degree of knowledge would lead to the inference that the Council discouraged, or at least did not care about, the possession of higher qualifications by dentists. One of the members of the Council *scientifically* supported the provisions of the fifth column by suggesting that, although the column might at first be a vacuum, yet, as it is well known that nature abhors a vacuum, nature might impel the medical authorities to supply ways of filling it up, and dentists to seek to walk in

the ways so provided. In the end it was resolved by a narrow majority that the Dentists' Register shall contain a fifth column for "additional diplomas, memberships, degrees, licences, or letters"; the question of whether these shall be dental only, or medical and surgical also, being left, as we have said, for the opinion of counsel.

After this knotty point respecting the form of the Dentists' Register had been settled, the rest of the resolutions considered requisite for carrying the Act into effect, which will be found elsewhere in our columns, and which, like the one above spoken of, had been prepared for the Council by the Executive Committee, were agreed to with little discussion, so that the report on them was brought up and adopted by the Council early on the second day of the session. But it will be observed, on looking at those resolutions, that the most difficult questions connected with the carrying out of the Act are in reality not settled, but postponed, and the labour of examining into them transferred to the Executive Committee. That Committee was directed "to require from the medical authorities that grant dental qualifications, information in accordance with Section 22 of the Dentists Act, as to the course of study and the examinations to be gone through in order to obtain such qualifications, and to report to the Council at a future meeting." At present we believe that only the Royal College of Surgeons of England have in force a dental curriculum and a dental examination; and that the Irish College has instituted a dental examination, and has prepared, but not promulgated, a dental curriculum. It could not, then, one would suppose, have taxed the time of the Council very severely to have considered whether or not the curriculum required by the English College of Surgeons is a sufficient one. But we much suspect, as we have said before, that the Scottish and Irish authorities are likely to think it too extensive and onerous, and that therefore the consideration of the subject was avoided. Other authorities may determine to grant dental qualifications before the subject is taken into consideration by the Executive Committee, and in such case their regulations also will have to be inquired into by the body. The Executive Committee are further "to obtain information respecting the education and examination of applicants for registration holding colonial and foreign qualifications under Sections 8, 9, and 10 of the Dentists Act," and to report to the Council thereon; and are "to carry out generally the provisions of the Act, in accordance with the resolutions agreed to by the Council." All this, again, can hardly fail to add considerably to the work thrown upon that Committee.

It has been noted that more than 800 applicants have been admitted to the Dentists' Register on the ground that they were "*bonâ fide* engaged in the practice of dentistry," either "separately" or "in conjunction with the practice of pharmacy," at the date of the passing of the Act; but no information has been given, either by the Registrar's report or in any other way during the session, as to how the Registrar is instructed to define the expression "*bonâ fide* engaged in the practice of dentistry." The Council evidently think that the matter is of no great importance, or at least not at all difficult, for it has not even been remitted to the Executive Committee. This must be considered extremely unsatisfactory. For the sake of the public, for the sake of the "dentists" themselves, and for the sake of the medical profession, to which dentists are seeking to be more and more closely allied, it is eminently desirable that it should be known how little or how much admission to the Dentists' Register may be taken to imply. At present we are entirely without guidance on the subject. We have heard that one of the applicants was a hair-dresser, who represented himself as having been *bonâ fide* engaged in the practice of dentistry, "in conjunction with pharmacy," as he sold tooth-powder, and washes, and puff-powder! We have nothing to make us feel sure that even such a claim was not admitted. We understand that the Council relies, for the protection of the Register, on Section 35 of the Dentists Act, by which it is provided that any person who wilfully procures or attempts to procure himself to be registered under the Act, by any false or fraudulent representation or declaration, shall be deemed guilty of a misdemeanour or offence, and shall be liable to imprisonment. But that clause surely makes it only the more necessary that the ambitious tradesmen who wish to become dentists should be able to learn what the Council means by "the practice of dentistry."

We have elsewhere noticed the discussion on Sir Dominic Corrigan's motion with regard to the revision of the constitution of the Council. Some other (not important, or formal) business was transacted, and the Council adjourned *sine die* at the end of the second day of the session.

THE REVISION OF THE CONSTITUTION OF THE MEDICAL COUNCIL.

The last subject of importance brought before the General Medical Council during its late session was the revision of its own constitution. Our readers were informed last week that Sir Dominic Corrigan had given notice that he should draw attention to the resolution passed by the Council, in July last, to the effect that it agreed that its constitution does need revision; and by which it affirmed and represented to her Majesty's Government that, at its first meeting after the present session of Parliament, it would consider what modifications of its constitution are demanded and are required; and that he should move that the Council should proceed at once to carry out its resolution. The spirit in which Sir Dominic's motion would be met was clearly intimated beforehand by both the mover and seconder of the original resolution. Mr. Teale gave notice that he would move the following amendment—"That a discussion on the constitution of the Medical Council during the present session is premature, inopportune, and not in accordance with the spirit of the resolution which was proposed by Sir William Gull and seconded by Mr. Teale on July 3, 1878." And when what is called, rather facetiously, the report of the Executive Committee with respect to the action taken by them on the subject of the revision of the constitution of the Council, was brought up, Sir William Gull took the opportunity of stating his views upon the matter. He said the subject was one that demanded the fullest and most careful inquiry, and expressed a hope that the Executive Committee would take care to obtain from the Chairman of the Reform Committee of the British Medical Association, and from any others who have any clear and definite opinions on the subject, statements of what are believed to be the views and schemes that the profession may be held to support. From all this it was abundantly evident that Sir Dominic Corrigan's motion would not be supported by either the mover or the seconder of the resolution of July 3. The report above alluded to, from the Executive Committee, was that, "as remitted to them by the Council, the question of its constitution has been under their consideration, but that at present they are not prepared to make their final report thereon." We venture to think that, under the circumstances, such a "report" was a mistake. It was well known that the Executive Committee had never really touched the subject till the day before the Council met, and that they could not possibly have gone at all fully into the matter. The tone of the report very naturally excited a request for an explanation of the words "final report," and for a statement as to the degree of "consideration" said to have been already given. But no reply was, we believe, obtained.

Sir Dominic Corrigan, in bringing forward his motion, declared that the working part of the profession, who paid the expenses of the Council, was entirely unrepresented on it; and that in the whole Constitutional History of England there is no other instance of such an abuse of representation and taxation. Indeed, in all Europe the only thing he could think of as corresponding with it was the French Constitution before the Revolution. He said that the Council had at last "in very shame passed a resolution" (that of July 3, 1878, we suppose) "that the bulk of the profession ought to be represented on it"; and he found great fault with the Executive Committee for their dilatoriness and their report, which he looked upon as an attempt to evade the question altogether. And finally, hestated that he had himself prepared a scheme for the revision and reconstitution of the Council, which he should be very happy to submit to the consideration of the Council should his resolution be passed.

Mr. Rawdon Macnamara thought the honour of eighteen members at least of the Council—*i.e.*, the honour of those who voted for the resolution of July 3—was involved in taking up the question at the present sitting of the Council; and he went into the question of whether the sitting was or was not the "first meeting" spoken of in the resolution. At any rate he could not conceive a more fitting opportunity than the preseut for dealing with the subject, and he thought that a great mistake had been made in referring the matter to the Executive Committee. The Council had all the required information before it, and had no right to attempt to shift such an important question on to the shoulders of the Executive Committee. And besides, any recommendations which might be brought up by the Executive Committee would have, in the end, to be considered and discussed by the Council. As to the expense which had been spoken of, it must be incurred at some time, aud why not now, when the great initial expense of calling the Council together had already been incurred?

Mr. Teale then moved the amendment which we have already noticed. Iu supporting it he also wasted, as we think, some time in speaking on the poiut of whether or not the Council was tied hand and foot by the words "its first meeting." He repudiated Sir Dominic Corrigau's opinion, that the Council had committed itself to the theory of direct representation. It was not committed to any point of reform, and must have before it a broad view of its duties, and of the manner in which those duties might best be performed. The report of the Executive Committee was very desirable as an aid to the Council in discussing its constitution; and, not having it yet, a discussion at the preseut time would be premature. It would be also inopportune, as the members of the Council were dragged away at a very critical period of the session of their schools, aud a prolonged sitting would seriously interfere with their duties as lecturers and teachers.

Professor Turner seconded the amendment, dwelling chiefly on the importance of having the report of the Executive Committee before discussing the question concerned.

The new representative of Trinity College, Dublin, the Rev. S. Haughton, M.D., observed that he would have supported the amendment had it included any indication that the Council intended to meet again before the next session of Parliament, but, as it gave no such indication, he felt bound to vote against it. He contended that the pith of the question was, when was the next meeting to be? He also very much regretted the resolution referring such an important question as the constitution of the Council to the Executive Committee. The Council committed moral suicide when it referred the consideration of its own existence to a committee; and the discussion on its constitution would not be shortened one hour by such a reference. He remarked, with much force, that they were in this dilemma:—If the Council was to meet before the next session of Parliament, all the arguments, financial and other, were in favour of going on with the discussion without separating; if it was not to meet till after Parliament, he could only characterise the resolution of July 3 as illusory.

Sir Dominic Corrigan having replied, the amendment was put, and carried by fifteen votes to four; three members declining to vote, and two being absent.

Dr. Haughton then again urged the importance of a meeting of the Council being held to discuss the vexed question before the meeting of Parliament; and moved—"That in the opinion of the Council it is desirable to hold the next meeting before February 1, 1879." Dr. Aquilla Smith seconded the motion, and it was supported by Sir Dominic Corrigan also. But Dr. Andrew Wood said that the President would no doubt watch the course of events, aud summon a meeting of the Council whenever it might seem necessary; while he thought the Council ought not to be pledged to meet on any particular day. It may be observed that Dr. Haughton did not ask any such pledge, but only that the Council should meet before next February. But the Council perhaps felt somewhat shy of again passing any resolution containing any such words as "next" or "first meeting." Dr. Quain agreed with Dr. Andrew Wood. He spoke also of the deep anxiety the Executive Committee felt in endeavouring to put the question of the revision of the constitution of the Council iuto such form as would best assist the discussion of it; and he made some remarks on the misapplication of the term "taxation" to the registration fee paid by the profession, and on the argument thereon grounded in support of direct representation. A division of the Council was taken on the motion, and it was negatived by eleven votes to eight; three members again not voting, and two being absent.

We cannot think that Sir Dominic Corrigan's motion was met in at all a happy way. It was idle to dispute whether the meeting just concluded was or was not the "first meeting" referred to in the resolution of July 3. It was not contended, as it might very plausibly have been contended, that as soon as the Dentists Act passed it should have been foreseen that an early meeting of the Council would be necessary, and that therefore the Executive Committee, and all the other members of the Council, should have been prepared to carry out that resolution earlier than had been thought of when it was passed. But it would have been much better had the Executive Committee and the members who opposed Sir Dominic at once confessed that the meeting had taken them by surprise, and have asked for more time. The discussion showed how much difference of opinion obtains in the Council on the subject of the revision of its constitution. Sir Dominic Corrigan holds that revision means alteration. Other members objected to this interpretation, and even Mr. Macnamara strongly repudiated the supposition that in supporting Sir Dominic's motion he had suggested any alteration of the Council. Sir Dominic proposes to diminish the number of the members of the Council, while Professor Turner spoke of adding to them; and while Sir Dominic considered the Council already committed to the principle of "direct represeutation," this finds no favour with other members. The Executive Committee are not asked to decide on the existence or the reconstitutiou of the Council, but only to gather up and shape for the Council the question of its revision and the schemes proposed for that end; and by doing this they may materially facilitate discussion. Further, considering the agitation that has so long prevailed, or is said to have prevailed, on the subject outside the Council, it is surely very unfortunate that the Council rejected Dr. Haughton's motion. Such action, or

rather negation of action, is but too likely to excite and give weight to suspicions, and direct accusations even, that the Council repents the passing of the July resolution, and rather desires to shirk the engagement made by it. But had the Council decided to meet and carry out its solemn pledge to Government before the next session of Parliament, it would have gone far to silence, for a time, its critics. And that pledge once fulfilled, the responsibility in the matter would have been shifted from the shoulders of the General Medical Council to those of the Government and of the Council of the Nation.

THE WEEK.

TOPICS OF THE DAY.

The Plumstead District Board of Works have recently been considering the statements made as to the foul state of the River Thames in their vicinity, and its probable effect upon the unfortunate sufferers by the late disastrous collision; and one of the members moved a resolution, to the effect that the defilement of the river by the discharge of the metropolitan sewage at Barking and Crossness outfalls was a circumstance deeply to be deplored. He further advocated the adoption of the dry earth, or some such system as is in successful operation at Manchester, Rochdale, Wolverhampton, and other large towns. The Metropolitan Board seemed content to have got the nuisance away from the centre of London, and then to have closed their eyes to the evil consequences which must inevitably result to districts lower down the river. He did not expect an immediate remedy, but he contended that the foul state of the river Thames had been amply proved, and demanded serious consideration. Another member hoped that the public would not rest contented until the sewage had been deodorised and divested of solid matter before entering the river, or else carried further away to some place where it could be utilised. Subsequent speakers were of opinion that, as the Metropolitan Board of Works were making an inquiry into the subject, there was no necessity for the resolution, more especially as there was every prospect of their finding out the extent of the evil and the remedy; and, on a division, the resolution was lost by fourteen votes to six.

An inquiry was held last week at Fort Pitt Hospital, Chatham, touching the death of Sapper Thomas Bridge, R.E., who died at the Hospital on the previous Monday from the effects of a dose of Burnett's disinfecting fluid which had been given him at the casualty hospital in Chatham barracks in mistake for a dose of salts and senna. From the evidence it seems that the mistake happened through a lance-corporal of the Army Hospital Corps filling a bottle from a stone jar with the disinfecting fluid instead of with the mixture; but how he made the mistake was not apparent, as the jar was labelled "poison" in large letters. Eventually, however, it was elicited that the bottle containing the fluid and that containing the cathartic mixture were similar, and only stood a few inches apart. After a great deal of evidence had been adduced, the jury returned a verdict that the deceased came by his death by having accidentally received a dose of Burnett's disinfecting fluid in the place of cathartic mixture, and they expressed their regret that the two should have been kept in such close proximity to each other. It did not transpire in the course of the inquiry whether the man who gave the dose was duly qualified to make up medicines.

It is reported from Spain that the Sultan of Morocco has ordered the immediate suppression of the sanitary cordon, and of the hospital established at Tangiers for the reception of persons attacked by cholera. The Madrid journals protest warmly against this measure, and call upon the Spanish Government to take vigorous precautions against all arrivals from Tangiers.

Some interesting details were recently given by Dr. Lebon, at the meeting of the Anthropological Congress in Paris, of the result of his experimental researches on the variations of volume of the cranium in relation to intelligence. According to observations made on numerous series of crania, the Doctor proves that intelligence is in proportion to the volume of the cranium, the best endowed races, and among races the most intelligent individuals, having the most voluminous crania. With the measurements of the circumference of the head, taken from more than 1200 living subjects, Dr. Lebon has constructed a series of curves which show that from the point of view of their development the heads of modern Parisians, and of the inhabitants of the country, are classed in the following order:—1, *savants* and learned men; 2, the Parisian *bourgeoisie;* 3, the old nobility; 4, Parisian domestic servants; 5, peasants. Dr. Lebon does not believe that height exercises any considerable influence on the volume of the cranium and the weight of the brain; nevertheless, with equal height, the woman has a brain less heavy than the man. Between seventeen male and seventeen female brains he found a difference of 172 grammes to the advantage of the former; and it is worthy of remark that among the superior races the cranium of the woman is generally much less than among the inferior races. This, he believes, is due to the insignificant part taken by women in the work of modern society.

By command of the Queen, General Ponsonby has forwarded to Dr. Poore, Secretary to the Parkes Museum of Hygiene, University College, the sum of £50 "as her Majesty's donation towards the establishment of a Museum of Hygiene." The museum is expected shortly to be opened to the public.

An inquiry has just been held at Cambridge, before Major Tulloch, one of the Local Government Board inspectors, into the drainage of the town, and more particularly into the pollution of the river Cam by sewage draining into it. The inquiry was instituted in consequence of the complaints as to the state of the river made by the members of the University representing the boating interest, and these gentlemen succeeded in proving to demonstration that the state of the stream was not only an annoyance, but actually prejudicial to the health of 1300 students habitually using it. The President of the Cambridge University Boat Club stated that having been accidentally upset near Barnwell Pool, the clothes he was wearing were rendered totally useless, as it was impossible to get rid of the stench adhering to them. Major Tulloch promised to make an early report to the Board in order that action might at once be taken.

At the last week's meeting of the Metropolitan Board of Works, some important resolutions were agreed to. In the first place it was decided "that arrangements be made to test the value of the electric light along the whole length of the Victoria Embankment, and subsequently, if considered desirable, upon Waterloo-bridge, and with this view that the offer which has been made by the Société Générale d'Electricité to assist the Board in carrying out the experiment by means of the Jablochkoff light be accepted." In the course of the discussion on this matter it was stated that the members of the Board were invited to see the working of the new electric light at the *Times* Office, that journal being now printed by electric light instead of by gas. It was further resolved—"That it be referred to the Parliamentary Committee to prepare and lay before the Board a Bill for the compulsory purchase of the interests of the

metropolitan water companies, with power only to issue the necessary Parliamentary notices, and that the whole matter be referred to the Works and General Purposes Committee with power to confer with her Majesty's Government, with a view to obtain their approval of the same previous to any further expenditure being incurred." A third resolution was:—"That the engineer be instructed to report under what conditions sewage from North Woolwich is discharged into the river Thames by the North Woolwich temporary outlet under the control of the Woolwich Local Board; and whether any, and if so what, improvement can be made in those conditions."

At the meeting of the Surrey magistrates held last week, a report was presented by the Finance and General Purposes Committee, stating that they had had under consideration the revision of the salaries of Mr. Carter and Mr. Hall, the county coroners, in consequence of the recent re-arrangement of their districts by an Order in Council. The Clerk of the Peace had obtained from returns the number of inquests held during the last five years in those parishes which had been transferred from Mr. Carter's district to that of Mr. Hall, and, acting upon that basis, they recommended that the salary of Mr. Carter be reduced from £1442 to £999; and that the salary of Mr. Hall be increased from £212 to £655 per annum. On the motion of the chairman, the report was adopted. It was also resolved to refer the question of compensation to Mr. Carter for loss of emoluments back to the Committee for further consideration.

The Honiton Town Council have now received peremptory orders from the Local Government Board to commence within four months the works necessary for providing the borough with a proper supply of water. The proceedings at the meeting at which this announcement was made were, if possible, more animated than upon previous occasions, and much recriminatory language was indulged in between the Mayor and his party, who upheld the quality of the present water-supply, and their opponents, who denounced it. When the meeting had somewhat tired of exchanging personalities, it was contended that the emlargement of a tank in the railway bank would meet the requirements of the town, and this was agreed to. It remains to be seen whether the Local Government Board will be as easily satisfied.

In his report as to the quality of the water supplied by the metropolitan companies during the month of September last, Dr. Frankland states that the water abstracted from the Thames by five out of the eight companies supplying the Inner Circle was again of inferior quality; and that delivered by the Lambeth Company was also turbid, and contained moving organisms. The Chelsea Company's water was of better quality than that distributed by the other Thames companies; and the water of the Lea delivered by the New River and East London Companies was of much better quality, and had been efficiently filtered.

SANITARY EXPENDITURE IN DUBLIN.

On Tuesday and Wednesday, October 15 and 16, Mr. Wm. P. O'Brien, one of the inspectors of the Local Government Board for Ireland, held an inquiry at the City Hall, Dublin, as to the incidence of the sanitary expenditure in that city. The inquiry was a novel one, being the first held under Section 226 of the Public Health (Ireland) Act, 1878. In opening the proceedings, Mr. O'Brien said the expenditure of the Dublin Urban Sanitary District had been, up to the present time, a charge upon the borough fund or borough rate. The Public Health Act of 1878 contained an important provision in Section 226, which provided that all expenses incurred by the urban sanitary authority in the execution of the Act, and not otherwise provided for, should be defrayed as follows, that was to say, in the case of a council or a borough out of the borough fund or borough rate. That provision was precisely analogous to the provisions contained in the previous Sanitary Acts; but there was this proviso at the close of the section—"provided also that if application be made to the Local Government Board, whereby it shall be alleged that it would be inequitable or inconvenient in the district of any urban sanitary authority that the said expenses shall be borne as last aforesaid, the said Board may, after inquiry by order under seal, alter the incidence of such charge in respect of the whole or such part of the expenditure referred to as to them shall appear to be fair and equitable." And in Section 227 there was a provision which existed in the previous Acts, to the effect "that any limit imposed on or in respect of any rate by any Act of Parliament should not apply to any rate required to be levied for the purpose of defraying any expenses incurred by the sanitary authority of any urban sanitary district for sanitary purposes." The present inquiry was held in consequence of a resolution passed by the Corporation of Dublin last August, to the effect—"That representation be made to the Local Government Board under Section 226 of the Public Health Act (Ireland), 1878, alleging that it would be inequitable and inconvenient that the expenses of carrying the said Act into execution in Dublin should be borne as provided in the said Act, and requesting that the Board may, as therein provided, after inquiry, alter the incidence of such charge in respect of the whole or such part of the expenditure referred to as to them shall appear to be fair and equitable." Mr. E. D. Gray appeared in support of the proposition which the Corporation had made. After a lengthened defence of the position of the Corporation, Mr. Gray called witnesses, including Mr. Boyle, Secretary to the Public Health Committee, who suggested that there should be a Sanitary "Doomsday Book" for Dublin, in which should be entered particulars as to the state of all the houses, etc., after periodical sanitary surveys. After much evidence had been tendered, both for and against the proposal of the Corporation, the inquiry closed. We shall watch with interest the announcement of the decision of the Local Government Board for Ireland on this novel question of the incidence of sanitary expenditure, and shall probably be able to give, with that decision, a fuller report of the whole proceedings.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

At the quarterly meeting of the Council of the Royal College of Surgeons, held on the 17th inst., after the minutes of the last meeting had been read and confirmed, the death of Mr. John Hilton was officially announced, and it was unanimously resolved:—"That this Council, having this day received notification of the death of Mr. John Hilton, a member of the Council, desires to record its high appreciation of the services which Mr. Hilton, in several capacities, and during a long series of years, rendered to the College, and of the influence which as a surgeon and teacher of surgery, he exercised on the progress of his profession; and that the President be requested to express to the family of the late Mr. Hilton the sincere regret with which the Council receives the intelligence of his death, and sympathises with them in their loss." The reports from the several annual committees were received, and the Council then took into consideration a requisition, signed by thirty Fellows of the College, for a meeting at the College to consider certain suggestions contained in Mr. Quain's recent circular to the Fellows. The requisition was referred to the President and vice-Presidents, to consider and report on to the Council. Mr. Holmes called the attention of the Council to the desirability of discontinuing the preliminary examination for the Fellowship in

the form in which it is now conducted, and moved the appointment of a committee to examine into the subject. After some discussion the proposal was enlarged, and it was resolved that a committee should be appointed to consider the general subject of the preliminary examination. Mr. Gay then moved—"That a course of lectures on Nematoid Parasites in relation to Endemic and Epizootic Disease be given in the theatre of the Royal College of Surgeons; and that Dr. Spencer Cobbold be invited to deliver such lectures." The motion, after some discussion, was by permission withdrawn.

There are now, we understand, three vacancies to be filled up on the Board of Examiners, instead of two as we announced last week, Mr. T. Holmes having resigned his seat on the Board, as well as Mr. Savory and Mr. Wagstaffe. The vacancy in the Council made by the death of Mr. Hilton must remain unfilled till July next year, as vacancies can only be filled up at the annual meeting in July, unless, indeed, the Council should, by some terrible disaster or series of disasters, be reduced to eighteen in number.

INSANITY IN VICTORIA.

The report of the Inspector of Lunatic Asylums in the colony of Victoria (Mr. E. Paley) for the year 1877 shows that on December 31 of that year there were 2747 registered patients under treatment, an increase of 112 during the year. The total number of admissions and re-admissions to public asylums during the period was 570, to lunacy wards 80, to licensed houses 33; and calculating on these numbers the ratio of the admissions to the population, estimated on December 31 last at 860,804, it appears that one person in every 1260 has been sent to an asylum for treatment. This proportion is slightly in excess of 1876 and the two previous years, but this is explained by the fact that the admissions to lunacy wards and licensed houses are introduced into the present calculations, whereas in former years the admissions to the public asylums alone were taken into account. The proportion of patients recovered and improved is rather below that of the four preceding years. In order that the ratio of recoveries only may be compared with the results in English asylums, Mr. Paley has made a calculation omitting those patients who were discharged relieved, and it appears that the recoveries are equal to 45·26 in every 100 of the admissions to Victorian asylums as against 35·49 in those of England. The total number of deaths, 197, is in a proportion equal to 7·75 in every 100 of the daily average of patients resident—a result in no way different from that of the last ten years, and contrasting favourably with the English rate, which, according to the last report of the Lunacy Commissioners, was 10·08 in every 100 of the daily average numbers resident.

UNION MEDICAL OFFICERS IN NORTH WALES.

The Board of Guardians of Forden, near Welshpool, recently met to discuss the question of reconsidering the salaries of the medical officers of the Union. On the appointment of a new Medical Officer for the Northern District a short time ago, the salary was reduced from £80 to £60 per annum, upon which the Rev. L. J. Lee, who disapproved of the reduction, gave notice of a motion, to discuss which the present meeting was called. The argument in favour of reduction was an alleged diminution of work; but it seemed to be forgotten by some of the speakers that in the work of discouraging pauperism, and reducing the rates, the medical officers had taken a prominent part: it was therefore contemplated to reward them for their services by reducing their pay. Eventually, on the motion of the Rev. R. White, it was considered inadvisable to come to any decision which would cause the salaries to be lowered, as the area had not been changed, and the population, if anything, had increased. The notices which had been given to the medical officers, terminating their engagements with the Board, were therefore decided to be withdrawn. It is satisfactory to find that even in the outlying districts of the country there are sensible members chosen to sit upon local boards, who neutralise the quasi-economic views of their narrow-minded colleagues.

THE HEALTH OF THE POPLAR DISTRICT.

The Medical Officer of Health for the South District of the extensive parish of Poplar, Mr. F. M. Corner, in his annual report for the year ended March last, recurs to the now prominent question, On whom shall fall the responsibility of supplying information of the existence of infectious diseases to the sanitary authorities? He lays great stress on the fact that since his appointment to his district, typhus, typhoid, scarlet fever, and small-pox have attacked the families of the milkman, greengrocer, baker, and laundress, all of whom might easily have conveyed disease with any article sent out by them. And as many slight cases of these diseases are never seen by a doctor, Mr. Corner thinks the profession is excluded from being made the informers, the responsible parties being naturally the heads of households. Commenting on the fact that the deaths of children under five years of age during the period under notice have been more than half of the total mortality, Mr. Corner observes that the causes leading to this result are many, and are to be found in all large and crowded towns; an epidemic, or sudden change of weather, finds the weakly ones easy victims. But national education and philanthropy will, he thinks, do much in improving the tastes and habits of the people, and to these, in conjunction with a steady application of the Sanitary Acts, we must look for some lessening of mortality amongst the young.

TOUGHENED GLASS—A WARNING.

We gather from our contemporary, *Nature*, that M. J. Laurent, of Marseilles, in the August number of the *Moniteur Scientifique*, warns the scientific world generally, and chemists especially, against using toughened glass. He regards utensils made of De la Bastie's toughened glass as being no better than so many Prince Rupert's drops or Bologne flasks, from which, according to M. Laurent, they differ only in shape. He gives an instance where a dish made of this glass was used in a sterine manufactory at Marseilles, and broke suddenly into thousands of fragments on being placed upon the metal scale of a balance. It was at the time cooling down from 110° C., at which temperature it had been maintained for some time. It had been in use previously for about a month, and M. Laurent considers that its sudden destruction was altogether inexplicable, except by the theory above mentioned.

IS IT SCANDALOUS?

Those of our readers who are interested in dental matters, and who duly peruse the proceedings of the Medical Council, will notice, in the early part of the narrative, given elsewhere in our columns, of the second day's doings, the faintest possible indication of something wrong somewhere. It seems that, in their beneficence, the Irish College of Surgeons have resolved to take dental matters specially into their kind consideration, and have opened their portals to all and sundry who may choose to come forward and, after undergoing an examination, claim their so-called dental diplomas. But beyond this, certain enterprising gentlemen have made their way across the Channel, have located themselves in London, and, if we may say so, touted the goods they proposed to introduce in a somewhat singular manner. The

fee, they said, for the new diploma was ten guineas; the candidates would have to journey to Dublin and there pass their examination; but besides, "it was customary" that the Committee should receive a *douceur*—two guineas or so—for their disinterested kindness in thus bringing to the doors of Saxon slaves the invaluable boon of an Irish diploma. Fortunately for the respectability of the Royal College of Surgeons in Ireland, whose well-earned reputation we should greatly regret to see tarnished, Mr. Macnamara was able to disavow the Dental Diploma Committee. Moreover, he said the term "Dental Diploma Committee" was a misprint for "Dental Reform Committee." Between the two there is a difference which should be apparent on the face of things.

A PLEASING PROSPECT.

THE following extract from a letter sent by the *Times'* correspondent with the fleet in the Sea of Marmora will be read with avidity by all looking forward to the service of her Majesty as a career in life. The tone of feeling it incidentally betrays is such as cannot fail to enchant those who have the privilege of serving with or under the writer in the capacity of "engineer or surgeon." Not only the juxtaposition, but also the relative order assigned to these "non-combatants" speaks for itself. Writing of Reform in the Turkish Naval Department, the amiable correspondent proceeds thus:—"Reform has commenced in this department by a change of uniform—much, indeed, needed; for until the present system of distinction was adopted, it was impossible by his dress to distinguish the captain of a man-of-war from the chief engineer or surgeon. As there was but one class of titles, and the pay and allowances of an officer were strictly in accordance with his position in the official hierarchy, whether a non-combatant or otherwise, so it was thought there should be only one uniform; and thus it was that foreign officers, visiting a Turkish man-of-war, found to their astonishment so many captains and commanders. In seeking an alteration for the uniform of the Turkish Navy, recourse has been had to our own for a model; and though the same marks precisely have not been adopted, yet the same general principle has been followed throughout. The *curl* has been taken from the non-combatant officers—that is, the engineers, surgeons, and dockyard officials—and braid of different colours inserted between the gold stripes of their rank; and thus, while still retaining their old titles of general, colonel, lieutenant-colonel, major, or captain, as it might be, anyone can see at a glance what are the peculiar duties of any one of them. The change was not at all popular in the Turkish Navy, for it appeared to involve, in the eyes of certain of these civilian colonels, a loss of dignity; and it required a few threats on the part of the Capitan Pasha to make them adopt the new dress."

VACCINATION IN WHITECHAPEL.

FROM a statement prepared by the Vaccination Officer for Whitechapel it appears that the statistics of vaccination in that Union during recent years are as follows:—In 1874 the number of children vaccinated showed a ratio of 80·9 per cent. to the number of registered births; in 1875 the ratio was 84·5 per cent.; in 1876 it was 85·4; and last year 92·5 per cent. There is reason to hope that the returns for the present year, when completed, will show even more satisfactory results than those of last year. During August and the early part of September five officers were engaged in house-to-house visitation, as a consequence of which the proportion of successful vaccinations during the Michaelmas quarter was unusually large.

MR. R. CLEMENT LUCAS, B.S. Lond., F.R.C.S, has been appointed Surgeon to the Metropolitan Life Assurance Society, in the place of the late Mr. John Hilton, F.R.S.

MEETING OF THE GENERAL MEDICAL COUNCIL.

HELD AT THEIR HOUSE, OXFORD-STREET, W.

FIRST DAY—THURSDAY, OCTOBER 17.

THE PRESIDENT having read his opening address, as reported in our last,

The REGISTRAR proceeded to read a Report, which he had drawn up by the direction of the Executive Committee of the Council, detailing what had been done up to the present time with reference to the registration of dentists. It stated that, the Dentists Act having passed on July 22 last, under the advice of the solicitor to the Council, forms had been prepared for effecting a provisional registration, which had been widely circulated. Applications for registration demanding immediate attention, had thereupon flowed in with great rapidity, the result of which had been that 930 dentists had been provisionally registered, having duly satisfied the various conditions of the Act. Beyond this number there were forty-four applicants for registration whose claims had been reserved for the decision of the Council, four of whom claimed as "foreign and colonial dentists," thirty-five under Section 37 of the Act relating to certain students, and five as licentiates in dentistry of the Royal College of Surgeons in Ireland. None of the Irish licentiates had satisfied the condition that they should send to the Registrar the document conferring or evidencing the licence or qualification, though one of them was already registered under Clause C of Section 6, and sought to register his licentiateship as an additional qualification. The Report then stated that during the month of September the pressure of the business had been very great, but was now decreasing within manageable limits; and as it might fairly now be assumed that almost every dentist was in possession of the necessary information, when the Council had revised the work already done, and prescribed what was further to be done, there was reason to hope that the difficulties inseparable from the new work of dental registration would have been completely overcome. The Report, in concluding, stated that the accounts relating to dental registration had been so arranged as not to clash with the medical registration accounts; that everything had been systematically arranged, and that without any paid assistance the work had been brought clear up to the day of the meeting of the Council.

On the motion of Mr. TURNER, seconded by Mr. TEALE, the Registrar's Report was ordered to be entered on the Minutes.

On the motion of Dr. ANDREW WOOD, seconded by Dr. HUMPHRY, the Council resolved itself into a committee for the purpose of considering the measures requisite to carry into effect the Dentists Act, 1878.

Dr. WOOD stated that the Executive Committee of the Council had met and considered the Bill, and had prepared a series of resolutions, which he would move, and which he believed would enable the Council to consider every point requiring consideration in the Act. The first resolution would be:—"That the following be the form of Register for United Kingdom dentists, for colonial, and for foreign dentists, to be kept in separate alphabetical lists, as prescribed by the Act":—

Name.	Address.	Date of registration.	Description and date of qualifications.

That was the exact form prescribed by the Act; but a question arose under Sub-section 6 of Section 11 of the Act as to whether the Register should contain only dental qualifications, or whether other qualifications were to be added. The section provided that the General Council might make orders for the registration on the Register of "any additional diplomas, memberships, degrees, licences, or letters, held by a person registered therein, which appeared to the Council to be granted after examination by any of the medical authorities in respect of a higher degree of knowledge than was required to obtain a certificate of fitness under this Act." Was a higher degree of knowledge confined to den-

tistry, or were they to engraft upon the registration of qualified dentists any other qualifications they might happen to have, such as M.D., F.R.C.S., and so on? He (Dr. Wood) thought the Council should, if it was in their power, encourage the additional registration; but as there was a doubt about it, counsel's opinion had better be taken on the subject of establishing an additional column for the additional qualifications.

Dr. HUMPHRY seconded the resolution as proposed.

Mr. MACNAMARA proposed, as an amendment, that an additional column be at once added for higher qualifications. He thought if the Register were left naked, as suggested, it would look as if the Council discouraged higher qualifications.

Mr. TURNER seconded the amendment.

Mr. TEALE thought it was a more complicated question than appeared at first sight. Were they to admit medical degrees? If so, a man who was not registered on the Medical Register might get on to the Dentists' Register, and so by a side road get his degree registered.

Dr. HALDANE thought what was meant by the Act was a higher degree in dentistry alone.

Mr. SIMON concurred in Dr. Haldane's view. There was unfortunately an ambiguity in the Act of Parliament in not restricting the use of the word "knowledge." He hoped that the Council would not admit all the innumerable titles which were possible as additions to dental qualifications.

Mr. TURNER pointed out that the question raised by the amendment was whether a column should be provided for the registration of additional qualifications, supposing the Council should at any time decide that such qualifications should be registered. The question of what the qualifications were to be was not before the Council.

Mr. SIMON thought they should agree first whether there were any higher qualifications before providing a column for them.

Sir WILLIAM GULL was of opinion that it would have a very evil effect on dentistry if there was not a place of honour somewhere in the Register. How it should be filled up could be decided hereafter.

Dr. ANDREW WOOD said that after hearing the discussion he felt satisfied that it would be desirable to have an additional column, for the reason that, whatever counsel might advise as to what they were entitled to register, at all events the Act entitled them to register higher qualifications. He thought it should be the object of the Council not only to encourage the dentists to take higher qualifications in dentistry, but also to take a degree in medicine or a licence in surgery.

Mr. MACNAMARA thereupon withdrew his amendment.

After some further discussion, Dr. ANDREW WOOD amended his original resolution by proposing the following as the form of Register, adopting the words of the Act as the heading of the additional column:—

Name.	Address.	Date of registration.	Description and date of qualification.	Additional diplomas, memberships, degrees, licences, or letters.

Mr. SIMON moved, as an amendment, that the form of Register be as originally proposed.

Dr. STORRAR seconded the amendment.

The Council having divided, it was found that there were eleven for and eleven against the amendment, which was consequently declared to be "not carried," the President declining to give a casting vote.

Dr. Wood's motion as amended was then put, and carried by twelve votes against nine, one member abstaining from voting.

Dr. ANDREW WOOD then moved the following resolution, which was seconded by Mr. TURNER, and agreed to—"That Mr. Ouvry (the Solicitor of the Council) be requested to obtain the opinion of counsel as to the interpretation of Clause 6 of Section 11 of the Dentists Act, so as to inform the Council whether, under that clause, they are entitled to register in a separate column the qualifications in medicine and surgery under the Medical Act (1858), held by registered dentists, or only higher qualifications in dentistry."

The following resolutions were also moved, seconded, and carried:—

"That the names of applicants be entered in the register, in conformity with the Dentists Act, by the General Registrar of the Council."

"That the names of those to whom certificates of registration have been issued by the General Registrar be entered by him in the Dentists' Register, and that the entry bear date from the date of such provisional registration."

"That a fee of two pounds be paid by those dentists who apply for registration before January 1, 1879, and a fee of five pounds by those who apply on or after that date."

"That a fee of five shillings be paid for entering additional diplomas, memberships, degrees, licences, or letters in the Dentists' Register."

"That a fee of five shillings be paid for the restoration to the Dentists' Register of names that have been erased therefrom (by neglect of duty on the part of registered dentists) under Section 12 of the Dentists Act.

"(α) That the Dentists' Register be printed, published, and sold at the price of one shilling a copy (or 1s. 3d. post free). (β) That the first edition of the Dentists' Register be published as soon as possible after the first day of August, 1879. (γ) That in subsequent years the Dentists' Register be published at the same time with the Medical Register, that is to say, at the beginning of each year, and that it be also issued to public offices and functionaries with the Medical Register. (δ) That the additions made in the Dentists' Register from January to June in each year be printed and issued at the same time with the additions made in the Medical Register."

"That pupils who have been articled to their fathers, or to brothers—between whom money transactions would be nominal—be in all other respects considered to be in the same position in regard to registration as those pupils, provided for in the first part of Section 37 of the Dentists Act, who have paid premiums for instruction."

"That students who commenced their professional education by apprenticeship to dentists entitled to be registered, or by attendance upon professional lectures, before July 22, 1878 (when dental education became compulsory), be not required to produce evidence of having passed a preliminary examination in arts."

"That the registration of dental students be carried on at the Medical Council Office in London, or at the Branch Council Office in Edinburgh or in Dublin, in the same manner as the existing registration of medical students, and, with the exceptions specified in the foregoing resolution, subject to the same regulations as regards preliminary examinations in arts."

"That the payments made out of the Dental Registration Fund for defraying the expenses of dentists' registration, and for other expenses of the execution of the Dentists Act, be in proportion to the expenses incurred in transacting the business of the Medical and Dentists Acts respectively."

"That the General Registrar shall not retain in his hands more than one hundred pounds of the Dentist Registration Fund, but shall lodge all moneys, as they accumulate, in the Bank of England to the credit of the Treasurers of the General Council, who are the Treasurers appointed by Section 33 of the Dentists Act, 1878."

Dr. ANDREW WOOD then, in eulogistic terms, proposed the following resolution, which was seconded by Sir DOMINIC CORRIGAN, and carried with acclamation:—"That the sum of one hundred guineas be voted out of the Dentists' Registration Fund to Mr. Miller, the General Registrar, in consideration of duties which have devolved upon him in connexion with the Dentists Act, and which have been so ably and zealously performed by him; and that the subject of an addition to his salary be reserved for the future consideration of the Council."

The REGISTRAR briefly thanked the Council for the vote.

Dr. PYLE wished to know if anything was to be done for the clerks.

Dr. ANDREW WOOD replied that that matter was under the consideration of the Executive Committee.

Mr. TURNER inquired what the duties of the local registrars were to be under the Act, as there seemed to him to be some ambiguity upon the subject in the Act.

The PRESIDENT replied that under Clause 5 the local registrars were to keep such registers and perform such duties in relation to registration as the General Council

should from time to time direct; and as the Council had as yet directed nothing, they had nothing to do. The draughtsman of the Act had given an unofficial opinion that the local registrars were to perform duties in relation to registration as the deputies of the General Registrar—such, for instance, as receiving the certificates of applicants and transmitting them to the General Registrar for entry on the General Register, which alone was the register to be given in evidence. The Council could, if it pleased, direct a local register to be kept, but, without giving an authoritative opinion on the subject, he (the President) thought he should be right in saying that the local registrars had no duties whatever to perform under the Act with reference to the Dental Register, except the registration of students.

Dr. Haughton, on the ground of convenience, said he would move the following resolution, which was seconded by Mr. Macnamara:—"That it be part of the duties of the local registrars in Scotland and Ireland to keep registers of persons in Scotland and Ireland desirous to register under the Dentists Act, and to receive the fees payable for such registration."

After some discussion, Dr. Andrew Wood moved, as an amendment, that the consideration of the motion be deferred to a future meeting of the Council.

Dr. Storrar seconded the amendment, which was carried.

On the motion of Dr. Andrew Wood, seconded by Mr. Turner, the Council resumed, when the following Report to the Council by the Executive Committee was read, and directed to be entered on the Minutes:—"The Executive Committee have to report to the Council that, as remitted to them by the Council, the question of its constitution has been under their consideration, but that at present they are not prepared to make their final report thereon."

Sir William Gull said that in consequence of a motion he had made at the end of the last session, that the constitution of the Council required revision, the Executive Committee was charged with the duty of inquiring what changes were demanded. He did not say demanded by the Council (though perhaps there might be members of the Council who demanded such changes), but on the part of the profession, or the public, or the Government. It seemed to him that if the Council were to be duly informed of those demands, the Executive Committee should be asked to obtain the fullest possible information as to the nature of those demands. He might say, in reference to a gentleman who had really taken an active part in the question—viz., Dr. Waters,—that in speaking to him on the subject he (Sir William Gull) had gone so far as to say that no doubt the Executive Committee would call upon him and others who had taken an interest in this matter to give what evidence they could, and that such evidence would be reported to the Council. If that was done the Council would in that way become informed as to what the views of the profession or of particular members of it were on this point. He thought he might say on the part of the Council that it was their wish that the inquiry should be of the fullest kind, because it was a question of the greatest importance. Therefore, he hoped it would be understood that the Executive Committee in carrying out the inquiry should ascertain exactly what were the demands of the profession, and then what were the requirements, because the requirements might be smaller than the demands. (Hear, hear.) He thought that in the short time the Committee had had the Council could not expect them to have done all that was requisite, because it was an organic question, requiring the very fullest consideration. He had no motion to conclude with, and was therefore perhaps out of order, but he thought he was only expressing the feeling of the Council on the matter. (Hear, hear.)

The Council then proceeded to elect by ballot six members to serve on the Executive Committee, the Committee, according to the rules of the Council, becoming *functus officii* on the day of the meeting of the Council. The result was that all the old members were declared re-elected—viz., Dr. Pitman, Sir James Paget, Dr. Humphry, Dr. Andrew Wood, Dr. Aquilla Smith, and Dr. Quain.

Dr. Andrew Wood having read the certificate of the conviction of Robert Charles Moon (M.R.C.S. Eng., 1866) for feloniously using on Emily Hockley an instrument with intent to procure her miscarriage, for which he was undergoing a sentence of penal servitude for fifteen years, the Registrar was directed to erase the name of Robert Charles Moon from the Register.

The Council then adjourned till the following day (Friday), at two o'clock.

Second Day—Friday, October 18.

The Council having, on the motion of Dr. Andrew Wood, resolved itself into Committee on the Dentists Act,

It was moved by Dr. Andrew Wood—"That the Executive Committee be directed to require from medical authorities that grant dental qualifications, information in accordance with Section 22 of the Dentists Act, as to the course of study and the examinations to be gone through in order to obtain such qualifications, and to report to the Council at a future meeting."

Dr. Haughton seconded the resolution.

Mr. Turner, in supporting the resolution, referred to the dental diploma regulations of the Royal College of Surgeons of Ireland, which provided for the reception by the Registrar of that College of a certificate from a body called "the Dental Diploma Committee," and also to a circular sent round by the Dental Diploma Committee, which he characterised as likely to throw great discredit on a diploma so obtained. He would be glad to have a disclaimer from Mr. Macnamara as to any connexion between the body represented by him and the Dental Diploma Committee.

Mr. Macnamara explained that the words "Dental Diploma Committee" in the regulations of his College were a misprint for "Dental Reform Committee," and stated that the circular which had been issued was entirely unauthorised. He warmly defended the course taken by the Royal College of Surgeons in Ireland with regard to dental examinations, and explained the constitution of the Examining Board.

Dr. Storrar did not think Mr. Macnamara's explanation altogether satisfactory, and regretted the course taken by the Royal College of Surgeons in Ireland. The expression "Dutch auction" had frequently been used at the Council with regard to diplomas, and it was remarkable that the number of candidates passed in Ireland bore a very large proportion to those passed in England.

Mr. Simon did not believe the Royal College of Surgeons in Ireland would intentionally take part in anything which could be described as a "Dutch auction" with regard to diplomas, but he thought they had made a serious mistake. It was said that their licences were given to persons who had not passed through a course of study. Unless Mr. Macnamara could assure them that such a course would be stopped in future, he thought the Council ought to take some notice of the matter.

Mr. Macnamara assured the Council that the Royal College of Surgeons in Ireland were most anxious to be thoroughly in accord with the Council, and to do nothing partaking of bad faith. He pledged himself that the certificate of the Dental Diploma Committee would not be accepted. The rules only applied to persons who had been previously in practice.

The resolution was then carried unanimously.

The next subject discussed was registration under colonial and foreign certificates.

Dr. Andrew Wood moved, Dr. Humphry seconded, and it was carried unanimously—"That the Executive Committee be directed to obtain information respecting the education and examination of applicants for registration holding colonial and foreign qualifications under Sections 8, 9, and 10 of the Dentists Act, and to report thereon to the Council at a future meeting."

Dr. Andrew Wood moved, Dr. Humphry seconded, and it was carried unanimously—"That the Executive Committee be directed to carry out generally the provisions of the Dentists Act in accordance with the resolutions agreed to by the Council."

It was also moved by Dr. Andrew Wood, seconded by Dr. Humphry, and carried unanimously—"That Mr. Miller, the Registrar of the General Medical Council, be appointed General Registrar under the Dentists Act, the appointment to take effect from the date of the passing of the Act."

Mr. Turner moved, Dr. Rolleston seconded, and it was carried unanimously—"That a Committee be appointed under Clause 15 of the Dentists Act for the purpose of erasure and restoration of names to the Dentists' Register,

and that the Committee consist of the following members of the Council:—The President, Dr. Pitman, Dr. Andrew Wood, Dr. Aquilla Smith, and Dr. Quain; and that the same payments be made to this Committee as to the members of the Executive Committee."

The foregoing resolutions having exhausted the subject of the Dentists Act, it was moved and carried—"That the Council resume." Dr. Andrew Wood having brought up the report of the Committee, a motion for its reception and adoption was also carried.

The PRESIDENT read the following letter from Dr. West, the President of the Obstetrical Society:—

61, Wimpole-street, London, October 15, 1878.

Dear Sir,—The members of the Obstetrical Society, while they share in the general disappointment experienced by the profession at the unavoidable postponement of the Medical Acts' Amendment Bill, yet cherish the hope that the General Medical Council may yet be able to urge upon the Government the expediency of bringing forward some measure to provide by a separate enactment for the education, examination, and registration of midwives.

The principles of the scheme submitted to the General Medical Council not only met with their approval, but were embodied by his Grace the Lord President in Section 24 of the Bill which he laid before the House of Lords.

The measure is urgently called for in the interests of the poor. It touches none of the complicated questions which are involved in any amendment of the Medical Act, and has absolutely no bearing on that of the general practice of medicine by women. The widest possible admission of women to the practice of medicine would leave the case of the village midwife untouched.

In these circumstances may I be permitted to inquire whether the Medical Council are possessed of any knowledge which they are at liberty to communicate with reference to the intentions of Government in this matter; and, secondly, whether the General Medical Council would themselves promote the introduction of a separate Bill to regulate the education, examination, and registration of midwives, as has been done with reference to dentists in the private Dentists Act. (Signed)

The President of the General Medical Council. CHARLES WEST.

In answer to the first question, he could only say that the Council had received no intimation from the Government on the subject. As to whether the Council would themselves promote the introduction of such a Bill as Dr. West referred to, he could not of course give him any information without a resolution of the Council on the subject.

After some further discussion, the matter dropped, it being suggested that it might be taken up at the next meeting.

Sir DOMINIC CORRIGAN then moved the following resolution:—"That, whereas on July 3, 1878, the following resolution was agreed to:—'Moved by Sir William Gull, seconded by Mr. Teale, and agreed to—That the constitution of this Council needs revision; and that the Council do affirm and represent to the Government that, at its first meeting after the present session of Parliament, it will consider what modifications of its constitution are demanded and are required, and will report to the Government accordingly. Dr. Rolleston required that the names and numbers of those who voted for and against the motion respectively, and of those who did not vote, be taken down. For the motion (18): Dr. Pitman, Sir James Paget, Mr. Bradford, Dr. Rolleston, Dr. Humphry, Dr. Pyle, Dr. Storrar, Dr. Haldane, Dr. Scott Orr, Dr. Pettigrew, Dr. Aquilla Smith, Mr. Macnamara, Dr. Lect, Dr. Apjohn, Sir Dominic Corrigan, Sir William Gull, Mr. Teale, Dr. Fergus. Did not vote (5): The President, Dr. Andrew Wood, Mr. Turner, Dr. Quain, Mr. Simon. Absent (1): Dr. Hudson.' (See General Council's Minutes for July 3, 1878, page 136.) And on the following day, in furtherance thereof, the following resolution was adopted:—'Moved by Mr. Simon, seconded by Sir William Gull, and agreed to—That the Council, referring to its resolution of July 3, remits to the Executive Committee to prepare for it, before its next meeting, a report on the present constitution and working of the Council, and on the changes (if any) of constitution by which, in the opinion of the Executive Committee, the Council might be rendered more efficient for the duties which it has or will have to discharge; and that the Executive Committee be requested to let the report be in circulation among members of the Council at least one month before the meeting at which it shall be discussed.' (See General Council's Minutes for July 4, 1878, page 143). And whereas it does not appear that the Executive Committee in the interval of three months that has elapsed has taken any steps to carry into effect the directions of the Council,—this Council is of opinion that it should not permit further delay to occur in so important a matter, but should proceed at once to the consideration of the constitution of the Council, and what changes may be requisite in accordance with the resolution of the Council of July 3, 1878, in fulfilment of its promise to Government, and in sustainment of its own good faith." He said the matter he had to bring before them was one of very great importance—namely, the revision of the constitution of the Council. He expressed dissatisfaction and surprise at the tone of the President's address, which was that of disapproval of the resolution now before them. The resolution he brought forward to-day was one he had brought forward twenty years before. His view was that the profession who supported the Council were not represented on it. The working part of the profession, who paid the expenses, had not a voice in the matter. There was, in his opinion, no instance in the whole constitutional history of England of such an abuse of representation and taxation as the Council presented. In all Europe the only thing to correspond with it was the French Constitution before the Revolution. The question of direct representation had been talked of and passed by year after year, and it was not until the previous day (October 17) that the Executive Committee made a report on the subject. That was three months after the time when the Council had, in very shame, passed a resolution that the bulk of the profession ought to be represented on the Council. They never moved a step for three months, and then, twenty-four hours before the meeting of the Council, they sent in this report:—"The Executive Committee have to report to the Council that, as remitted to them by the Council, the question of its constitution has been under their consideration, but that at present they are not prepared to make their final report thereon." He looked upon the course which had been pursued as an attempt to evade the question altogether. The excuse had been offered that it was holiday time, and they could not meet; but holiday time was the only time they had for work, the whole of the winter session being engaged in lecturing and clinical teaching; and surely the holiday time did not extend over three months. In the Bill which had been brought forward the question of the constitution of the Council was not dealt with. It was the play of *Hamlet* with the character of Hamlet omitted. When that was mentioned the answer was, "You may rest assured it will be taken into consideration if you will only wait." Again and again the profession had been deluded into the idea that there was something looming in the distance. That Bill had not passed, and he hoped they would not allow any Bill to pass which did not contain full legislation on the subject of direct representation. He had himself drawn up a plan for the revision and reconstitution of the Council, which he would have great pleasure in bringing before them if his resolution were passed.

Mr. MACNAMARA had great pleasure in seconding the resolution. He felt that the honour of eighteen, if not of all the members of the Council, was involved in their taking up this question at the present sitting. On July 3 they had passed a resolution, *nem. dis.*, pledging themselves to their professional brethren, and still further to the Government, that at their next meeting they would take this question into their consideration. It had been said that that was not "the *next* meeting," but that some future meeting was meant. He did not know what meaning could be attributed to the word "next," if that were not the next meeting. He could have understood the argument had the meeting been summoned for a special purpose, but it was a general summons, and at that meeting general business had been transacted. He thought they were pledged to take the subject into their consideration. His views on the subject itself were immaterial, but he could not conceive a more fitting opportunity for taking up the subject. Different stories were told as to the intentions of the Government, and they might or might not introduce a Bill, but if the constitution of the Council were to form part of the Bill it was necessary that they should come to a decision at the meeting. He thought it a loss of time to refer the matter to the Executive Committee. No matter what recommendations they might bring up, they would have to be submitted to and discussed by the full Council. Such an important question should not be thrown off their shoulders on to those of the Executive Committee. It had been urged that the Executive Committee could take evidence and hear parties interested on the subject, but they had all the necessary information before them—the matter had been discussed *ad nauseam* in all the periodicals—and then was the time to take the matter up. It might be said that it would involve expense. He believed the most extravagant procedure was

to hesitate about spending a day or two in considering these matters. The expense must be incurred at some period. Dr. Smith had told him that they never took their seats round that table under something like £250.

Dr. Aquilla Smith: For the first day £404, including travelling expenses.

Dr. Quain: It costs 10s. a minute.

Mr. Macnamara pointed out that their travelling expenses having been paid, the discussion of this question would cost less per day.

Mr. T. Pridgin Teale, in moving the following amendment—"That a discussion on the constitution of the Medical Council, during the present session, is premature, inopportune, and not in accord with the spirit of the resolution which was proposed by Sir William Gull, and seconded by Mr. Teale, on July 3, 1878,"—claimed that as one of those who drew up the resolution referred to he had a right to explain the meaning and intention of it. He granted that logically that was the next meeting of the Council as referred to in the words of the resolution, but morally it was not so. It was not the next meeting of the Council that was then contemplated, or the next meeting in the ordinary sense of the word. It was an accidental meeting brought about by certain circumstances not then foreseen, and if those circumstances had not occurred they would not have been specially summoned then to consider the question of the constitution of the Council. He contended that they would not be violating the spirit of the resolution of July 3 in refusing to enter upon the question at that time. He thought that to discuss it at that meeting would be premature. Sir Dominic Corrigan had spoken as if they had committed themselves to the opinion that they must have direct representation. They could not consider the narrow point whether the addition of a few more members would satisfy the needs of the Council, but they must take a broad view of its duties, and of the manner in which those duties might best be performed. To consider it, then, without the report of the Executive Committee, would not be advisable, and probably the majority were not then prepared to discuss the question with the seriousness which it demanded. Again, he claimed that it was inopportune. They were dragged away at a very critical period of the session of their medical schools, and if the sitting were—as it ought to be for the discussion of so important a question—a prolonged one, it would be very inopportune and inconvenient. He believed there was an earnest intention on the part of the majority of the Council to face the question.

Professor Turner, in seconding the amendment, thought that Mr. Teale had struck the weak point of Sir Dominic Corrigan and Dr. Macnamara's arguments so thoroughly that little remained to be said. The resolution of July 3 had been referred to, but little had been said about that of the following day. The two resolutions hung together. It was important that they should have the report of the Executive Committee before discussing the question. For instance, the Council had imposed upon it most important duties with regard to the registration of dentists, and the dentists had a fair claim to be represented in some form or another. That was a point which the Executive Committee would have to take into consideration. He thought it would be premature and inopportune for the Council to take up the consideration of so great a question at that meeting, and that if they were to take it up it was not likely that they would come to any satisfactory conclusion on it.

Dr. Haughton would have voted for the amendment if it had included any indication that the Council would meet again before the next session of Parliament, but in the absence of any such indication he would vote against it. The pith of the question was, when was the next meeting to be? To hold the next meeting in May would be to tamper very seriously with a very great responsibility. If the Council did not take up the question of reform from within, it was his conviction it would be taken up roughly from without. The name of his predecessor, Dr. Apjohn, was amongst the eighteen members of the Council who had pledged themselves to the need of revision, and he felt constrained as a man of honour to support the pledge they had so given. He very much regretted the resolution referring so important a question to the Executive Committee. There were questions which should not be referred to them, and the constitution of the Council was one of those questions. The Council committed moral suicide when they referred the consideration of their own existence to a committee. The proceedings were not shortened an hour by it. He thought it would be better if Mr. Teale would add to his amendment something pledging them to meet before the next session of Parliament. They were in this dilemma. If the Council met before the next session of Parliament, all the arguments, financial and otherwise, were in favour of going on with the discussion then; if, however, it did not meet till after Parliament met, he could only characterise the resolution of July 3 as illusory. A great many influential members of the Government understood the resolution as a moral pledge that they should have the advice of the Council on the subject at their next meeting.

Sir Dominic Corrigan, replying to the objections to his resolution, observed it had been said the discussion then was inopportune, but Mr. Teale had not said when it would be opportune. It had been said that the present resolution was not in accord with that of July 3; but could anything be more in accord with it? Mr. Teale had said that they might come to the resolution that the constitution of the Council was the best that could be devised; but in the way of that was the resolution of July 3, which was that the Council needed revision. That implied that it needed alteration. (No, no.) At all events, that was the meaning he attached to that word. Mr. Teale had gone into the constitution likely to be introduced, and had said more members were to be added; but in the programme which he (Sir Dominic) had drawn up he proposed that the Council should consist of fewer members than at present. Professor Turner had said that the report should be before them before they could take up the discussion; but when were they to have the report? It was quite time at the end of three months for the Council to take up the question for themselves.

Mr. Macnamara strongly repudiated the assertion that he had suggested any alteration of the Council. All his observations had been directed to the meaning of the resolution of July 3, and the propriety of going on with the discussion.

The amendment was then put to the vote, when fifteen voted for it and four against it. Three members of the Council did not vote.

Dr. Haughton suggested that the following words should be added to the amendment:—"That the Council pledge themselves to hold the next meeting referred to in the resolution of July 3 before February 1, 1879."

Dr. Andrew Wood thought the Council should not pledge themselves to meet on any particular day. He had no doubt the President would watch the course of events, and would not hesitate to summon the Council at any time.

Dr. Quain agreed with Dr. Wood. He thought Sir Dominic Corrigan could not know the deep anxiety the Executive Committee had felt in trying to put the question before the Council. The Executive Committee had carefully considered the question, but they could do nothing till Parliament had risen. Then, again, direct representation had been treated as the natural result of taxation, but he had not heard a word in favour of direct representation. They did not tax the medical profession—it was Parliament which taxed them. Would the lawyers say that the Council of Legal Education was to be elected by the solicitors' clerks and by those who paid the annual tax of £30? If direct representation was a right thing, it must be on stronger grounds than that of taxation.

Sir Dominic Corrigan having made some further observations in reply to Dr. Quain,

It was moved by Dr. Haughton, and seconded by Dr. Aquilla Smith—"That, in the opinion of the Council, it is desirable to hold the next meeting before February 1, 1879."

The motion having been put to the Council, eight members voted for it, and eleven against it, three members not voting.

Dr. Andrew Wood moved, and Dr. Aquilla Smith seconded—"That the thanks of the Council are hereby cordially tendered to Dr. Acland, the President, for his efficient services during the present session of the Medical Council, as also for his most able, zealous, and untiring exertions in behalf of the Council under all circumstances"—which was carried unanimously.

The President thanked the Council, and expressed his gratitude for the confidence reposed in him.

The proceedings then terminated.

DEATH FROM CHLOROFORM.

We are indebted to the Senior House-Surgeon, Mr. J. D. Dixon, M.B., M.R.C.S., for the following particulars of a death from chloroform which occurred in the Newcastle-on-Tyne Infirmary on October 15:—

John William R., aged fifteen, clerk, complexion florid, and apparently in good health, was admitted into this Infirmary on October 3, under the care of Dr. G. Y. Heath. His arm had been amputated about four inches below the shoulder-joint seven years previously; the stump had become conical, and the skin had ulcerated over the end of the bone. On the 15th he was placed under chloroform, which was administered according to our usual custom, on a single fold of lint. Patient was somewhat nervous at first, but came under influence readily. Immediately after the completion of the operation, which only lasted about one minute, his breathing stopped: the tongue was drawn forward, and the breathing commenced again; and he showed signs of feeling in the stump. Attention was again drawn to his breathing, which was loud and peculiar. No radial pulse could be felt, and there was no bleeding from the wound, so that though the heart's action had ceased, the breathing continued for a time. Artificial respiration, galvanism, and friction were made use of; brandy and ammonia enemata were given; champagne was passed into the stomach by means of a tube. Endeavours were made to restore life, for about an hour, without avail. Two drachms and a half of chloroform was the quantity used, a considerable portion of which must have evaporated off the single fold of lint used.

Post-mortem, made six hours after Death.—Lungs healthy; right apex slightly adherent; no congestion. Pericardium contained about two drachms of clear serum; heart-valves healthy; right side widely distended with a quantity of dark fluid blood; left side contracted; muscular tissue healthy. Liver slightly congested. Spleen natural. Stomach distended with air. Kidneys congested; otherwise healthy.

FROM ABROAD.

Thumb-Sucking and Irregular Teeth.

Dr. Chandler, in a paper published in the *Boston Journal* (August 15), states that there is no cause so productive of malformation of the bones of the mouth and irregularity of the teeth as the habit of thumb-sucking during infancy, the different positions of the thumb giving rise to different kinds of deformity.

In general, there is observed in the upper portion of the mouth, just behind the incisors, a hollow in the palate bones into which the thumb has fitted, and which itself has been moulded by and on the thumb. The front teeth are projected forwards, sometimes spread out as a fan, but commonly at an angle, overlapping one another, and pushing out the upper lip, giving the face a prognathous appearance, while the whole upper jaw has a stretched look, as though it had been drawn out while soft, and become hardened in that position—which is the fact. The bones of the floor of the nares are not infrequently elongated, and at the same time narrowed, occasioning a difficulty in breathing through the nostrils, especially when asleep, and many consequent ills. The mouth being kept open, the saliva dries, leaving a deposit of tartar on the teeth, which, combining with the dust from without, produces an offensive greenish tartar. Acids so formed also unite with the lime of the teeth, and cause their destruction.

In the lower jaw a reverse deformity often occurs. From the position taken by the thumb, while the upper jaw is drawn out, elongated, and narrowed, the lower is pushed back and shortened, flattened in front, and protruded at the sides, so that the articulation of the lower molars is thrown outside of their corresponding upper teeth, whilst the lower incisors are far inside of their proper position. The bones of the ramus, and of the infantile jaw itself, while soft, are at times literally bent back, causing the bite of the lower teeth to be an entire tooth back from its normal position; while the front portion of the jaw, containing the incisors, is bent upwards, so that the crowns of these teeth come close to, or actually bite into, the gum of the upper jaw. This is a kind of irregularity which little or nothing can be done to remedy. Not infrequently this bending back of the lower jaw is such that, as the second set are developed, each molar strikes in turn and takes the bearing off from the anterior tooth, until at length the wisdom-tooth takes the whole bearing, and the mouth can no longer be closed—the front teeth being kept apart sometimes as much as a quarter of an inch, entirely preventing proper mastication of the food, interfering seriously with speech, and greatly impairing the looks. The powerful pull of the temporal muscles, and frequent shocks both in the act of mastication and the numerous accidents of life, often set up inflammatory action in these unsupported teeth, and, after more or less intensity of suffering, cause their final loss. The same process is then set up in the teeth immediately anterior to these, the second molars, and they in turn are lost: and so on, until the patient has no molars for mastication, and all the work of pulping the food comes upon the weak bicuspids and front teeth. Along with the general deformity of the jaws and the malposition of the teeth, caused directly by the changes of shape forced mechanically upon the alveolar processes, comes greater or lesser displacement of the teeth, from disturbance of the tooth-germs in their infantile cysts; and there is hardly any form of irregularity that may not arise from this cause. Consequent upon the crowding and overlapping of the teeth arises caries, with all its train—caries upon the lingual and buccal surfaces, disfiguring them much more than the proximal caries which occurs in the teeth of well-formed and regular mouths.

In the general category of thumb-sucking we may reckon finger-sucking; lip-sucking, usually, but not always, the under-lip; and tongue-sucking, which may deform either side or the front of the mouth, according as the child favours one or the other positions for its tongue. In this latter case the whole of one side may be pushed out beyond its proper articulation, throwing the upper teeth entirely over and outside of the under ones in such a way that they not only become a disfigurement, but are wholly useless for the purposes of mastication. The tongue also buries itself deeply in the soft bones of the palate, and there leaves its mark indelibly impressed, greatly injuring the voice and interfering seriously with, or rendering impossible for life, distinct articulation. These practices are not less harmful than thumb-sucking, inasmuch as they can and do go on at all hours of the day and night, whether sleeping or waking, and from their nature are less susceptible of correction.

The practice of mothers and nurses of allowing children bottles and teats from which they may always be sucking, is not only a filthy one, but very injurious to the digestive organs, especially favouring the rapid decay of the deciduous teeth from the action of the acids formed from the sugar always present upon and between them. The effects of sugar upon the teeth are now well understood to be rapidly destructive, confirming the popular belief, from its property of rapidly fermenting when mixed with the saliva, and forming lactic and acetic acids—the warmth and moisture of the mouth particularly favouring this process. Such infants are the early victims of sensitive teeth, and much of their uneasiness at this period arises from this unsuspected source. Toothache from inflamed pulp and alveolar abscess soon follow, and the early indulgence for the sake of quietude is more than paid for by subsequent disturbance. The crowns are lost by rapid caries, and dead roots are left to obstruct the passage of the coming permanent teeth, and turn them aside from their proper positions in the arch, adding this deformity to that caused directly by the presence of the bolus in the mouth, and its moulding the soft and growing bones of the child's palate. Even physicians of long practice have been known to advise mothers to encourage these habits, and when shown models of mouths made monstrous in this seemingly harmless manner, can hardly bring themselves to believe that the special case called to their attention is anything more than an exceptional one, instead of being a type of a class. Whenever the practice is discovered, no time should be lost in the endeavour to break it up, as it grows with the growth and strengthens with the strength. Even in its earliest stages this is not an easy task. The little one, with its strong sucking instincts, has found that other things besides the nipple of its nurse can give it a sort of comfort, and it sucks indiscriminately everything it can clutch and carry to its mouth, and no means but absolute confinement of its hands and the

prevention of access to its mouth will suffice to prevent it. Anointing the fingers with aloes, pepper, and other bitter and pungent flavours, answers but for a time, and soon loses its efficacy, for the child becomes so accustomed to the taste as either to acquire a liking for it, or else overlooks it. A loose night-dress made of light flannel without sleeves, like a bag open at both ends, placed over the head and drawn up about the neck, leaving the head out and all the rest of the body within, with the hands free to do anything but go to the mouth, is the only real safety. With this the habit can be corrected, and with this only, and the child suffers no inconvenience or real discomfort. Perseverance in this method will surely effect a cure, and nothing short of an absolute cure should be allowed; for so persistent is the habit that it is not rare to find it retained through childhood and youth, up to adult age, disfiguring the hands as well as the features, and imparting to the whole countenance a look of idiocy. With our modern appliances and methods some of these deformities may be remedied, but not all. Many are absolutely incurable, and the victim may be compelled to carry the marks of this practice and their accompanying discomforts through a long life.

FOREIGN AND COLONIAL CORRESPONDENCE.

AMERICA.

PHILADELPHIA.

THE YELLOW FEVER EPIDEMIC.—MOVEMENT FOR A NATIONAL YELLOW FEVER COMMISSION—MODES OF TREATMENT—THE DISEASE COMMUNICATED BY THINGS, NOT BY PERSONS—VIRULENCE OF THE PRESENT EPIDEMIC—QUESTIONS AS TO EFFECTS OF HYGIENE, AND OF HIGH ALTITUDES ON THE DISEASE—DEATH OF DR. ATLEE.

ALTHOUGH many weeks have elapsed since the epidemic of yellow fever became the one popular theme for discussion and sympathy all over this country, it is almost too early yet to study the lessons which it teaches or the means by which its invasion may be avoided in the future. Thus far, in New Orleans alone there have been about 9000 cases and nearly 3000 deaths; while Memphis has had as many, and smaller towns along and near the Mississippi have lost hundreds upon hundreds of their best citizens. If we compare the population of New Orleans with that of London (which I assume is now at least 4,000,000), and imagine the latter city suffering under a similar calamity, a more vivid idea may be formed of the immense loss of life and of the extent of the epidemic. A corresponding list of cases and deaths would be represented in London by 180,000 cases and 60,000 deaths. So far as known, more than sixty medical men have succumbed to the dreadful scourge, and volunteers from other cities have taken their places, only to meet a similar fate. A movement is now in progress to solicit Congress to make the necessary appropriation to defray the expenses of a Yellow Fever Commission, as it will be called, from whose researches it is hoped that much information will be gleaned as to the exciting and predisposing causes of the disease, and of its extension, its characteristics, and the mode of treatment best adapted to the various types of the fever. Certainly the opportunities for observation are vast, and many of the most capable observers still survive, and they should be able to ascertain hereafter the causes of the excessive malignancy assumed by this particular epidemic. Whatever the theories may be, however varied their scope, let us hope that the Government may make it a subject for national investigation by the most competent of the profession, in the Southern States particularly. For the present a Commission appointed by the Surgeon-General of the Marine Hospital Service will direct their inquiries and observations to the causes of the present epidemic rather than to the natural history of the disease itself. For this purpose the Commission will visit as many as possible of the southern cities and towns in which the yellow fever prevails, before November 19 next, on which day the American Public Health Association will convene in special session, probably in the city of Richmond, to discuss the facts which shall have been gathered by that time. Whatever tendency the disease may have to spread to other localities, some of the danger has been averted by the vigilance of the authorities, and by the exclusion of refugees who have left the centres of disease, but may bring with them some of the seeds; and by the rigid quarantine regulations established everywhere. Mails have been stopped; and in one instance, now undergoing investigation, liberty has been taken by a postmaster in the destruction, rather than the fumigation, of mail matter, in the cause of humanity.

Medical literature is being enriched by numerous contributions on the symptoms and treatment of the disease; and the information thus conveyed may be of practical value to the inexperienced, who have never seen cases of the affection, but to whom a sick refugee might present himself at any moment for medical attention. A recent article in a medical periodical states that a favourite method of procedure in New Orleans is to give a warm mustard-bath for the feet, and then follow it by a warm enema, then the stomach is emptied by ipecacuanha; and if the enema dose not succeed, a ten-grain dose of calomel is given. Quinine is then administered in doses of ten grains and upwards. The expectant treatment is pursued, and only such remedies are given as the case seems urgently to demand. The neuralgic symptoms are combated with stimulating liniments or sinapisms. For thirst, tamarind-water, acidulated barley-water, and sweetened cream of tartar are taken. If black vomit threatens, iced lemonade or champagne is given, the latter with some care. The only nourishment allowed is barley-water, or weak gruel, by the spoonful. Should collapse occur, it is to be met by iced brandy, mint julep, etc., which, if they be not retained by the stomach, can be administered by the rectum. In black vomit it is thought best to let the stomach alone. Above all are cleanliness in one's surroundings, good air, rest of mind, and the best of attention from efficient nurses.

Dr. F. Peyre Porcher, Physician of the City Hospital, Charleston, from personal experience of previous epidemics has addressed a circular letter to the medical officers of boards of health, containing a plan of treatment which is efficient and safe, to be used by those who cannot have quickly the services of a physician. He states that in yellow fever time is almost everything, for life is compromised by the fever of the first few hours. Many would recover if they would begin at the very inception of the attack, with cold sponging (or with towels) of the head, hands, and arms with ice-water, thoroughly applied and repeated frequently as the temperature rises, and for the first one, two, or three days, if necessary. Give at the beginning, he says, ten, twenty, or twenty-eight grains of calomel, with the same of quinine; follow, in three or four hours, with a dose of salts. Then no more medicine except a little acetate of potash (four or five grains) with one-eighth or one-twelfth of a grain of morphia in a little water, used two or three times a day to quiet irritation. Place the feet in hot mustard-water, and cover the abdomen with mustard-plasters at the beginning, to be repeated. There will be no black vomit if the fever of the first few hours is kept within bounds.

Dr. Woodworth, of the Marine Hospital Service, is firmly of the opinion that all the evidence warrants the assertion that yellow fever poison is transported by *things*, and not by *persons* considered apart from their clothing. He mentions in corroboration of this (*New York Medical Record*, September 21) several cases which occurred during the present epidemic. A young woman, a resident of Cincinnati, was there attacked by the fever and died. Previous to her attack, baggage or goods brought from the infected city of New Orleans had been stored in the house in which she lived. The children of the Porter family, residing upon the bank of the Mississippi, about two miles from Cairo, found a skiff which had been used by refugees from the infected cities, and carried it to their home for repair. Three or four days afterwards all the children who were around the boat were stricken with the yellow fever in one day. At Gallipolis, Ohio, none have had the yellow fever but those who visited or came near the infected steamboat and her barges anchored in the river near that place, and there have been twenty-five cases and nine deaths already. On the other hand, yellow fever patients have been treated in the Marine Hospitals at St. Louis, Cairo, Louisville, and Cincinnati, without communicating the disease, the simple precaution having been taken to disinfect the clothing and other effects immediately upon receiving the patients. It is a well-known fact that the unacclimated attendants upon the yellow fever patients at the New York Quarantine do not contract the disease.

Here Dr. Vanderpoel, the health officer, disinfects the clothing by fire, so that there shall be no mistake about its thoroughness. Dr. Woodworth advocates an internal quarantine of things rather than persons—such as the clothing upon the person, baggage in boxes, trunks, valises, or hand-bags, the disinfection to be effected just outside the infected city, at the commencement rather than the end of a journey. He insists that when the yellow fever breaks out among the resident population of a town, all unacclimated persons should be prohibited from entering the infected place, and the unacclimated residents should be removed to temporary camps, on the highest available ground, at least two miles outside of the infected locality. There should be established an intermediate station, where the clothing and other effects of the fleeing people should be thoroughly disinfected before they are permitted to enter the camp. It seems to be pretty well settle in the experienced of the past that the disease arises from a specific poison which frost destroys; but several weeks must yet elapse before that happy consummation can be reached. In the meanwhile abundant opportunity exists for establishing the fact admitted by many physicians, that the poison of yellow fever cannot be conveyed directly from the sick to the healthy; but from the changes undergone by the secretions, discharges, evacuated contents of the stomach, etc., from unwashed and undisinfected clothing, chamber utensils, drains, gutters, privies, etc., into which they have been thrown. The popular impression seems to be that plans of treatment or specific remedies that have been useful in other years have been absolutely ineffective in checking the virulence of this epidemic. Quinine, it is stated, has not been so potent as usual in controlling the disease; but we must wait for the reports of competent medical witnesses to establish this fact. It is also said the Chinese have a peculiar and almost absolute exemption from the disease, and if this be true it will only confirm the well-known fact that diseases act very differently on the different races of men. There seems to be some reason to believe that prior to the invasion of this epidemic fever of 1878 the proper sanitary precautions were not taken to prevent it. It is said that in New Orleans, for instance, the foci of disease in the epidemic of twenty-five years ago continued to be as filthy as ever up to the present summer. Sewerage and drainage have been equally neglected there and elsewhere with an indifference amounting almost to criminality.

In Grenada, a town in Mississippi, which has suffered terribly from the epidemic, the chief drain or sewer of the town is described as an ordinary ditch, only a few feet deep, covered in places by logs and planks, with a layer of earth, but often entirely open, and collecting the drainage of stables, cesspools, etc. Complaints being made last July to the official authorities, the sewer was cleansed, and the filth at its bottom removed, with the dead bodies of animals that had fallen into its openings. The first case of fever at that town originated at a point very near the spot at which these men were at work, and numerous cases followed along the line of the drain.

It is said that this picture pourtrays the condition of many of the Mississippi towns, in which refuse of all kinds is thrown into the streets and alleys. Among the unsubstantiated facts (so-called) of the present epidemic, are the statement that a new tendency of the fever is to cause fatty degeneration of the heart; and that the mortality among young men has been without precedent; that, instead of being restricted to localities less than 600 feet above the level of the sea, it has prevailed most destructively on the table-lands of Mexico, from 6000 to 7000 feet above the ocean; that yellow fever is sometimes latent, like intermittent and remittent fever, in the system for months; that the atmosphere, which is so deadly to some human systems, operates tonically on others, improving their health immensely; etc. The daily press is not, however, governed by the most perfect knowledge of medical matters, and we must patiently wait for the verdict of the medical world on all such points, as well as on plans of special treatment, accounts of which occasionally appear in the journals. We read, for instance, of the application of cold in a number of cases by the use of ice or ice-water. In one case reported—the first in which the experiment was tried—the patient was apparently moribund, having been sick for twenty-four hours without medical attention. The temperature was 105°, the pulse 100, and it seemed as if death would occur in a few minutes. The patient was stripped, placed upon a fever cot designed by a Dr. Kidder (since dead), which had a network cover and indiarubber receptacle beneath, and then sprinkled with ice-water from a sprinkling-can for more than two hours. The temperature of the body, it is stated, was reduced to 58°, the pulse to 90. After the sprinkling, the normal temperature of health returned, the fever disappeared, and the patient fell into a gentle sleep. I do not wish to disturb the effect of such a picture of successful treatment, but I am under the impression that I have since read that the patient afterwards died.

The recent death of Dr. Washington L. Atlee, following but a few months after that of Dr. Peaslee, is memorable on account of the almost simultaneous loss to the medical world of the two chief American advocates and practitioners of ovariotomy. Dr. Atlee had performed the operation several hundred times with success, commencing his career in this direction in 1844. When he came to Philadelphia to practise, he found himself in direct opposition to the views of the great mass of the profession, who denounced the operation as butchery. The press and the medical societies and colleges were equally outspoken, and his professional brethren declined ever to consult with him or to be present at his operations. It is said that he was pointed out as a man to be shunned, a murderer, whom the law should be invoked to arrest in his bloody work; and that his first patient in Philadelphia was visited by an eminent surgeon just before the operation, and warned that she would die within twenty-four hours after its performance; but she had the courage to submit to the operation, and recovered.

A new national medical organisation, which gives promise of great vitality in the direction of progress, was instituted during the Centennial year, and has just held its third annual meeting. It is entitled the American Academy of Medicine, and as its main principle insists upon the necessity of a thorough preliminary training for the members of the medical profession. No one is admitted as a member who does not possess an academic degree. Dr. Frank H. Hamilton, of New York, was its President. Undoubtedly such an Association must eventually have much influence upon the cause of education. One of the most active of the younger associations is the American Gynæcological Society, also an offspring of the Centennial year. It has just held at Philadelphia its third annual meeting, and some of the most prominent American gynæcologists took part in the discussion, which were thoroughly practical and instructive. The American Dermatological Association, another young society, met in August at Saratoga. Wisely, we think, it selects each year some fashionable summer resort for its place of meeting, offering a pleasant excuse in its surroundings for a short absence from home and professional care. The nomenclature of skin diseases seems to have undergone considerable modification at the hands of these and other gentlemen of that specialty within a few years past.

The Midland Medical Society.—The annual meeting of the Midland Medical Society was held in Queen's College on the 16th inst., when the following officers were elected:—*President:* Mr. Herbert M. Morgan. *Hon. Treasurer:* Mr. Harmar. *Hon. Secretaries:* Dr. Thomas Savage and Mr. John Garner. The names of Mr. Gamgee, Dr. Sawyer (late President), Mr. William Thomas (late Hon. Sec.), Mr. West, and Dr. Welch were added to the Council. Professor Lister, F.R.S., has consented to deliver the inaugural address on Wednesday, the 30th inst.

Case of Hydrophobia.—In the *Boston Journal* for August 29, Drs. Shattuck and Fitz relate a case of hydrophobia in considerable detail, in which no evidence of a bite could be traced, and the poison (conveyed, as supposed, by the licking by the dog of some abraded surface) remained about eight months in a condition of incubation. With such a history, it might be disputable whether the case was one of hydrophobia at all, but the numerous capable observers who witnessed it were unanimous as to its diagnosis. Curare was tried, nine doses (varying from one-fourth to an entire grain) were injected between 11 a.m. and 4 p.m., without any physiological effect being induced. In the medulla oblongata "the alterations were a diffuse cellular infiltration of the adventitia of the veins, venous injection and thrombosis, perivenous hæmorrhages, and miliary abscesses."

GENERAL CORRESPONDENCE.

A CORRECTION.

LETTER FROM DR. TILBURY FOX.

[To the Editor of the Medical Times and Gazette.]

SIR,—In my remarks on elephantiasis arabum, published in your issue of the 12th ult., I had the pleasure of referring to the careful and interesting statistics of "Mr." Mooden Sheriff, of the Triplicane Hospital. It has been pointed out to me that this gentleman's real designation is Mooden Sheriff, Khan Bahadur. I must plead for excuse of my unintentional discourtesy to him, my ignorance of Eastern etiquette, and my being misled by a semi-official report in my possession. But I hasten to make the *amende*. I am, &c.,

TILBURY FOX.

14, Harley-street, Cavendish-square, W., October 19.

THE ASSOCIATE FELLOWS OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.

LETTER FROM DR. R. BARNES.

[To the Editor of the Medical Times and Gazette.]

SIR,—In your last number is a paragraph announcing the election of a new Associate Fellow of the College of Physicians of Philadelphia, and professing to give a full list of the British Associate Fellows. To make the list complete I must beg you to add the name of Yours, &c.,

15, Harley-street, W., October 21. ROBERT BARNES.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

TUESDAY, OCTOBER 15.

CHARLES MURCHISON, M.D., LL.D., F.R.S., President, in the Chair.

NEW VOLUME OF TRANSACTIONS.

THE PRESIDENT presented the new volume of *Transactions*. He said that he trusted that the present session might prove as successful as that preceding, the labours of which were embodied in the volume.

STENOSIS OF THE ORIFICE OF THE PULMONARY ARTERY.

Dr. PEACOCK gave an account of G. D. T., a boy, aged thirteen, residing in Wandsworth-road, who was admitted into Charity Ward, St. Thomas's Hospital, under Dr. Peacock, on July 20, 1878. No satisfactory history of his previous state of health could be obtained; but he was not known to have ever had rheumatism or any other disease likely to lay the foundations of cardiac disease. He was reported never to have been strong, and to have been always livid in the face in cold weather. He was, however, in his usual health till four months before his admission into the hospital. He was at that time livid, and his lips were purple; he had much dyspnœa; and his face and extremities were puffy. A loud double murmur was heard at the upper part of the sternum and on each side of that bone, and it was most distinct in the course of the pulmonary artery, where also there was a distinct thrill felt. The abdomen soon after his admission became tumid; and he was tapped, and eight pints and a half of fluid were removed. The abdomen again became distended, and the tapping was repeated; and he died soon afterwards. The heart was large, and weighed about nine ounces; the hypertrophy and dilatation of the right ventricle being most marked. The orifice of the pulmonary artery was much constricted, admitting only of the passage of a ball measuring ten Paris lines in circumference = 22·5 millimetres, or 0·88 English inch; and this constriction was due to adhesion of the edges of the three valves, so that a kind of diaphragm was produced, which, being protruded forwards in the course of the vessel, formed a funnel-shaped aperture. The heart was otherwise well formed, and the fœtal passages were completely closed. From the similarity of the condition of the valves in this case to that which obtains in cases of decided malformation, and the rarity of pulmonary arterial disease in after-life, it was inferred that the disease was of congenital origin, though the constriction at the time of birth must have been only slight, otherwise one or both of the fœtal passages would have been still pervious.

Dr. DOUGLAS POWELL asked whether Dr. Peacock had noticed any analogous condition in the mitral valves of congenital origin. In certain cases of mitral stenosis no history of rheumatism could be obtained, and the valves were flaccid, without the thickening that would result from endocarditis. It was difficult to explain the origin of such cases except by reference to congenital defect. Persons suffering from this condition might live for a long time, with simple constriction of the mitral orifice.

Dr. PEACOCK replied that he had long regarded some of these cases as congenital, and other observers had expressed a similar opinion. In some instances the history of the disease was life-long, and these were almost certainly congenital.

The PRESIDENT said that he had lately seen a patient, aged twenty-five, who was known to have a cardiac murmur at the age of two, and who had had symptoms of heart disease the whole of this time.

OSTEO-MYELOID TUMOUR OF UPPER JAW.

Mr. EDWARDS (of Ipswich) brought forward this specimen, which he had removed by operation from a woman of twenty-one. The patient had fallen on her right cheek at the age of three. A local thickening was the result, and there had always been a visible tumour in that situation. Lately the growth had much increased in size, and it occupied the whole of the right upper jaw. The general health remained unaffected. In the operation for removal, a portion of the tumour was found to extend into the hard palate of the opposite side, and had to be left behind. There was, however, no subsequent growth. It was a question now whether the tumour should have been removed.

Mr. BRYANT said that there was little doubt that the tumour was a solid myeloid growth of the upper jaw. He had met with a case in a girl of eight, which had been growing for some years, and was solid, with a malplaced tooth in the centre. A portion of the tumour was left at the operation for its removal; this rapidly grew, and the whole of the upper jaw was exsected in consequence. At the border of tumour corresponding to the middle line, myeloid elements were found microscopically, and part was therefore undoubtedly left behind. Yet, contrary to expectation, the whole of the enlargement and induration of the bone at the part subsided, and the disease had not returned.

Mr. HULKE inquired what the real histology of these tumours might be: they had been described as "osteoid," and referred to as "myeloid."

Mr. GOODHART, who had examined both the tumours, stated that the tumour exhibited had presented myeloid elements when it was fresh, though such were not to be found now. It evidently consisted of rapidly growing myeloid tissue. He would not say that this was pathological. This class of specimens appeared to him to have a bearing upon leontine disease of the bones of the face, as described in previous volumes of the *Transactions*. It seemed as if a general hypertrophy of the bones of the face might have ensued if the disease had been allowed to progress.

THE MINUTE ANATOMY OF MOLLUSCUM CONTAGIOSUM.

Dr. TILBURY FOX read for himself and Dr. T. C. Fox a paper on this subject. As the view which had long been held with almost universal acceptance in England concerning the glandular origin of molluscum contagiosum was just now seriously questioned by good observers, and particularly in a paper by Lukomsky, of Kief, the authors had thought it important to make a careful examination of certain specimens of the disease in their possession. The conclusion they had come to was, that the proof of the correctness of the old view was overwhelming, and in their examination they had made out also one or two new points to which they desired to call attention. All observers agreed that a molluscum tumour under the microscope presented a glandular aspect; but Lukomsky, Boeck, and others, affirmed that the little tumours were produced by the growing downwards of the rete Malpighii in cone-like processes into the corium, and that the cells underwent degenerative changes, and gave rise to the so-called "mollusc bodies." The papillæ, altered by pressure, according to Lukomsky, were represented by the fibrous septa of the gland-like tumour. The growths they

had examined varied in size from a pin's head upwards, and had the immediately surrounding and apparently healthy skin attached, but which, happily for their purposes, contained the earliest changes in the formation of a tumour—so slight that the affected gland did not as yet alter the contour of the skin. They had failed to detect any evidence whatever of the growth downwards of the rete; on the contrary, it was flattened out and thinned by and over the growing molluscum tumour, and was quite normal in adjacent parts, and took no part in the formation of the tumour. The first sign of the disease was a hypertrophic growth of the sebaceous glands, in which the lobules became multiplied, and the cell-contents actively increased. They had transitional stages between this and the condition presented by the fully developed molluscum tumours. Whilst, therefore, the mere microscopical appearances in the abstract figured by Boeck and Lukomsky were much as they found them, they had been enabled to detect and follow out the earlier and later stages in the formation of these tumours, which these observers had really failed to do, and they held that the glandular origin of the disease was incontrovertible. They wished to call attention specially, moreover, to the changes that went on in the cell-contents of the tumours. There were two main phenomena—viz, first, the rapid endogenous formation of *Schleim*-cells, preceded by great activity of the nuclei, and seen especially in the outermost layer of cells; and secondly, the free vacuolation of all these cells as they advanced towards the centre of the acini and to the excretory duct. The so-called "mollusc bodies" were nothing more than these completely vacuolated cells, the contents of which had undergone some peculiar departure, certainly not of a colloid nature, as had been affirmed, from the normal sebum. They were simply and solely completely vacuolated glandular cells distended by altered sebum. The two processes of cell multiplication and vacuolation went on in the same cells, but the former in the earlier, and the latter in the later life of the the cells. Vacuolation processes were not peculiar, of course, to molluscum contagiosum, and in this disease the ordinary sebaceous gland-cell functions were represented in a much exaggerated degree. Again, in the expressed contents of a molluscum contagiosum tumour there were observed cuticular cells, like those met with in comedo, and the "mollusc bodies" —*i.e.*, altered gland-cells. The latter were seen now and then to be more or less embedded in the cuticular cells, which often exhibited moulds also, from which the mollusc bodies had evidently dropped out. Lukomsky argued that this condition signified the formation of the "mollusc bodies" in the rete cells. The authors believed, however, that the mollusc bodies were not formed in these cuticular cells, but became partially impacted in them in their passage from the acini by the great pressure in the concreted mass. Lastly, as regards fungi as a cause of molluscum contagiosum, the authors had never found any fungus elements in any *fresh* tumour; but they had seen plenty of fatty granules and oil-globules and altered blood-cells which might be mistaken for fungi, whilst the irregular edges of the cuticular cells sometimes presented an appearance somewhat like mycelium.

The President asked whether these investigations extended to the consideration of the contagious nature of the disease.

Dr. Tilbury Fox replied that they had not gone into this question from a pathological point of view.

Lymphangiectodes.

Dr. Tilbury Fox exhibited a young man the subject of "lymphangiectodes" or lymphatic verruca, and presented a report by himself and his brother, Dr. T. C. Fox, upon the pathological features of the case, as derived from an examination of portions of the growth excised from the patient. The patient was a young man, aged twenty-one, who was admitted under Dr. Fox's care in University College Hospital last June. He was born with two large unraised nævi (mother's-mark) on the left thigh, which had remained unchanged till the present date, whilst smaller ones had appeared from time to time. At the age of six months the veins of the left calf began to enlarge, and he had now a large soft reducible bluish swelling, the size of a big walnut, on this part, which was a venous "cavern" evidently. At two years of age a number of little warty growths made their appearance on the skin of the buttock, the back of the knee, and about the anal region, and he was laid up with "low fever." The warty-like masses had increased considerably; and the following was the present state of things. The left lower limb, buttock, and the anal region were alone diseased. There were a number of minute nævi, besides the large congenital ones before referred to, scattered about the limb, which, when they developed, were at first red, then became bluish, and then gradually faded in colour, and perhaps nearly disappeared; but, in addition, between the buttocks, extending from the base of the coccyx to the front of the anus, also more externally over the left gluteus maximus and about the lower fold of the nates, and over the popliteal space, were isolated masses of warty or condylomatous-looking growth, which, when closely examined, were seen to be made up of closely-packed large vesicles, each embedded in a tough capsule, and were not unlike frog-spawn, over the gluteal region, and of pinkish hue. The growths about the anus were more warty-looking and irregular; that over the gluteus, the size of the palm of the hand, was raised half an inch in height; those over the popliteal space—three or four little masses—were about the same elevation and of the size of a small to a large filbert or half a walnut. There were a few smaller, flat, very slightly elevated patches, in part raised and looking like minute warts crowded together, but each little point vesicular in aspect. Pressure had no effect upon the growth. The vesicles did not discharge spontaneously, but, if pricked, they gave exit to a clear fluid containing leucocytes and epithelial elements in an active state of vacuolation. On examining portions of the growth, the diseased mass was seen to be composed of hyperplastic connective tissue, with great development of the veins and arteries, especially the former, which, dilated and branched, formed a plexiform network in the more superficial part of the skin; but they were always in the distinctly tubular walled form. The lymphatic tracts were exceedingly well marked and over-developed; and lymphatic vessels, easily distinguished in places from the veins, could be traced dilating into varicosities and large spaces, and enlarging in the uppermost layers of the corium into cysts, which were seen with the naked eye as the vesicles on the surface of the skin. The glands and their ducts were well marked, but had undergone no other important change. The changes in the rete were chiefly two: pigmentation of the cells of the lower strata; and its displacement and thinning by the advancing vesicular formations, the walls of which were formed immediately by a thin layer of the corium tissue and papillæ. The papillæ, in which there were no vesicles, contained distinct lymphatic tracts, and actual vessels here and there could be demonstrated. The vesicles and lymphatic spaces below were lined by endothelium. They contained lymph-cells. No veins or arteries could be traced into any of the lymphatic vesicles or spaces, nor in communication with them. They, however, were seen distributed about the vesicles. The lymphatic vesicles and spaces, however, did communicate with actual lymphatic vessels. The veins and arteries of the glands were large, and their small branches tended to assume a plexiform deposition in the tissues surrounding the sweat coils. The lymphatic tissue was everywhere increased in amount, and distinct peri-acinous lymph-channels were traced about the other glands upwards to the lymph-spaces. The reporters referred to the clinical and pathological points of similarity and difference between their case and the elephantiasis teleangiectodes of Virchow, and many of the eighty-eight instances of lymphatic diseases collated recently by Busey; and they considered that it possessed peculiar features of its own, as compared with all the cases which they had as yet found recorded.

Dr. Hoggan said that he had never seen lymphatic disease more clearly demonstrated than in Dr. Fox's specimens.

Mr. Morrant Baker asked what was the character of the fluid that escaped from the vesicles when they were pricked.

Dr. Tilbury Fox replied that the vesicles when pricked gave out a gummy-like fluid, not at all chylous, containing lymph-cells.

Mr. Hulke said that it seemed remarkable that the vesicles were not compressible, and yet communicated with the lymphatic spaces beneath.

Mr. Bryant said that he should call the case one of nævus undergoing the peculiar cystic degeneration that nævi are apt to suffer. It was true this was an extreme case of nævus and of degeneration. But he had seen a similar case. Some fifteen years ago he recorded such a case in the *Transactions* of the Society, in a child. Five years later the subject of the disease was seen, and the growth was found to have advanced further towards degeneration. The sinuses called vesicles were dilated veins. It was a case of cystic warty degeneration of a nævus.

Dr. Thin said that the mere fact of the presence of caverns

of lymphatic character did not prove that the disease took its origin in the lymphatic system. There was little doubt that there were lymphatics in section microscopically; but such an appearance might occur from the pouring out of fluid in venous stasis. He did not mean to offer this as a criticism of Dr. Fox's account, but as a fair explanation of the microscopical appearances.

Mr. Hutchinson said that his case, which had been said to resemble the present case, was really by no means like it. The present seemed to be an instance of change in a nævus. Whatever the alterations were, they had occurred in nævoid structure. In his case there was no congenital disease whatever. It occurred in a boy, and seemed to be produced by the friction of a brace. It consisted of a tuft of warts, with vesicles at the base, and readily bleeding. In another boy, vesicles with enlarged papillæ and dilated veins formed a growth upon the chin. In both subjects the disease was spreading. He had never seen the disease otherwise.

Dr. Tilbury Fox replied that he was astonished to hear some of the remarks that had been made. The question of the occurrence of dilatation of the lymphatics had been fully worked out and settled. He had studied the growths in this subject from their first appearance. They were independent of the nævoid condition, the vesicles being visible when there was no alteration of the bloodvessels.

(*To be continued.*)

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

Friday, October 18.

Dr. Stevenson, President, in the Chair.

This being the first meeting of the session 1878-79, the President read his Inaugural Address, which we publish *in extenso* elsewhere.

A letter was read from the Secretary of the National Health Society, in reference to the prevention of the spread of infectious diseases by children and others attending the out-patient waiting-rooms of hospitals and dispensaries. The subject was referred to the Council for consideration and report.

A letter was also read from Dr. Edmunds, offering to read a paper communicated by Dr. Elizabeth Hoggan, relative to the need of establishing a service of public lavatories for women in London. It was resolved that Dr. Elizabeth Hoggan be thanked for the proposed communication, but the Society must decline to receive the paper, as they have already a large number of papers down for reading during the current session.

Dr. Murphy, the successor to Dr. Stevenson as Medical Officer of St. Pancras, was balloted for as a metropolitan member and unanimously elected.

Dr. Collier, Medical Officer of Health for Hammersmith, was nominated for election.

The Secretary read the titles of books and pamphlets received on sanitary matters.

Dr. Dudfield alluded to the by-laws as proposed under the Cattle Diseases Act of last session for regulating the business of cowsheds, dairies, and milkshops. The Veterinary Department being now in direct communication with the Government through the Privy Council on this matter of framing by-laws, it was therefore very desirable that the Council of this Society should urge the Government to adopt some special by-laws for the better regulation of dairies, giving special emphasis to the need of increased cubic space for the cows and for the storage of milk. The Kensington Vestry have written to the Privy Council, urging them to issue more detailed instructions, and especially that country dairies be brought under the same regulations, as most of the milk retailed in London comes from the country. The Dairymen's Association are doing their utmost to get the rules made as lenient as possible.

Mr. Lovett, of St. Giles's, alluded to the case of a boy living over a cowshed being attacked with typhoid fever. He ordered the case to be removed to the fever hospital, more especially as the neighbourhood was densely crowded, and the accommodation unsuitable for the treatment of such a case. Another medical man was called in, who certified that the boy was too ill for removal. He had, therefore, no alternative but to submit, the result being that the father is now down with typhoid fever.

Dr. Tripe remarked that the Hackney Vestry had agreed to a cubic space of 500 feet, and he thought the Metropolitan Board of Works would not consent to 800 cubic feet for each cow.

Dr. Dudfield referred to the case of Hadley, brought before the Registration Courts, in respect of a child under sixteen years of age having been removed to a small-pox hospital (*i.e.*, for so-called paupers), thus disqualifying the parents from registration as voters for a member of Parliament. The Kensington Vestry intend to go to the Privy Council recommending that infectious diseases be no longer placed under the control of the board of guardians, and that the misfortune of having such a disease treated in an Asylums Board hospital should no longer disqualify for the franchise. The people who willingly consent, for the sake of their neighbours, to go to a hospital supported by the rates, ought not to have the stigma of pauperism upon them, and to be thereby deprived of their political rights. More than 90 per cent. of patients at these hospitals are not really paupers, and never have been. Many would not go if they knew they were being pauperised.

Dr. Tripe thought it would be better to let the objectors contest the matter on the score of their political rights.

It was subsequently moved by Dr. Dudfield, and seconded by Dr. Tripe—"That it be referred to the Council to consider the proposal of urging the Government to introduce a clause into an Act of Parliament, making it a condition that treatment in a pauper hospital ought not to convey to the patients the stigma of pauperism."

Dr. Tripe proposed a vote of thanks to the President for his inaugural address.

Dr. Barclay, in seconding this proposal, said that he much regretted to find that there was a growing tendency among the lay governors of our public hospitals to exclude infectious cases. The opportunities hitherto afforded the students of studying these diseases at the bedside would be quite taken away from them if this proposal were carried out. He had vigorously opposed the governors at St. George's Hospital in their attempt to exclude such cases, and he was glad to say that he had succeeded. He thought the suggestion of the President, to expect the students to expose themselves to the pestilential atmosphere of a fever hospital, would be very undesirable.

Dr. Dudfield proposed a vote of thanks to Dr. Vinen and Dr. Corfield for the labour bestowed by them on the compilation of the annual report.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Wednesday, October 22.

Charles West, M.D., President, in the Chair.

The report of the Committee appointed to examine into the identity of Diphtheria and Croup was read, their conclusions being first laid before the meeting, and afterwards the report itself, though somewhat in abstract. The following is a summary of the Committee's conclusions:—1. Membranous inflammation confined to, or chiefly affecting, the larynx and trachea, may arise from a variety of causes as follows:—(*a*) From the diphtheritic contagion. (*b*) By means of foul water or foul air, or other agents such as are commonly concerned in the generation or transmission of zymotic disease, though whether as mere carriers of contagion cannot be determined. (*c*) As an accompaniment of measles, scarlatina, or typhoid, being associated with these diseases independently of any ascertainable exposure to the special diphtheritic infection. (*d*) It is stated, on apparently conclusive evidence, although the Committee have not had an opportunity in any instance of examining the membrane in question, that membranous inflammation of the larynx and trachea may be produced by various accidental causes of irritation—the inhalation of hot water or steam, the contact of acids, the presence of a foreign body in the larynx, and a cut throat. There is evidence in cases which have fallen under the observation of members of the Committee, that membranous affection of the larynx and trachea has shortly followed exposure to cold; but their knowledge of the individual cases is not sufficient to exclude the possible intervention or co-existence of other causes. The majority of cases of croupal symptoms definitely traceable to cold appear to be of the nature of laryngeal catarrh. 3. Membranous inflammation, chiefly of the larynx and trachea,

to which the term "membranous croup" would commonly be applied, may be imparted by an influence, epidemic or of other sort, which in other persons has produced pharyngeal diphtheria. 4. And, conversely, a person suffering with the membranous affection chiefly of the air-passages, such as would commonly be termed membranous croup, may communicate to another a membranous condition limited to the pharynx and tonsils which will be commonly regarded as diphtheritic. It is thus seen that the membranous affection of the larynx may arise in connexion with common inflammation or with specific disorders of several kinds, the most common of which in this relation is that which produces similar change elsewhere, and is recognised as diphtheria. In the larger number of cases of membranous affection of the larynx the cause is obscure—*i.e.*, in any given case it is difficult to predicate the particular cause in that case. Among those in which it is apparent, common irritation seldom presents itself as the source of the disease; accidental injury is but very infrequently productive of it. But few cases of undoubted origin from exposure to cold are on record. On the other hand, in a very large number of cases, infective or zymotic influence is to be traced. The membrane, even when chiefly laryngeal, is more often than not associated with some extent of a similar change in the pharynx or in the tonsils; and whether we have regard to the construction of the membrane, or to the constitutional state as evinced by the presence of albumen in the urine, it is not practicable to show an absolute line of demarcation (save what depends upon the position of the membrane) between the pharyngeal and laryngeal forms of the disease. The facts before the Committee only warrant them in the view that when it obviously occurs from a zymotic cause or distinct infection, and primarily affects the pharynx, constitutional depression is more marked, and albuminuria more often and more largely present, though in both conditions some albumen in the urine is more frequently present than absent. The most marked division indicated by the facts before the Committee is that between membranous and non-membranous laryngitis. The Committee suggest that the term "croup" be henceforth used wholly as a clinical definition implying laryngeal obstruction, occurring with febrile symptoms in children. Thus croup may be membranous, or not membranous; due to diphtheria, or not so. The term "diphtheria" is the anatomical definition of a zymotic disease which may, or may not, be attended with croup. The Committee propose that the term "membranous laryngitis" should be employed in the avoidance of confusion whenever the knowledge of the case is such as to allow of its application.

The PRESIDENT, after thanking the Committee for the care and attention they had bestowed on their work, said that it would be more appreciated when read than when listened to. The report, however, had no claim to finality; many points yet remained for discussion, such as the difference of diphtheria when seen in an epidemic and a sporadic form; and the difference between croup when endemic, as in low-lying and cold situations, and when it was sporadic and epidemic. One fact seemed to be established, viz., the greater prevalence of fatal croup in country over town districts—in Sussex, for instance, over Liverpool. Another point was the comparative frequency of albuminuria in some cases as compared with others, and that it was mostly absent in non-membranous croup. Then, again, paralysis, especially of the fauces, was much more frequent after diphtheria than after croup.

Dr. SEMON thought the numbers given were too small on which to found accurate conclusions. No note had been taken of the fact that in certain continental cities succeeding epidemics had gradually been becoming more severe, and the cases graver than heretofore. Abroad the idea was ordinarily held that in croup the membrane was only superficial; in diphtheria the tissues were involved.

Dr. SEMPLE said that the inquiry had extended as far as possible, but the investigation dealt only with diphtheria as compared with croup, not as to their relative frequency or as to any particular epidemic. The mortality referred to only one class of cases—those where the larynx was involved. The histology had been fully considered, and there was absolutely no difference between the two. Three years ago he had read a paper on the subject before this Society. He then said there was no distinction between laryngeal croup and diphtheria. He had not at that time the advantage of such distinguished collaboration, but he claimed that all the evidence they had collected tended to show that his views were correct.

Dr. COUPLAND wanted to know something more of the results of tracheotomy in these cases. Was it sometimes performed, as was said of Trousseau's cases, in the slighter forms, which commonly do well?

Dr. HABERSHON, whilst returning the best thanks of the Society to the Committee for their unwearied investigations, thought it was due to them that their work should be fully discussed. He therefore moved the postponement of the discussion to another meeting, when they should have had an opportunity of reading the report. Many questions arose from it, some of which he instanced.

Mr. HOLMES in substance seconded the motion. The report should not be passed over without discussion, but it was absolutely necessary to refer to the report itself to do so properly.

It was next suggested that the report should be printed and circulated, and a night fixed for its discussion. Ultimately the whole matter was referred to the Council for the purpose of carrying out the foregoing suggestions.

MEDICAL NEWS.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At special examinations for the Licences of the College, held on Monday and Tuesday, October 21 and 22, the following candidates were successful:—

For the Licence to practise Medicine—

M'Laren, Agnes, M.D., Paris.

For the Licence to practise Midwifery—

Burdon, Daniel, M.D., Queen's University, Ireland.

APOTHECARIES' HALL, LONDON.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, October 17:—

Baddeley, Charles Edward, Newport, Salop.
Noble, Henry Brewin, Loughborough.
Outhwaite, William, Lichfield.
Warrillow, Edward Sadler, Headcorn, Kent.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Adolphus, Theodore F. P., King's College.
Heygate, Frederick Nicholas, St. Thomas's Hospital.
Owen, Robert, Charing-cross Hospital.
Scale, Thomas William, Middlesex Hospital.
Smith, John, Westminster Hospital.

BIRTHS.

ADAMS.—On October 18, at Barnes, Surrey, the wife of James Adams, M.D., of a daughter.

BADCOCK.—On October 20, at 53, Buckingham-place, Brighton, the wife of Lewis Carter Badcock, M.D., of a son.

GOODING.—On October 17, at Alconbury, Cheltenham, the wife of John Callender Gooding, M.D., of a son.

MUIRHEAD.—On October 21, at Edinburgh, the wife of William Muir Muirhead, M.D., of Assam, of a daughter.

THURSFIELD.—On October 12, at 39, High-street, Bridgnorth, the wife of William Thursfield, M.D., of a daughter, prematurely and still-born.

WEATHERHEAD.—On October 13, at 53, Kew-bridge-road, the wife of J. F. Weatherhead, L.F.P.S. Glasg., of a son.

MARRIAGES.

BOURNS—WALKER.—On October 16, at Eastbourne, Charles Bourns, M.D., son of the late Robert W. Bourns, Esq., of Katley Manor, Co. Leitrim, to Florence Jane, daughter of Edward Walker, Esq., of Araluen, Eastbourne.

LAMSON—JOHN.—On October 16, at Ventnor, George Henry Lamson, M.D., L.R.C.P., L.R.C.S. Edin., of Rotherfield, Sussex, to Kate George, eldest daughter of the late William John, Esq., of Swansea.

MALIM—SHORROCK.—On October 22, at Park Chapel, Camden Town, George W. Malim, M.R.C.S. Eng., of Rochdale, to Mary Constance, daughter of Eccles Shorrock, of Darwen.

PALMER—FRY.—On October 17, at St. George's Church, Bloomsbury, Frederick S. Palmer, M.R.C.S., eldest son of the late Henry Smith Palmer, M.R.C.S., of East Sheen, S.W., to Mary Georgiana, only daughter of the late Charles Edward Fry, Esq., of Compton House, Compton Bishop, Somerset.

ROBERTSON—BAKER.—On October 15, at Wymering, Frederick Freer Leslie Robertson, M.B., M.R.C.S., of Bradford, Yorks, to Louisa Marion, eldest daughter of Thomas Browne Baker, of Cosham, Portsmouth.

SQUIRES—CHAVASSE.—On October 16, at Walmley, the Rev. Henry Charles Squires, M.A., youngest son of the late William Westbrook Squires, M.D., to Ada Martha, youngest daughter of Thomas Chavasse, F.R.C.S., of Wylde Green House, near Birmingham.

TELLET—GOLDSMITH.—On October 8, at Bishop's Court Chapel, Isle of Man, Frederick Stevenson Tellet, L.K.Q.C.P.I., L.R.C.S.I., only surviving son of Frederick Tellet, late High Bailiff of Ramsey, to Margaret, youngest daughter of the late Daniel Goldsmith, of Riversdale.

WARTENBERG—WATSON.—On October 17, at Crumpsall, Victor A. Wartenberg, M.R.C.S. Eng., of Blackpool, to Martha, youngest daughter of the late Charles Watson, Esq., of Rose Villa, Broughton-park, Manchester.

DEATHS.

ADAMS, ARTHUR, F.R.C.S., F.L.S., Fleet-Surgeon R.N., at Stoke Villa, Honor Oak, on October 16, aged 58.

HULL, GEORGE, M.D., F.R.C.S., F.R.C.P. Edin., at 89, Holland-road, Kensington, on October 17.

JOHNSON, HENRY, M.R.C.S. Eng., L.S.A., at 2, York-road, Lambeth, on October 19, aged 58.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

CHELTENHAM GENERAL HOSPITAL.—Resident Surgeon to the Branch Dispensary. Candidates must be on the "Medical Register" as qualified to practise medicine and surgery. Applications. with copies of testimonials, to the Resident Secretary at the Hospital.

LANCASTER UNION.—Medical Officer of the Southern District of the Union. Applications, with testimonials, to J. Grant, Clerk, from whom further information may be obtained.

ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY, WIGAN.—Senior House-Surgeon. Applications, with testimonials, to the Secretary, on or before November 1.

UNIVERSITY COLLEGE HOSPITAL.—Resident Medical Officer. Applications, with testimonials and statements of age and qualifications, to Talfourd Ely, University College, Gower-street, London, W.C., on or before October 29.

UNION AND PAROCHIAL MEDICAL SERVICE.

RESIGNATIONS.

Coventry Union.—Mr. H. G. Shorter has resigned the Second District.
Yeovil Union.—Mr. William Francis has resigned the Third District.

APPOINTMENTS.

Alnwick Union.—Alexander J. Main, M.D. Edin., L.R.C.S. Edin., to the Embleton District.
Ashbourne Union.—Wm. Mulligan, M.R.C.S., to the Brassington District. T. N. Twigge, M.R.C.S., to the Hartington District.
East Grinstead Union.—Charles E. Collins, L.R.C.P. Lond., M.R.C.S. Eng., to the First District and the Workhouse.
Hinckley Union.—W. H. Griffith, M.R.C.S., L.S.A., to the Stoke Golding and Wolvey Districts.
Thetford.—Mr. Francis Sutton, F.C.S., as Analyst for the Borough for one year.
West Ham Union.—John Moir, L.R.C.S. Edin., L.R.C.P. Edin., to the St. Luke's and St. Mark's District.

THE LONDON SCHOOL OF MEDICINE FOR WOMEN, 30, HENRIETTA-STREET, BRUNSWICK-SQUARE, W.C.—The successful competitor for the Entrance Scholarship of this School, value £30, is Miss Annie McCall. The subjects were English, Latin, arithmetic, geometry, and physics.

THE ODONTOLOGICAL SOCIETY.—At the meeting of the Odontological Society to be held on Monday, November 4, at 8 p.m., the President, Mr. Coleman, will open a discussion "On the Justification of Administering Chloroform for Dental Operations." The subject is one of undoubtedly much and general interest.

THE PARIS MEDICAL NIGHT SERVICE.—In his report for the quarter July-October, 1878, Dr. Passant states that there were 1022 visits paid, the mean number each night having been eleven. Men formed 34 per cent., women 52 per cent., and children 14 per cent. of those visited.—*Gaz. des Hop.*, October 17.

THE TOURNIQUET IN HICCOUGH.—In an obstinate case of hiccough, which had resisted all the various means tried, Dr. Faivre compressed the epigastrium forcibly by means of a tourniquet. In five minutes the hiccough, which had lasted uninterruptedly for fifty days, had completely ceased. At first it reappeared on the compression being relaxed, but afterwards was permanently arrested.—*Revue Méd.*, October 14.

CONGENITAL HYDROCELE.—M. Labat furnishes an account of the good effects which he has observed, in the wards of M. Lannelongue, to follow the practice of alcoholic injection in congenital hydrocele, when performed according to Monod's method. A gramme of the serosity is withdrawn by means of a hypodermic syringe, and then a gramme of alcohol is injected by the same syringe, compression being made on the inguinal canal during and for some time after the injection.—*Revue Méd.*, October 14.

CHOKING BY A LIVE FISH.—Surgeon Dantra relates (*Indian Medical Gazette*, September) that he was called to a man said to be dying of suffocation, and whom he found in a fearful state of agony with a live fish (which had entered his mouth while swimming), about three inches in length and one in breadth, lying on the dorsum of the tongue, his mouth being also filled with clots of blood. Attempts had been made to pull it out by means of a dressing forceps, but these slipped off, only bringing away a few scales. On examination it was found that the fish had caught a firm hold of the patient's uvula, which it was induced to relinquish on its head being seized by a forceps and pressed from side to side. When it had let go its hold it was easily drawn out, and lived for some time after its extraction. There was little subsequent hæmorrhage, the blood in the mouth having chiefly come from the surrounding tissues injured by the expanded fins. The uvula itself was bitten, not torn, as it would have been had traction been made before releasing it from the mouth of the fish.

FOREIGN BODY IN THE ŒSOPHAGUS.—Dr. Verger relates the case of a child, nine years of age, to whom he was called in consequence of a plum-stone obstructing the œsophagus—not even water could pass by the obstruction; and, as he had no œsophageal forceps with him, he injected hypodermically, in two doses, following each other closely, one and a quarter milligrammes of apomorphine—therefore two and a half milligrammes altogether. In less than two minutes vomiting was produced, and the stone expelled. After free vomiting, an irresistible desire for sleep overcame the child for awhile, but this was eventually overcome by strong coffee.—*Bull. de Thérap.*, September 30.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—The annual stated meeting of the College was held on Friday, October 18, the feast day of Saint Luke the Evangelist. The following were appointed officers of the College for the ensuing year:—*President:* Henry Haswell Head, M.D. Edin. *Censors:* James Little, M.D. Edin. (*Vice-President*); George Frederick Duffey, M.D. Dub.; Fleetwood Churchill; Stephen Myles MacSwiney, M.D. St. And. *Registrar:* John Magee Finny, M.D. Dub. *Treasurer:* Aquilla Smith, M.D. Dub. *Examiners in Midwifery:* Edward B. Sinclair, M.A.O., M.D. Dub.; Arthur Vernon Macan, M.A.O., M.D. Dub. *Professor of Medical Jurisprudence:* Robert Travers, M.A., M.D. Dub. *Representative on the General Medical Council:* Aquilla Smith, M.D. Dub. *Agent to the Trust Estates:* Charles Uniacke Townshend. *Law Agents:* Messrs. Stephen Gordon and Son. *Librarian:* Hugh J. Fennell. On the eve of St. Luke's Day, Dr. Samuel Gordon (the outgoing President) entertained the Fellows and a numerous party of guests at a banquet in the Hall of the College of Physicians. Dr. Gordon had filled the presidential chair during three successive years, and at the general meeting of the College the following resolution, proposed by Dr. Apjohn and seconded by Dr. Lyons, passed unanimously:—"That the marked thanks of the College are justly due, and are hereby offered, to Dr. Gordon for the able, judicious, and efficient manner in which he has upon all occasions discharged the duties of the office of President of the College."

SUICIDE IN FRANCE.—According to a recent thesis by M. Moret, which M. Lacassagne characterised at the Société Médicale des Hopitaux as a most valuable production, suicide is continually on the increase in France. During the forty-five years 1831-75, there occurred 173,232 suicides, and during each quinquennial period an increase is observable. The mean annual number of 3317 for 1831-35 had increased to 6107 for 1871-75, and the increase becomes still more alarming on calculating the mean annual number per 100,000 inhabitants. Neglecting fractions, the number is 6 for the first period (1831-36), 7 for the second, 8 for the third, and so on successively until 1865-70, when it attained the figure of 13; while during the last period (1871-75) it reached by a leap the enormous amount of 16·89, or almost 17 suicides per 100,000 individuals. This is explained by the events of which France had been the theatre. After a war, suicide and crime increase in all countries. Next to political commotion, age seems to exert most influence, the number of suicides regularly increasing with it, the maximum being found among individuals from seventy to eighty years old. There were four times fewer suicides among women than among men; while married men committed suicide with twice less frequency than bachelors, and three time less than widowers. With regard to women, spinsters and married killed themselves with about the same frequency, but this frequency was doubled for widows. Fewer suicides occurred in the country than in towns, and it is in Paris that the greatest number of voluntary deaths is met with. As to the mode of death, nine-tenths of the suicides were performed by hanging, drowning, firearms, and charcoal asphyxia, the last tenth being accomplished by cutting instruments, poisons, and precipitation.—*Union Méd.*, October 15.

CÆSARIAN OPERATION WITH AMPUTATION OF THE UTERUS.—Dr. Wasseige (*Presse Médicale Belge*, August 18) relates the case of a woman whose pelvis was greatly deformed by rickets, upon whom he performed the Cæsarian operation, and then proceeded to the removal of the uterus as first practised by Prof. Porro of Pavia, and since recommended by Prof. Späth of Vienna. A living child having been removed by the ordinary Cæsarian section, the écraseur was placed nearly opposite the internal orifice of the uterus and the organ removed. The uterus and its appendages when removed weighed 765 grammes. Both mother and child did exceedingly well. This makes the eighth case in which Porro's operation has been performed, and four of the women have recovered; and in Dr. Wasseige's opinion it should become the regular procedure. Its danger is less than that of the ordinary Cæsarian operation, while it has the great advantage of rendering a future labour impossible. The consent of the husband and the patient should, however, be obtained after due explanation of the nature of the procedure; and Prof. Porro has quieted all uneasy consciences in the matter by obtaining the approval of the Bishop of Pavia.

THE CIVIALE MUSEUM AT THE NECKER HOSPITAL, PARIS.—In the issue of the *Revue Médicale* for October 7, Dr. Jean gives an account of this museum. In 1829 Civiale founded at the Necker a service for stone cases, with twelve beds (since increased to twenty-eight), which remained under his direction from that period to 1867, since when Prof. Guyon has been at its head. Close to the ward there are deposited in an almost sumptuous museum the collection of the calculi and the instruments of the founder, giving almost the scientific history of his life, to which has been added by his son his portrait. About 900 calculi are disposed in a methodical manner in a handsome glass case with oak fittings, these calculi having been selected by Civiale from 2700 patients treated by him since 1824, 1600 of them having undergone lithotrity. They are methodically arranged, exhibiting all the chemical varieties, ranging from mere gravel to stones weighing 300 grammes. One set illustrates the action of the various instruments on the calculi, which Civiale was in the habit of using; and another exhibits the "false calculi," in shape of various foreign bodies withdrawn from the bladder. Above this rich collection are placed the instruments he employed, among these the first in chronological order being the *trilabe*, which he used exclusively during the period 1824-36. All the numerous modifications which he made in his instruments are here exhibited. Another case contains a very rich collection of anatomical preparations made during the last ten years by Prof. Guyon and his *internes*, exhibiting in an admirable manner all the various lesions which have been observed in the genito-urinary organs. The preservative liquid in which they are kept, prepared by M. Méhu, pharmacien of the Hospital, does not induce contraction and induration of the parts like alcohol, but enables them to retain their natural colour and suppleness, so as to serve as well as recent specimens for the purposes of study. Some plaster casts, wax preparations, and water-colours, complete this interesting museum, which is being continually added to, owing to the generosity of its founder, who left an annual sum of 300 francs for this purpose.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

S. D. Clippingdale.—The paper will appear in due course.

Hygienist.—The Lower Thames Valley Main Sewage Board have selected, out of twenty-five, four schemes for disposing of the sewage of its district, and referred them to a committee for further consideration. All are irrigation schemes but one, which proposes an alternative plan of precipitation.

A Dangerous Manufacture.—The dangers to which the manufacture of lucifer-matches prepared with phosphorus according to the old fashion gives rise, has recently been reported upon by the Prussian Factory Inspectors to the Ministry of Commerce. The report concludes with the recommendation that the manufacture be entirely prohibited. Lucifer-matches of the old sort are still largely manufactured in some parts of Germany, especially in Saxony, and a large number of poor people make their livelihood by the dangerous industry.

Sham Workmen's Clubs.—It would appear that workmen's clubs require rather strict police supervision if their real purpose and character are to be ascertained. From the evidence produced before the Edmonton magistrates, in the recent case of the "Lady Burrell Progressive Club," there can be little doubt that the Club was a mere cloak for drinking. The Treasury authorities prosecuted the proprietor of the Club, which was situated at Tottenham, for selling intoxicating liquors on unlicensed premises. The house was built in 1869, and since that time an application has been annually made to the magistrates for a licence to the premises, and refused. At length the place was turned into a working-men's club. It was often kept open until three o'clock in the morning. Members could introduce a friend and pay for drink for them, and some of the witnesses had seen drink carried away in jugs and cans. The defendant stated that he simply acted as secretary to the Club, receiving 25s. per week for his services. The Club was managed by a committee, but he admitted that the arrangement with him was that if a licence could be obtained he was to receive a present, and leave the premises. The Club would then be broken up. The chairman and vice-chairman of the Club were brewers, but they had never attended a meeting. The magistrates fined the defendant £50, but gave time for payment on condition that the house should be closed. It will be well if some other similar clubs take warning, lest they invite a like Government interference.

The Advantage of a Sensitive Nose.—A provision dealer of Paddington has been fined 40s., costs and expenses, by the Marylebone police magistrate for exposing rabbits for sale which were unfit for human food. Dr. Whitmore, the Medical Officer of Health for the parish, stated that the odour from the defendant's shop attracted his attention as he was passing, and he found the defendant offering for sale unwholesome Ostend rabbits, of which great numbers were sold to the poor in London, and he directed the officers to go and seize them.

Infection and the Elective Franchise.—Dr. T. B. Dudfield, the Medical Officer of Health, has reported to the Kensington Vestry a new and unusual cause of disfranchisement. He stated that the children of a householder were in the month of March suffering from small-pox, and by order of the Sanitary Authority removed to a hospital. At the recent revision of the list of voters, the father was objected to, on the ground that he had received "parochial relief" in the form of maintenance of his children in a hospital supported by the poor-rate; the revising barrister deciding that such maintenance was, to all intents and purposes, parochial relief, notwithstanding that it was provided against the will of the recipient. This decision will, Dr. Dudfield fears, add another difficulty to those which already exist in inducing people stricken with infectious diseases to go to a hospital. Under the circumstances, such a disqualification is a hardship. Compliance with an order from the Sanitary Authority, which it can legally enforce, should not be capable of abrogating a political privilege or right. The action of the Sanitary Authority is in many instances, from the nature of its duties, arbitrary, because it is imperative; and any new—apparently justifiable—cause for opposition to its legal powers is to be regretted.

Cabmen's Shelters.—The appreciation of the advantages of the "Shelter" is demonstrated by the petitions from cabmen from various metropolitan districts, which, we understand, are constantly being received by the Cabmen's Shelter Fund, for more shelters. We hope the Society, aided by the continued generosity of the public, will be able to extend the sphere of its usefulness. The complete success of the cabmen's shelters at Waterloo and Vauxhall railway-stations has induced the Society to construct one for Paddington station. This, which is the largest yet erected, and cost £160, was opened last week. It is the twentieth erected in the metropolis.

Intoxicating Drink: Cyprus.—Touching the memorial from the Church of England Temperance Society to Sir Garnet Wolseley, asking him to prevent the extension of the number of drinking-houses in the island, it is announced that long before the English occupation the Marina was full of wine-shops, in which little better than poison was sold, where a man could get mad drunk for about twopence. Now most of those places are closed, or taken by foreigners who sell good English beer at about tenpence per quart. The consequence is that now it costs a man about two shillings to get drunk. The natives still stick to their own drinks, and the shops which sell these liquors are far less in number than they were before.

Scientific Research.—The Royal Society announce to all whom it may concern that applications for grants from the Government fund of £4000, for the promotion of scientific research, or from the Government grant of £1000, must be forwarded to the Secretaries of the Society before the last day of the present year. The meetings of the committee to consider the applications will be held in February next.

A Test Case.—The overseers of the poor of Liverpool have been summoned at the Lancaster County Sessions for neglecting to remove a Liverpool patient from the county asylum after having received notice of his discharge. This was a test case to settle the responsibility in the matter, and the object was to obtain a judgment from the superior courts by appealing from the magistrate's decision. The Bench inflicted a fine of 20s. and costs.

Lunacy in Surrey and Sussex.—The Surrey magistrates have decided to erect a third lunatic asylum for the county. A site has been secured at Coulsdon, and plans of the building (which will be capable of accommodating 1124 patients) have been adopted. The estimated cost, exclusive of the purchase of the land, is £186,000. The increase of lunacy in Sussex has rendered it necessary to enlarge the County Lunatic Asylum at Hayward's Heath, and it is proposed that the apartments now occupied by the Medical Superintendent should be thrown into the general building, and that a separate house be erected for him in the grounds. There are now nearly 800 patients, and by the addition suggested, sixty more could be accommodated. The ratio of increase of patients had been twenty-five per year for the last five years. The outlay will be about £4000.

COMMUNICATIONS have been received from—

Dr. T. Mitchell Bruce, London; Mr. John Chatto, London; Mr. W. E. Poole, London; Dr. Edward Sparks, London; Mr. W. A. Meredith, Windsor Forest; Dr. Octavius Sturges, London; Mr. D. Colquhoun, London; Dr. Frederick Churchill, London; Dr. Thomas Stevenson, London; Dr. Robert Druitt, London; Mr. B. R. Wheatley, London; Mr. T. M. Stone, London; Mr. W. Hay, Hull; Dr. S. D. Clippingdale, London; Mr. Ernest A. Coombs, London; Dr. R. Neale, London; Mr. J. E. Ingpen, London; The Registrar of the Apothecaries' Hall, London; Dr. Tilbury Fox, London; Mr. E. Sutton, London; Mr. R. Clement Lucas, London; Messrs. F. C. Calvert and Co., Manchester; Mr. J. T. Bacot, Seaton; Dr. Thomas Savage, Birmingham; Dr. Robert Barnes, London; Dr. Symes Thompson, London; Dr. J. W. Moore, Dublin; Dr. Sturge, London; The Registrar-General, Edinburgh; Mr. J. D. Dixon, Newcastle-on-Tyne; Dr. Jolly, Birmingham; The Dean of the London School of Medicine for Women.

BOOKS AND PAMPHLETS RECEIVED—

Society of Medical Officers of Health, 1877-78—John Drysdale, M.D., The Germ Theories of Infectious Diseases—Transactions of the Massachusetts Medico-Legal Society, vol. i.—Paris Universal Exhibition of 1878, List of Awards made to British Exhibitors—R. Willis, M.D., William Harvey: a History of the Discovery of the Circulation of the Blood—Fleming Jenkin, F.R.S., Healthy Houses—Charles Thomas Kingzett, F.C.S., Animal Chemistry, or the Relations of Chemistry to Physiology and Pathology—H. Macnaughton Jones, M.D., Atlas of Diseases of the Membrana Tympani—Chinese Medical Reports, from July, 1871, to March, 1878—J. Wallace, M.D. Edin., Clinical Studies on some forms of Utero-Pelvic Disease.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médicale—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Cincinnati Lancet and Clinic—Gazette Hebdomadaire—Canadian Journal of Medical Science—Lecciones Clinicas y Noticias Médicas—North Carolina Medical Journal—Guy's Hospital Gazette—Canada Medical and Surgical Journal—Chicago Medical Journal and Examiner—Home Chronicler—Chinese Customs Gazette, from July, 1871, to March, 1878—Liverpool Argus.

APPOINTMENTS FOR THE WEEK.

October 26. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

28. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Clinical Cases, Specimens, &c. Dr. Brunton, "On the Treatment of Nævus by the External Application of Sodium Ethylate."

29. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

30. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 1½ p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

31. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

November 1. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 19, 1878.

BIRTHS.

Births of Boys, 1287; Girls, 1271; Total, 2558.
Average of 10 corresponding years 1868-77, 2311·2.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	707	662	1369
Average of the ten years 1868-77	705·5	657·6	1363·1
Average corrected to increased population ...	...	...	1459
Deaths of people aged 80 and upwards ...	...	...	51

Note.—The births and deaths registered last week may be compared with the average numbers in the corresponding weeks of the ten years 1868-77 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	3	3	...	5	...	2	...	5
North ...	751729	...	2	13	2	6	...	11	1	11
Central ...	334369	...	...	2	2	4	...	2	...	4
East	639111	1	2	11	1	7	1	2	1	7
South	967692	4	3	16	7	11	1	7	2	9
Total	3254260	5	10	45	12	33	2	24	4	36

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·838 in.
Mean temperature	51·9°
Highest point of thermometer	62·4°
Lowest point of thermometer	36·4°
Mean dew-point temperature	47·3°
General direction of wind	E.
Whole amount of rain in the week	0·00 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, October 19, 1878, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1878.*	Persons to an Acre. (1878.)	Births Registered during the week ending Oct. 19.	Deaths Registered during the week ending Oct. 19.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3577304	47·5	2558	1369	62·4	33·4	51·9	11·06	0·00	0·00
Brighton	103923	44·1	69	32	63·0	40·7	51·7	10·95	0·58	1·47
Portsmouth ...	129461	28·9	83	47	...	...	...	...	...	...
Norwich	84620	11·3	67	29	61·2	41·0	52·7	11·50	0·00	0·00
Plymouth	73599	52·8	43	18	63·5	45·0	52·3	11·28	0·1	0·25
Bristol	206419	46·4	134	69	59·7	37·0	49·8	9·89	0·16	0·41
Wolverhampton ...	74240	21·9	48	30	58·0	38·6	49·2	9·55	0·10	0·25
Birmingham ...	383117	45·6	310	166	...	...	...	...	...	...
Leicester	121473	38·0	97	43	60·0	39·5	49·7	9·83	0·02	0·05
Nottingham ...	165267	16·6	125	59	60·4	37·0	50·3	10·17	0·11	0·28
Liverpool	532681	102·2	381	275	58·9	43·4	50·5	10·28	0·18	0·46
Manchester ...	360514	84·0	296	158	...	...	...	...	...	...
Salford	170251	32·9	157	70	64·0	38·0	50·7	10·39	0·05	0·13
Oldham	107366	23·0	74	52	...	...	...	...	...	...
Bradford	185088	25·6	122	56	59·2	43·0	50·5	10·28	0·00	0·00
Leeds	304948	14·1	245	134	61·0	40·0	50·8	10·45	0·00	0·00
Sheffield	289537	14·7	235	127	63·0	40·5	50·2	10·11	0·03	0·08
Hull	143139	39·4	135	80	59·0	39·0	51·4	10·78	0·11	0·28
Sunderland ...	112459	40·6	97	51	65·0	46·0	53·5	11·95	0·01	0·03
Newcastle-on-Tyne	144570	26·9	110	59	...	...	...	...	...	...
Edinburgh	222371	53·1	155	67	61·0	43·5	51·2	10·67	0·00	0·00
Glasgow	566940	94·0	389	231	59·7	48·7	54·4	12·44	0·00	0·00
Dublin	314666	31·3	165	149	64·6	39·8	53·4	11·89	0·02	0·05
Total of 23 Towns in United Kingdom	8373953	38·0	6095	3371	65·0	36·4	51·3	10·73	0·08	0·20

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·84 in. The highest reading was 30·18 in. on Sunday, and the lowest 29·59 in. on Friday.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1878 by the addition of seven years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. Nottingham, Salford, and Oldham, however, form exceptions to this rule, as the estimates for these three towns have been revised with the aid of local information as to the rate of increase of inhabited houses. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

II.

CLINICAL LECTURE ON ABNORMAL PELVIS.

BEING THE SECOND OF A COURSE OF LECTURES DELIVERED AT ST. BARTHOLOMEW'S HOSPITAL

By J. MATTHEWS DUNCAN, M.D., LL.D.,
Physician-Accoucheur and Lecturer on Midwifery to the Hospital.

THE subject of my lecture to-day is Abnormal Pelvis. An abnormal pelvis is not necessarily a deformed pelvis; it may be merely a small one. A deformed pelvis may be, as you see in this example, both small and deformed. The most frequent deformity of the pelvis occurs in pelves that are not otherwise small—that are large enough except in the seat of the deformity. Now, in connexion with this subject we have a very great piece of progress in obstetrics that is going on at the present moment. Within my days, the introduction of anæsthetics into midwifery was a very great improvement. A still greater improvement, because saving of life is of more importance than saving of pain, has been the applications made of the antiseptic theory, not only in the treatment, but in the prevention of diseases. That is undoubtedly the greatest improvement in obstetrics in modern times, and it is an improvement that is still going on and increasing.

The subject that I am to lecture on to-day is a part of the great improvement that has been introduced in the treatment of abnormal pelvis. Now, to show you in one sentence the striking character of this improvement, I may tell you that while (not very long ago) I visited an obstetric hospital which was not possessed of a callipers at all—had not such a thing;—nowadays, in many of the best obstetric hospitals, every woman is measured to find out the conditions of her pelvis. I am not recommending you to measure every pregnant woman, yet these measurings have resulted in very considerable increase of our information; and although this universal application of measurement is not required, still it shows you the contrast with the condition that I have mentioned of a hospital that had not callipers at all. This great improvement has been introduced from Germany, and it is, in the main, an importation from Kiel. In order that you may understand it, I must use the old division of mechanically difficult cases into three. You have firstly the slighter cases—and therefore the more frequent, and in that respect the more important cases—where the pelvis is spoken of as a pelvis whose conjugata vera varies between four inches and a little above three. These are the slighter cases. Now, in these cases the enormous improvement that has been made is an improvement, in our judgment, of the conditions of the labour—an improved diagnosis, so that cases which are still extensively spoken of as cases of inertia (which is, no doubt, generally an erroneous explanation, far too widely applied), or simply spoken of as "forceps cases," are now more exactly and correctly defined. They are recognised chiefly by deviations from the ordinary progress of labour. These deviations from the ordinary progress of labour are what are called deviations from the ordinary mechanism; and these deviations from the ordinary mechanism are in a very great measure distinctive especially of cases of mere smallness of the pelvis, the pelvis being otherwise well formed; and of cases in which the deviation of mechanism is produced by antero-posterior contraction of the brim without the pelvis being otherwise small. This is not the place to speak further of this kind of diagnosis made during labour. I merely point it out to you because I wish you to see intelligently the interest attaching to the preliminary investigations in the cases that I am to bring before you at a further part of the lecture.

If we come now to the graver cases—the second kind of mechanically difficult labours, where the pelvis varies from above three down to, in exceptional cases, nearly two inches in the conjugata—in such cases the great improvement which is still going on is an improvement, not in diagnosis, but in our judgment of the method to be pursued in delivering. In such cases it has been common—indeed, it may be said to be the prevalent way—for students or young practitioners to divide themselves into two classes, and one set to swear a belief in version as the proper mode of delivering women with deformed pelvis; while another set believe in the forceps as the proper mode. All such judgments are ill-founded. They are founded upon the measurement of the conjugata as the criterion; and it was and is taught extensively that according to certain minute measurements of the conjugata, so you should proceed to deliver a woman by podalic extraction after version, or by forceps, or by craniotomy. Such a method of judgment must be entirely given up. It is necessary nowadays, if you are to treat your patients properly, to come to each case unprejudiced, to study it as an individual case in which there are a great many elements besides the mere measurement of the conjugata, some of them more important than any refinement of that measurement. Among these elements are the position of the head, the state of the membranes, and the state of uterine retraction. Now I wish to point out very impressively to you this error which leads a man to go to treat a case on the assumption that all he has to do is to measure the conjugata.

A similar defect in judgment runs through the recent writings in favour of the increased frequency of the use of the forceps in what may be called ordinary labours. In the case of greatly deformed pelvis it is the measurement of the conjugata that is held to be the criterion of practice—the better judgment founded on the consideration, not of one, but of all the important elements of the case, being omitted or lost. In the case of forceps, statistics, whose accuracy requires consideration, are held as showing success resulting from a certain frequency of their use, and practitioners are directed to look at that frequency as a criterion of good practice—the better judgment founded on a full and careful consideration of all the particulars of each case, or of each group of cases, being again also omitted.

Although it is out of place, I shall here make one remark on the difficulty of using statistics in judging of the forceps practice referred to. The forceps cases are set against natural cases. I advise you to trust to nature as far as you wisely can; to be loth to take a case into your own comparatively ignorant and unskilful hands; and to judge that the success which the forceps practitioner seems to have, as against leaving cases to nature, is a fallacious appearance of success, if it be true that nature is on the whole better than forceps. For, if a forceps practitioner delivered all his cases artificially, his so-called success would be still greater, which is absurd. The forceps cases and the natural cases are not, as hitherto collected, groups that can be compared with a view to decide the practical question that is now widely discussed. We require more diagnostic refinement of the causes and conditions of difficult labours; and it is a part of this diagnostic progress that I am trying to teach you to day. This improvement will diminish the number of cases going by the name of the treatment—as forceps—and describe them less nosologically and more pathologically. No doubt it will diminish also the number of cases vaguely called inertia, or declared to be from an undiscoverable cause.

The third class of cases—the gravest cases—cases which run from two and a half inches downwards to less—have also undergone very great improvement, the improvement being in the kind of instrumental treatment, the means of carrying out the design of the practitioner; not, as in the former class, deciding what is to be done, but the method of doing it. Upon this third class I shall say nothing more meantime.

Now I come back to the first set of cases, which are far the most important—the slightest class of mechanically difficult labours. The astonishing result has been clinically arrived at, that in Germany there is a mass of from 12 to 15 per cent. of such cases. I am quite sure that there will be found much fewer in this country. That is a judgment, not a statement founded upon exact information, because I know no hospital or practice in this country where there has been systematic measurement of every case and observation of the mechanism of early labour, with a view to decide such a question; but it is founded upon this, which is almost positive proof, that in this country malpresentations, cord presentations, face presentations, are rarer than in Germany. I should be very much astonished, therefore, if a careful clinical inquiry found that in this country there were so many as from 12 to 15 per cent. of pelves abnormal, as has been found by thoroughly competent authorities in Germany.

Now, in these slightest cases, pelvimetry is most difficult,

and fortunately it is not of the highest value. The pelvimetry in these cases consists in very simple measurements, which, however, you require to learn to make. A practitioner is very awkward in making such measurements at first, and he requires to have a good callipers or other good external pelvimeter. He also requires experience, still more, for internal pelvimetry.

How do you proceed in these cases? The patient is undressed, and placed on a suitable bed for careful examination. The object is to find out as nearly as you can the length of the conjugata vera, and to find out the general size of the pelvis. In all cases these are the two chief things; but in cases of higher deformity you go farther, and measure such things as the distances of the posterior superior spines of the ilia, and make a variety of further observations which I have not time to enter upon now.

In order to find out these different conditions or their absence you make the following measurements: The first is the external conjugata ("C. ext.") frequently known as D. B., the diameter of Baudelocque. Now, the external conjugata is measured from what you judge to be the first spine of the sacrum, or in a hollow that is generally found below the last lumbar spine, to the mons veneris in front of the symphysis pubis. In a healthy woman that measurement is from seven and a half to eight inches; I shall put it down at seven and a half. There are sources of variation which will easily suggest themselves to you, such as the different amount of fat in different women. Now for the judgment you form from this. You take off two and a half for the thickness of the sacrum; you take off fully an inch for the thickness of the pubes and the soft parts—that is, you subtract quite three inches and a half from seven and a half. If you had nothing else to rely upon, and you found the measurement seven and a half, you would say a four-inch pelvis—a healthy pelvis so far—four inches. But you will find in practice that this is not a very reliable measurement, therefore you take other measurements by which to correct this. It so happens that in the most interesting case I have to mention to-day the measurement proved correct, or as nearly correct as was to be expected. In this poor woman, whose pelvis I have in my hand, the external conjugata was five and a half; take off fully three and a half, and you have left two inches, or somewhat less.

The next measurement you take is the measurement of the spines, as it is called. This measurement is from the external margins of the anterior superior spinous processes of the ilia, and it is known by the marks I show you here, "Sp. il." In healthy women this measurement varies greatly, and it is about ten inches. Then you take another measurement between the most distant parts of the crests of the ilia, and this is known in books as "Cr. il.," and in healthy women generally measures eleven inches, or fully an inch more than the former. These two measurements afford valuable evidence; they are easily taken, and you will find their value excellently illustrated in the cases I have to go over immediately. If these measurements are both small, then you have reason to suspect that the brim of the woman's pelvis is small. If the measurement (as in this case) of the crests is smaller than the measurement of the spines, or equal, then you have great reason to suspect that the pelvis is contracted or flattened in its antero-posterior diameter.

The next measurement is the most difficult; it is also the most important. In some cases no other measurement is absolutely required—that is, the measurement of the conjugata diagonalis, which is known in books as "C. d."—generally in a well-made pelvis four inches and a half. But in a full-sized pelvis it is generally not to be measured during life: to do so would give the woman too much pain; you would have to force the fingers too far in order to succeed. You will see how comparatively easily it is measured in some of the cases of contraction that I shall presently describe. This measurement is made by pushing one or two fingers per vaginam so as to touch with the point of the index-finger if one is used, or of the middle finger if two are used (the index-finger being not long enough). With the nail of the index of your other hand you mark off where the inferior border of the symphysis cuts the radial side of the introduced index-finger, and then you have a pretty accurate measurement of the conjugata diagonalis by telling off the distance between the point of the index-finger if that alone was used, or between the point of the middle finger and the mark you have made with the nail of your other index upon the radial border of your hand. This gives you the conjugata diagonalis. Now, from this you argue as to what you wish to ascertain—namely, the conjugata vera ("C. v."). The conjugata diagonalis being ascertained, from this take half an inch, and you get the conjugata vera which you seek. There are a good many niceties about this measurement, but you get as your result in a healthy pelvis four inches from this plan, just as you get it from the diameter of Baudelocque.

These measurements in the slighter class of cases are important, but they have to be supplemented by measurements during labour, and by observations of the mechanism of early delivery.

Now I come to the cases. We have had recently in Martha four cases, not of the first or slightest class, but of the second and third.

The first case is one of which this well-known museum preparation may be held to be a representation, for in the patient whose case I have now to read the condition was exactly similar. This case is one of osteo-sarcoma of the sacrum: the pelvis was neither small nor deformed, in the ordinary sense of those words, but for obstetric purposes it was extremely deformed.

E. P., aged twenty-seven, married for seven years, has had four children, all born at full time; complains of almost constant pain in the lower part of the back, greater on the left than on the right side. This pain has been present since her last confinement, seventeen months before admission into the hospital. About the seventh month of her third pregnancy she first felt this pain—about three years ago. The child was delivered by craniotomy. The pain, which had been less or altogether gone, returned about the seventh month of her last or fourth pregnancy. This child was also delivered by craniotomy. Besides the pain she has leucorrhœa and frequent micturition. She has not had a monthly illness for two months, and thinks she is pregnant. She is on the whole a well-made woman. A large solid tumour occupies the posterior parts of the pelvic cavity so as to reduce the available conjugate to one inch and a half or thereabouts. There is a rounded, flattened, and slightly projecting swelling of the base of the sacrum externally, and more on the left than on the right side. The uterus is elevated above the brim of the pelvis, and is three inches in the length of its cavity. She was found to be not pregnant, and was dismissed.

You will observe this case was not measured by callipers, because measurement by callipers could afford us no information—the woman had no deformity to be detected in that way; and besides, the external tumour would render any measurement by callipers useless. The fingers here made the measurement: they measured the available conjugata vera actually and at once, and they found it one inch and a half at the time of her coming into the hospital. Here the measurement of the conjugata diagonalis was not attempted, not required, and it could scarcely have been done. This woman's disease began before the third pregnancy, in which she was delivered by craniotomy, after having had her former children easily enough. The disease was gradually increasing; and now, if she were falling in the family-way again, abortion should be induced to save her from the dangers of delivery by Cæsarian section. She could not be delivered if she went on to near full time in any other way. In this woman, then, had we found pregnancy to exist, we should not have hesitated to destroy the pregnancy, in order to save her from the dangers attendant upon its further progress.

Cases of osteo-malacia are very uncommon in this country. There is a case at present in one of the medical wards. A woman may be seized with this disease after she has had some children quite easily, and may offer you a history like the history of this woman, of gradually advancing deformity of the pelvis. But in the case of osteo-malacia you would have very different conditions. The whole skeleton is modified, and the woman is gradually sinking in stature as well as having her pelvis diminished in its conjugate diameter. In fact, the cases have no analogy to one another except in the circumstance that you have the deformity of the pelvis gradually increasing from one pregnancy to another, and requiring, as the deformity advances, different kinds of delivery if the woman is allowed to go on to full time.

The next case is one of a commoner kind—a case of gene-

rally contracted rickety pelvis. This woman, aged twenty-seven, was brought into Martha ward in labour on June 24 last. She has been deformed since childhood, and is of low stature, measuring four feet two inches. She was married on September 24, and has had no catamenial discharge since then. Pains began on the 22nd; they are not severe. The cord became prolapsed on the morning of the day of admission—it is pulseless. The diameter of Baudelocque was found to measure five inches and a half, the crests measured eight inches and a quarter, while the spines measured more—eight inches and a half. The uterus has a natural feeling, projects extraordinarily, and has a left lateral obliquity. Through the hypogastrium the child's head can be felt, movable. The limit of the uterus and cervix not distinctly felt, from the pains being slight—it is about half an inch below the level of the navel. The external parts are swollen and congested. The external os uteri is dilated to the size of a florin. The head presents in the first position. Two fingers can with difficulty be squeezed into the conjugata, which is almost an inch and a half, and there is no considerable increase of any antero-posterior diameter of the brim at any part. Some pelvic brims have dilatations at one or both sides of the promontory; in this case there was no increase. Cæsarian section was performed, and proved fatal from septic peritonitis of slight extent and degree upon the third day. This is the pelvis of that woman. In this case the callipers were used, and they alone indicated very accurately the kind of deformity and the degree. But the fingers gave an additional measurement by being jammed into the actual and available conjugata vera, so as to measure directly the size of the conjugata just as in the former case. The pelvis in this case was made out without any difficulty to be a pelvis which was generally contracted or small, highly deformed, with a conjugata of an inch and a half, and its deformity was rickety, the brim having a reniform or kidney shape. I have not entered in this case upon the woman's medical history, which of itself showed that she had a pelvis almost certainly rickety, and involving great difficulty and danger should she come to be confined at or near the full time.

The next case I have to mention is one of a still commoner kind; it is also a case of generally contracted rickety pelvis. This young woman was aged twenty-two, healthy-looking, four feet four inches in height; had her last monthly period in the beginning of April, six months ago; had previously been always regular. The legs are curved, nearly symmetrically, the convexity looking outwards to either side, the greatest curvature being at the junction of the middle and lower thirds. The abdomen presents the characters of a pregnancy advanced beyond the sixth month. The posterior superior spines of the ilia are not easily or well made out—two inches apart. The diameter of Baudelocque is six inches; spines eight inches and a half, the left being an inch and a half higher than the right; the crests eight inches and a quarter; the diagonal conjugate is three inches; the sacrum is acutely bent in a posterior angular curvature below its middle. The spine has a slight right lateral curvature in the dorsal region, compensated by one in the lumbar region to the left. The induction of premature labour is recommended as soon as the child is viable, the conjugata vera being judged to be little more than two inches and a half You will observe the words I use in regard to this case: that the conjugata vera is "judged" to be so-and-so. In this case you cannot, before labour, actually measure it—you cannot measure it as in the two former cases, by jamming the fingers into it. In all cases that can be done just after the child is born, and should be done. In the great deformities, such as those of the two women I have previously described, it can be done before labour, but in a case like this it cannot be done. Therefore I have here a judgment as to the measure of the true conjugate; we do not actually measure it. In this case the operation recommended is induction of premature labour, as I have mentioned.

I have still another case of equal interest, but I shall not read it to you. I shall merely mention it. It is like the last, but still slighter in its dangerous character. It is the case of a woman who had had eleven children, and of these children she bore only two spontaneously—the first two. Of these two, the second alone was born alive, and survives. Now, I mention these few particulars of this case to point out to you an observation of great interest—the contrast between successive labours in a slightly deformed pelvis and in a healthy pelvis. Everybody knows that, in an ordinary practice, tedious and difficult cases are expected among the primiparæ: and it is quite true. The observation is correct. In the cases of primiparæ you are not astonished at having a long, expectant sederunt. Subsequent labours are undoubtedly more and more easy, mechanically speaking, till at last they very frequently become far too easy for the woman's safety. But in the case of the first degree of deformity of the pelvis you have, as this case illustrates, the opposite course. It is the first labours that are easiest. In the first labour the woman's power, and especially the labour and uterine power, is the greatest, and in a woman's first labour she may succeed in forcing the child at the full time into the world, while in subsequent labours she utterly fails from weakness or incapacity of the powers of labour. In a woman with a slightly deformed pelvis you expect subsequent labours to be the more difficult, apart from any increasing deformity, but simply from the powers of labour being less as pregnancies increase in number—a well-known fact.

This very nearly concludes what I have to say to-day, but I go back to repeat what I said when I was speaking of the second class of deformed pelvis, that the measurement of the pelvis, and especially the measurement of the conjugata, even if accurately made, is not the criterion of the mode of delivery to be adopted at the full time, or if premature labour is induced. In the same woman, conditions may vary in different labours; and in different cases of the same dimension, conditions may vary, so that at one time perforation may be the right operation, and at another time turning may be the right operation; and I may state to you that turning, or rather delivery by podalic extraction after turning, is not to be resorted to unless you have a rational prospect of getting a living child. If your delivery by turning ends in the birth of a dead child, it is to a considerable extent a failure; it would have been better to perforate—safer for the woman. You may not justly condemn your practice retrospectively. Nevertheless, it is a fact that you would not choose to turn a dead child: and if you turn a living one, and do not extract it alive, your operation is partly a failure; perforation would have been better.

You may use the forceps, and you can easily understand that not only may the forceps be used in one instance in the same woman, where in another instance turning is the right operation; but you may be pretty sure that as the forceps is the operation most used in the slightest cases, so it will be the most frequent operation; you will more frequently have recourse to the forceps than to podalic extraction after version: but that frequency is nothing at all in favour of the forceps as an operation in jealous rivalry with version. There is no just occasion for any rivalry. Every case must be judged of on its own merits, the whole particulars being taken into consideration.

Now, finally, suppose you have had a case of this kind. The future treatment of the woman is much easier, because in future pregnancies you have the history of the labour in the former pregnancy to aid you. And every woman who has a deformed pelvis should have kept for her a careful record of the history of her various deliveries, so that the practitioner may have the instruction derivable from former deliveries.

Every woman whom you deliver, who has a pelvis that is at all suspected of contraction, should have five different measurements of her brim, for the purpose of guiding the treatment in subsequent confinements.

The last words I shall say are to tell you what these five different measurements of the conjugata are. Firstly, you have the measurement of the conjugata vera founded upon the measurement of the diameter of Baudelocque—the external measurement; and that you can get at any time. Secondly, you have the measurement of the conjugata vera founded upon the measurement of the conjugata diagonalis; and that measurement you can get at any time, whether the woman is pregnant or not. The third measurement is a measurement that we can only get when the woman is not in a state of advanced pregnancy; it is a measurement which is easily made in a thin woman—a woman who has not much fat in the anterior abdominal wall nor any kind of abdominal distension. You can make out in such a woman through the anterior abdominal flap the promontory of the sacrum and the symphysis pubis, and measure the intervening distance. Then you have a fourth measurement which generally can be made, and is made, only during

delivery or immediately after it. I told you that in a slightly contracted pelvis you cannot actually measure the conjugata vera before delivery as you can measure it in an extremely contracted one by jamming the fingers into it; but immediately after delivery it is your duty to do that, and you do it by introducing your whole hand into the pelvis. Every practitioner knows the breadth of his hand at different parts, and he finds out the number of fingers he can pass into the conjugata, or the degree to which his whole flat hand will go into the conjugata. He can measure actually at that time the size of the conjugata vera. That is a fourth measurement that every woman should have made upon her during her labour if her pelvis is suspected. There is a fifth which is also very valuable. Of course, in a case of delivery of this kind, you watch the passage of the child's head, noticing the diameter which comes through the contracted part; and, as soon as the child is born, you take your callipers and measure this part, generally the bi-temporal diameter, and you measure it pressing your callipers pretty firmly, as probably the pelvis pressed it pretty firmly, as the child's head came through. This gives you the size of the body that came through. In every case of deformed pelvis this measurement should be used by you for your guidance in managing your patient in subsequent deliveries.

THE CAUSES AND COURSE OF DISEASES OF THE HEART,(a)

WITH SPECIAL REFERENCE TO PREVENTION AND TREATMENT.

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Lecture III.

THE GOUTY HEART.—FATTY DEGENERATION.

The next subject to be taken up is that of the structural and histological changes which the heart-walls undergo. It may seem at first somewhat odd that such mural changes should be linked to the consideration of the gouty heart; but in a little time the propriety of so doing will become apparent: for the progress of the gouty heart is steadily, if slowly, downwards, and best illustrates that undermining of an hypertrophied heart by molecular necrosis which is such a serious affair.

In choosing the title, "Gouty Heart," I have been influenced by several considerations. The expression, "combined heart and kidney disease," is scarcely lucid enough; for it includes renal changes which are consequential to heart mischief—that form of interstitial nephritis which is set up by venous fulness; just as venous fulness from an obstructed blood-flow produces a development of connective tissue in the liver, spleen, and other viscera. Then, again, the term, "the secondary diseases of the heart," includes changes in the right heart due to old-standing disease of the lungs; and does not sufficiently indicate to what the heart changes are consequential. But the term, "gouty heart," at once points to the causal relations of the heart changes, and makes it apparent that the kidneys are also implicated. Consequently, it is a term which carries with it a definite meaning. It tells that a gouty condition—*i.e.*, a condition where the retrograde products of nitrogenised materials taken as food are found in the blood in excess. It does not matter whether this condition is brought about by free living, by the consumption of food far in excess of the needs of the organism; or is set up by defective action in the oxidising processes and in the functional power of the kidneys. We are already familiar with the idea that in bilious persons, so-called, the liver is only just equal to its work at the best of times, so that it has been said they have no "spare liver"; just as in other persons, predisposed to phthisis, it is said they have no "spare lung." So there are persons who have kidneys that are only equal to a certain amount of functional activity: if any extra work be thrown upon them, then defective blood-depuration follows. Such persons are probably those who inherit a gouty taint, so that the most ascetic fare is alone able to keep away the gouty attacks to which they are hereditarily liable. Whether this hypothesis be well founded or not, certain it is that in some persons we find a gouty condition which has had a tangible history in long-continued good living, where the system has struggled long against a superfluously rich dietary, and had to yield at last; while in others the dietary has been very moderate, and yet a gouty condition is very manifest. Some such hypothesis as the one just adventured is necessary to explain this last condition. In consequence of the fact that the form in which the retrograde products of our nitrogenised food most persistently remain in the system is that of uric or lithic acid, this condition has been termed "lithiasis"; while Dr. Murchison prefers to call it "lithæmia." It matters little which term is used, the meaning conveyed is the same—namely, that the system is overcharged with lithic acid. That such is actually the case has been proved to a demonstration by Dr. Garrod; though the idea that lithic acid is the "gout poison" *par excellence* has long existed in the profession. This is the essential part of the subject, so far as we are concerned, that the blood is surcharged with azotised waste, and certain pathological changes result therefrom which are of the most interesting and instructive character. Amongst them are changes in the vascular system, including alike the heart and the peripheral arterioles. Indeed, in some families, gout only manifests itself, or at least chiefly manifests itself, in the changes which it works in the circulatory organs. It is not the place here to discuss the rival theories of Sir William Gull and Dr. Sutton on the one hand, the "arterio-capillary fibrosis"; and the hypertrophy of the muscular walls of the arterioles, of Professor George Johnson, on the other. Each seems to see a part of a great pathological process, which must be still further studied before we see it in anything like completeness. For myself, my experience is in unison with Professor Johnson's views; and we know that the thickening of the muscular walls of the arterioles has been also observed by Professor Grainger Stewart, Dr. Ringrose Atkins, and others. There is no doubt about this fact, whatever may ultimately be found to be the explanation thereof. In such cases we find thickened arteries, an hypertrophied left ventricle, often dilated in women, and a firm, incompressible pulse, giving to the sphygmograph the characteristic square-headed tracing with which all are familiar.

This condition is well known to all of us. We have all seen numerous instances of this complex condition. It is generally found with naturally hale persons, who have seen little of doctors in their lives. But it is not confined to the robust, the stalwart, or those of the sanguineous or arthritic diatheses. Certain it is, few ruddy-complexioned elderly persons are free from lithiasis, more or less developed; but, on the other hand, it is found also along with a spare figure and an unnaturally white and bloodless face, the skin being dry and harsh. The condition varies with the diathesis of the individual affected.

The pathology of this complex state is as follows, that is, so far as we know at present:—There is a condition of impure blood, which is charged with effete nitrogenised products. The consequence of this is a certain amount of contraction in the minute arterioles. These tiny vessels undergo constant oscillations of calibre, and, when the blood is impure, contraction of them is induced. Various explanations of this fact have been put forward: one has attributed it to a local effect upon the vessels themselves; while another has thought it more probable that the vaso-motor centre is affected by the impure blood circulating through it. Which of these is the correct explanation cannot yet be affirmed; indeed, it is not certain if either be the complete explanation. When the blood contains lithates in excess, the effect is to cause the peripheral arterioles to contract and to lessen their calibre. Consequently the blood-flow is obstructed, and the blood is dammed up in the arteries, the arterial tension is heightened, and the onward flow of blood on the ventricular systole is obstructed. This is readily intelligible, for if the resistance to be overcome is increased each time the ventricle contracts, a more powerful systole is required to overcome this increased resistance. How such a condition leads to hypertrophy, or, failing that, to dilatation, we saw in the last lecture, and the matter need not detain us now. If the blood-pressure within the arteries be increased, an obstruction is offered to the complete emptying of the left ventricle, and hypertrophy sets in. The effect upon the arterioles is maintained, and consequently we find that betwixt the peripheral resistance and the hypertrophied left

(a) A course of Clinical Lectures delivered at the West London Hospital.

ventricle the high arterial tension is sustained. The effect of over-distension of the arteries is to set up a parenchymatous inflammation in their tunics, a development of connective-tissue corpuscles, known as atheroma.

Thus when the patient is seen at this point we find the hard pulse, the arteries thickened and becoming tortuous, the left ventricle enlarged and thickened, and the aortic valves closed with abnormal force by the highly distended arteries, and producing an unwontedly loud sound. There is no more important physical sign in the whole range of cardiac diagnosis than this accentuated aortic second sound. Progress may be very slow in this state, and years elapse in certain cases before any marked aggravation of this condition is observable. But nevertheless the state is one of steady, perhaps even stealthy, progression. Sooner or later the heart begins to fail, for the condition leads to mural decay, and then the whole aspect of the case is altered. How such cardiac failure is brought about is one of the most instructive of pathological processes, and one so common that it ought to be familiar to all practitioners. It is not its frequency only which gives it a claim to their attention; it is the completeness with which it illuminates the various signs and symptoms that are presented by the downward progress of such cases.

The decay of an hypertrophied heart can be better studied in a gouty heart free from valvular disease, than where the state is rendered more obscure by valvular complication. Years elapse from the formation of the hypertrophy to its obvious decay, and during this time the changes to be enumerated have been slowly going on. The chief change is that in the arteries. The muscular hypertrophy can be maintained steadily, but it is the elastic structures which give way. We have seen that in the above-described condition the arteries are chronically over-distended, and the consequence of this is that there is a development of connective-tissue corpuscles in the arterial walls. Such is the now accepted view of the causation of atheroma. This change will be found widespread; but at some points—the outside of curves, for instance, where the internal pressure is great—it is more pronounced. Frequently the thin-walled arteries within the encephalon are much affected; and apoplexy from rupture of them is a common occurrence in this condition. The association of apoplexy with an hypertrophied heart and altered vessels, along with Bright's disease, was pointed out by Rokitansky in the third volume of his well-known "Pathological Anatomy." Indeed, the possibility of rupture of a cerebral vessel is the chief danger of this condition until the time comes when the heart itself begins to fail. In many families—strong, healthy people—their history is as follows: practically unbroken health till past middle age, then apoplexy in sundry members; and ultimately sudden death from heart failure. Such sequence is intelligible enough. While the heart-walls are in their integrity, and the powerful hypertrophied ventricle is driving blood with vigour into the distended arteries; while the muscularly thickened arterioles oppose its escape; the internal pressure within the arteries is high, and rupture of an altered encephalic vessel is often imminent, and not rarely occurs.

But as the arteries become diseased the heart-walls commence to decay. Indeed, the muscular change is the direct outcome of the arterial changes. For the proper comprehension of this we must bear in mind how the heart is fed and its tissues nourished. When the heart contracts it squeezes the blood out of its walls; at the same time that the aortic cusps are floating backwards, and so cover the orifices of the coronary vessels. But when the aorta in its turn recoils, the aortic valves are closed, and the blood flows freely into the coronary vessels. In proportion to the recoil of the elastic aorta is the pressure of the blood within the coronary vessels. These coronary vessels, too, are exposed to the full force of the comparatively huge aorta, without vessels of intermediate size between them. I cannot help thinking that this has something to do with the changes in the coronary vessels, which are often much more marked than in the rest of the arterial system. The over-distended aorta recoils powerfully—that is the *vis a tergo*; then the enlarged heart, with its extra bulk of tissue, demanding blood, is the *vis a fronte*; the coronary vessels are filled with blood even more than the other arteries of the body, and the high persistent internal pressure within them renders them atheromatous. Later on, the coronary vessels are commonly seen tortuous and thickened to a much greater extent than the other arteries; and where such is the case the heart-walls are in fatty degeneration. When, then, the aorta loses its elasticity as the atheromatous process extends, the blood is driven less powerfully into these thickened, tortuous coronary vessels, and mural decay of the heart follows. This, however, is a long and chronic process, and is often far advanced without the subject of it being in any way aware that he is not in perfect health. The steady undermining of the heart-walls gives no sign in some cases until it is far advanced; but still there are evidences of it to the eye of the practised observer. It would be an ungracious act for one who has studied these senile changes to go round his elderly friends, and note the tortuous temporal artery, the exaggerated pulse of atheromatous vessels, the changed aspect of the skin, the corneæ clouded with fat granules, and often surrounded by a hazy, badly defined arcus senilis, and often an irregular pulse, which they manifest; and then, Cassandra-like, to prophesy. It is not surprising that a large number of elderly persons die suddenly of heart-failure; it is rather a matter for astonishment that many of them continue to live, and do live, for years with degenerate vessels and hearts far from structurally sound. But such is the case, and an extending experience proves that survival is often more perplexing than sudden death.

There are several considerations of high practical importance connected with this decay of the heart-walls. The first is the question of dilatation in the undermined parietes. The second is the possibility of repair in the degenerate muscular walls. In some cases, when the hypertrophied walls are undergoing decay, a process of dilatation is set up, and the chambers yield to the distending internal pressure. When such is the case we find the signs and symptoms of cardiac dilatation developed: these are dyspnœa and dropsy, Indeed, the final stages of degenerating hypertrophy assume two aspects—the one where the characteristics of cardiac dilatation are developed, and there are present œdema and the other troubles of a failing heart, which, however, struggles away with the stretching muscular fibrillæ remaining structurally undecayed; and the other of no dilatation, no symptoms but the subjective ones of failing power and unfitness for exertion, with perhaps a slow and very compressible pulse, where the tendency to sudden failure of the heart is very great. Enough of attention has not, in my opinion, been paid to these two forms of change in the latter history of cardiac hypertrophy, and yet they have a practical value prognostically, for where the dilatation is pronounced the patient will probably pass through the ordinary course of a failing heart with dropsy, and die gradually; while in the other case, where the mural decay goes on without apparent alteration in the size and shape of the heart, sudden failure of the heart in diastole is the common termination. In the one the dilating and yielding fibres of the heart make a good losing fight of it; in the other case there is sudden failure, in all probability because of some sharp rise of blood-pressure in the arteries and quick distension of the left ventricle, which is followed by cessation of the heart's action in diastole, because it is powerless to overcome the over-distension to which it is subjected. Such are the terminations of failing hypertrophy; and the association of angina pectoris with the latter form gives it a weird interest for us.

Angina pectoris may be a neurosal affection in some instances, and as such is not fraught with sinister indications. With that form which occurs at a comparatively early period of life, with sound arteries, a normal heart, and a neurosal diathesis, we are not now concerned: it will form a part of the next and concluding lecture. The form we are now engaged with is that associated with degenerative changes in the vascular system. Here we find that there is a rise of blood-pressure within the arteries during the attack, as was first pointed out by Dr. Lauder Brunton in 1866, in the Edinburgh Royal Infirmary. This rise in the blood-pressure is due to sudden spasm in the arterioles; and relaxation of the arterioles by the inhalation of the nitrite of amyl was followed by immediate relief, after all other treatment had failed. This happy piece of induction by Dr. Brunton not only did much to clear up the obscurity which surrounded the pathology of angina pectoris, but it pointed to the proper treatment of the more permanent condition of this arteriole-contraction and high blood-pressure in chronic renal conditions.

(To be continued.)

ORIGINAL COMMUNICATIONS.

THREE CASES OF

RODENT ULCER (FLAT EPITHELIOMA) OF SKIN TREATED SIMPLY BY ERASION WITH A SHARP SPOON.

By BALMANNO SQUIRE, M.B. Lond.,
Surgeon to the British Hospital for Diseases of the Skin.

THIS considerable improvement on the surgery of excision as applied to certain progressive ulcerating lesions of the skin was originated by Volkmann of Halle. It is nothing more than an extension of the use of the gouge (as used in removing carious bone) to a still wider application in the treatment of more or less similar diseases of the skin. Or from another point of view it may be considered as a hint adopted from the dentist who arrests the process of caries in a tooth by scraping out the carious part, and then, inasmuch as a tooth is incapable of cicatrisation, constructs an artificial cicatrix by plugging the tooth-ulcer with an incorrodible metal.

The process has lately been largely adopted in uterine surgery in the treatment of various lesions of the cervix by scraping away the *materies morbi* by means of the so-called *curette*, and it has also been employed for the treatment of the commonly occurring and obstinate glandular nodules of the pharynx, commonly known as the "granular throat."

In Germany, where the method first received its application to the treatment of disease of the skin, its use for this purpose has been received with considerable favour; and it has met with warm support in Austria and in France and in America; but in this country certainly it has not met with approval. However, I am disposed to think that only one obstacle exists to its popularity with the profession in this country, and that the obstacle in question is a remediable one. It is this—namely, that the method has not been tried. It is with a view to its obtaining a trial that I now venture to report these cases.

Case 1.—Dr. X., practising in London, aged seventy-six, had been affected with rodent ulcer for eleven months. The ulcer was situated on the right temple just in front of the pinna of the ear. The ulcer was still of small dimensions. It measured half an inch across, including in this measurement its characteristic beaded edge. I may save the need of a detailed description of it, and more briefly verify my diagnosis of it as a veritable rodent ulcer by stating that, having this report of the case in view, I availed myself of the obliging good nature of my friend Mr. Jonathan Hutchinson, who kindly examined our *confrère* for me, and furnished me with his independent view of the diagnosis. He pronounced it to be a rodent ulcer beyond any manner of doubt. On May 23, 1878, I operated (chilling the skin first by the ether spray), by means of one of my own sharp spoons carefully scraping away all the friable tissue, including the raised beaded margin. The process was effected without pain, and even without sensation of any kind except the sensation of cold occasioned by the ether spray. No blood, not even a drop, was lost. Fourteen days after the operation the wound was completely healed, and the patient consequently cured. Up to the present time no re-appearance of the disease has occurred.

Case 2.—Charles P., a man aged fifty-five, was admitted an in-patient of the British Hospital for Diseases of the Skin on March 20, 1878. He had been affected with rodent ulcer for six years. The ulcer was situated on the right side of the upper half of his nose, and measured half an inch vertically by a quarter of an inch across. The ulcer presented the characteristic floor and margin of a rodent ulcer; but in this, as in the previous case, Mr. Hutchinson most kindly sent me his independent diagnosis of the lesion, and called it a case beyond question of rodent ulcer. On March 21, I operated on the man under chloroform, scraping away the friable floor and margin with one of my sharp spoons. After the slight bleeding had (under digital pressure) quite ceased, the ulcer was pencilled freely with solid nitrate of silver. On May 24 the ulcer had completely healed up and the patient was dismissed cured. I have seen the patient occasionally from time to time since the complete cicatrisation of his ulcer, and no sign, not even the minutest perceptible trace, of disease has evinced itself.

Case 3.—Philip J., aged seventy-eight, admitted in-patient of the British Hospital for Diseases of the Skin on March 7, 1878. Had been affected with rodent ulcer for four months. The ulcer (situated on the lower part of the right side of the face—namely, over the lower jaw) measures an inch and a half long by an inch across. The hinder margin of the ulcer is about an inch from the pinna of the ear, and the lower margin corresponds with the lower edge of the jaw bone. The ulcer presented a pale yellow superficially lobulated floor, irregularly depressed below the level of the raised margin of the ulcer. The sinuous raised beading or moulding which surrounds the ulcer is of almost cartilaginous hardness to the touch, of a faint pink-white colour, and measures across its breadth on the average one-eighth of an inch. At some parts of its course this raised moulding is slightly lobulated or moniliform. I trust I have here said enough to establish the diagnosis. Indeed, the ulcer was in all respects a very characteristic rodent ulcer. There was no perceptible enlargement of the adjacent lymphatic glands. On March 7, 1878, I operated under chloroform by scraping away the floor and raised rim of the ulcer with one of my spoons, just as in the other cases. The floor of the ulcer came away quite readily, being quite rotten (as much so even as lupus-tissue), and the raised margin, notwithstanding its firmness to the finger touch, yielded to the spoon withl equa readiness. April 13: The wound measures now only three-eighths by one-eighth of an inch, and is nearly closed. 16th: Wound now reduced to a pin-hole. From this date until June 1, one or two small discoloured spots in the skin, which remained or became developed in the otherwise perfectly healthy cicatrix, were dealt with at various times by scraping them out by means of the small spoon. The patient readily tolerated these minor interferences without anæsthesia either by the spray or by chloroform. In all about half a dozen of these supplementary erasions have been performed, and a few days ago, on presenting himself for inspection, it was observed that a small speck of about the same size as the others—namely, of about the size of a millet-seed—has again declared itself.

Commentary.—The process of erasion originally advocated by Volkmann(a) for the treatment of lupus has since been extended to the treatment of some other lesions of the skin, and amongst them to epithelioma in general, by Hebra junior, of Vienna, and F. J. Pick of Prague, and to rodent ulcer by Auspitz of Vienna.(b) However, Auspitz supplements his scraping by the use of arsenical caustic. The instruments in use at Vienna for the treatment by erasion (Fig. 1) present to my mind two disadvantages: they are too large and too shallow; so that the former disqualification renders them deficient in precision, since it is necessary that every portion of the diseased structure should be effectually scraped away, otherwise it will at once begin to grow again. Now, these large spoons will not serve for a thorough scraping out of small corners. On the other hand, their shallowness prevents their edges effectually catching the morbid fragments so as to bring them readily away, unless the spoon be held perpendicular to the skin—and this position of it is of considerable practical inconvenience in exercising the required manipulation with them.

I have accordingly devised much smaller and deeper spoons of an oval form (Fig. 2), which I find are practically not only more convenient, but more efficient also.

In both Fig. 1 and Fig. 2 the instruments are represented full size. In either case the spoons are made of steel and have sharp edges. The Viennese spoons may be obtained of either Leiter or Reiner, surgical instrument makers, of Vienna. Those I have had constructed are to be had of Messrs. Weiss, of the Strand.

The floor of the rodent ulcer is extremely friable and rotten in texture, and so equally is the thin, and to the touch seemingly hard, margin of the ulcer. The friable texture comes away like soft putty under the touch of the spoon, while the tough subcutaneous fibrous tissue, as well as the equally fibrous tissue of the surrounding sound skin, is quite impervious to the touch of the spoon. In this way, by exercising only moderately firm pressure with the spoon, the

(a) *Sammlung Klinischer Vorträge*, von R. Volkmann, No. 13, 1870.
(b) "Ueber die Mechanische Behandlung der Hautkrankheiten," von Prof. Heinrich Auspitz. Wien., 1877.

sense of touch greatly supplements the eye in differentiating the diseased from the sound structure.

Pick (of Prague) recommends going over the ulcer with the spoon very carefully again about two days after the first operation, in order that any deficiencies of the first operation may be felt out and made good at the second procedure; but I myself, while fully approving of his precaution, prefer not to wait so long. I find that by exercising firm pressure on the scraped out ulcer with the finger-tips immediately after the first scraping, the bleeding becomes after about five minutes completely arrested, and that thereupon the second or supplementary scraping may at once be performed quite as conveniently and as efficiently as on the second day.

Fig. 1.

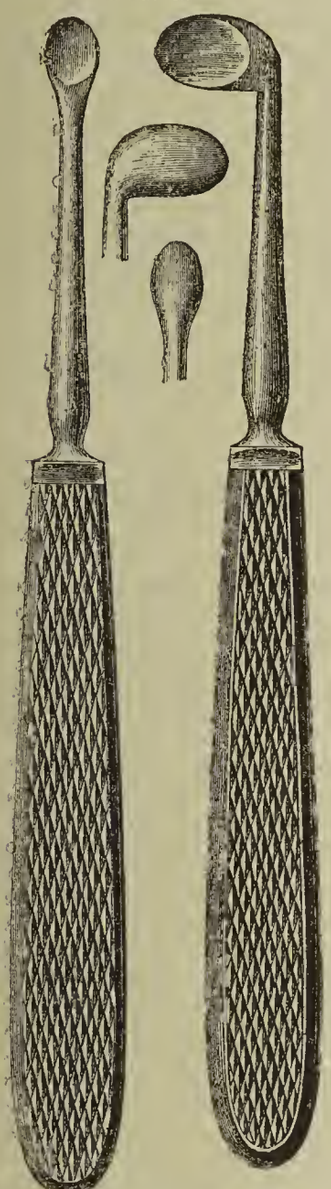

Fig. 2.

As to the after-treatment, it is merely that of any simple and healthy ulcer—that is to say, it may be almost anything, or even nothing, according to the fancy of the operator. In all of the three cases above quoted I confined myself to merely washing the ulcers gently with soap and water once or twice a day, and keeping them greased with a film of simple ointment without other covering of any kind. It will be noticed that in two of the cases—namely, in those in which the ulcer was small, and its progress slow—the cure has been at least for the present quite complete, and that in the larger and more active ulcer presented by the third case the ulcer was immediately reduced to very insignificant proportions, although some supplementary interference was requisite, and perhaps a little more still may be needed to complete the cure.

Chloroform was used in two of the cases, because I had at the time not yet found, as I did when I had got to the third case, that chloroform is needless. I had thought it essential because I had found that if the surface were rendered insensible by the alternative of chloroform—namely, by the ether spray—the frozen condition of the skin interfered materially with the differentiating sense of touch, since all of the structures, sound as well as diseased, were rendered, when frozen, equally hard to the touch of the spoon; but I found out quite in time for my third case (the case of the doctor), that if after freezing the ulcer and its immediate vicinity the skin be allowed to thaw, and if directly on its thawing the process of scraping be expeditiously performed, the operation may be effectually concluded without being in the least degree felt; indeed, the doctor assured me that he felt nothing whatever.

I have now to contrast the merits of this procedure with the other alternative methods of arresting the progress of rodent ulcer, and they are but two, namely, excision and deep cauterisation. Now in the case of a disease which is so prone to attack by preference the face, and the chief and in most cases the sole danger of which is the ravages it commits in destroying the features so disastrously as it is wont eventually to do, it therefore becomes a great point in arresting its spread not to add to its ravages by so doing. Now, excision and deep cauterisation, although unquestionably efficient, present both of them this grave disadvantage. Then again, the process of erasion is a much more trivial procedure, and dispenses with the need of chloroform, and so is more willingly undergone by a patient who, as yet, has only a trivial-looking and small-sized ulcer to urge him to submit to any formidable-seeming procedure. Then as to deep cauterisation, even chloroform administered at the time of application is unavailing to avert the subsequent and long-continued severe pain which the patient must inevitably endure; whereas there is no subsequent pain when erasion is performed.

Then as to the eventual result: will erasion insure against a future relapse? I am not yet in a position to say, although I should scarcely think it would; but then no more does deep cauterisation or excision.

In a paper communicated a year or two since to the *Medical Examiner*, I recorded a case of rodent ulcer, in which deep cauterisation had at an early period in the history of the case been performed by the skilful hand of the late Sir William Fergusson, and in which, nevertheless, after a few months the disease returned. In the same case the ulcer, while still small, was subsequently cut out, and, as we may be sure, very efficiently, by the practised knife of the late Dr. Velpeau of Paris, aad yet when I saw the unfortunate patient some years after the last-named operation, the whole of the left side of his face was one vast chasm from the ravages of the ulcer, which had returned a year or two after it had been excised.

A few years since I recorded in the columns of the *Medical Times and Gazette* the history of a woman who similarly had lost the whole of the left side of her face from rodent ulcer, and in this case the ulcer had been deeply cauterised at an early period in its progress by one of the able surgeons of St. Bartholomew's Hospital. I may mention that the diagnosis of these cases by Sir William Fergusson, by Velpeau, and by the surgeon last referred to, was that of rodent ulcer, so that my diagnosis of each of these cases was well affirmed.

It is therefore probable that, whatever course may be pursued with reference to rodent ulcer, it will nevertheless turn out, if the further progress of the case be watched, that no course is capable of preventing the possibility, and perhaps not even the probability, of a future relapse; we must at the most content ourselves with healing the ulcer completely and effectually for the time. Now, this end, as I venture to affirm, is effected more conveniently, more economically as regards needless destruction of sound tissue, and more painlessly—in short, in a better and more artistic manner—by erasion than either by cauterisation or excision. If I have proved so much, or, rather, if a more extended trial of the operation in more experienced hands shall be found to prove as much—and I feel convinced that it will,—then I venture to say that erasion will become the orthodox treatment of rodent ulcer, to the exclusion of the more formidable methods of excision or of deep cauterisation.

The Cambridge Improvement Board have resolved that immediate steps be taken for diverting the sewage of the town from the river Cam, and that Sir Joseph Bazalgette be requested to advise the Board as to the best mode of doing so.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

CHARING-CROSS HOSPITAL.

CASE OF FRACTURED RIBS WITH LACERATION OF LUNG, RUPTURE OF DIAPHRAGM AND LIVER, PNEUMOTHORAX, EMPYEMA, ETC.—RECOVERY.

(Under the care of Mr. HIRD.)

J. D., aged twenty-six years, a labourer, was admitted on February 4, 1878. On the morning of February 2, while engaged in a quarrel with some men, he was knocked down and kicked about the left side. He drank considerably afterwards, and was not clear as to what subsequently happened, but on the morning of admission, about half-past three, he spat up a considerable quantity of blood, and was brought shortly after that to the hospital, very inefficiently protected from the cold.

When admitted, patient, who was a strongly built man, was found to have a large amount of bruising of the left side below the nipple; the fifth and sixth ribs were fractured on the same side. He coughed and brought up some venous blood continually. His respirations were about 40 to the minute; temperature 101·8°. An ice-bag was applied to the affected side, and patient was placed in bed with his body slightly raised.

February 5.—Temperature last evening 103·4°. Patient has passed a very restless night. His expectoration is almost entirely made up of blood, and is profuse. Morning temperature 97·6°; pulse 100; respirations 40. His whole condition is one of extreme depression, and he can bear very little handling.

6th.—This morning expectoration is free from blood, but yellow, with white frothy patches. The reaction of the fluid is alkaline, and with nitric acid it gives the characteristic play of colours of bile. Just below the left nipple, to the outer side, air can be heard entering the pleura. There is dulness behind as far up as the upper angle of the scapula. The heart-sounds are indistinct. There is exaggerated harsh breathing all over the right lung. His respiration is hurried and forced. The tongue is dry and red. Breath offensive. He complains very much of intense thirst. Temperature at 10 p.m., 103°.

8th.—There is some bile in urine to-day. His expectoration is still markedly bilious.

10th.—Patient is much weaker. Respiration in morning 42. Pulse weak and thready. Urine and sputum still bilious.

13th.—A slight swelling to-day could be made out round about the left nipple, and fluctuation could be felt. The heart is pushed down towards the epigastrium, and there is marked pericardial friction.

14th.—To-night an aspirating needle was pushed into the swelling, and about an ounce of purulent matter of the consistency of olive oil and of a brick-red colour was drawn away. Patient seemed relieved afterwards. Temperature in evening, 100·6°.

15th.—The needle was again introduced and about three ounces of pus drawn off. Expectoration still bilious, and, in addition, somewhat purulent. Patient's condition has for some days been too low to allow of thorough physical examination. Evening temperature 102°.

16th.—Pneumothorax of affected side is extensive; expectoration purulent and bilious.

17th.—An incision was made to-day with a scalpel into the pleura at the fifth left interspace, where there was a good deal of bulging, and about four or five ounces of pus were evacuated; a drainage-tube was then put in. Evening temperature 100·4°.

18th.—Patient expresses himself as feeling much relieved from yesterday's operation; dyspnœa still great; expectoration profuse and purulent; bile disappearing. Morning temperature 98·4°, evening 100·4°.

21st.—Patient now sleeps better; dyspnœa is less; expectoration still purulent, but the bile has disappeared; his tongue is clean. Temperature fluctuates.

26th.—Patient is improving in strength; the wound discharges freely; the left lung is much collapsed, but the right seems to be undergoing compensatory expansion.

March 1.—Patient continues to do well; expectoration is less, and the wound discharges freely. Temperature rises from 98° in the morning to 100° in the evening pretty regularly.

8th.—The wound continues to discharge freely; patient is much stronger; dyspnœa is less. Temperature fluctuates.

18th.—Another opening was made to-day a little to the left of the previous one, and some bloody pus was evacuated.

20th.—There is a free discharge from the wound; patient's expectoration is free and slightly tinged with blood. His condition is one of improvement. Morning temperature 97·4°, evening 99·8°.

From this date until April 18, when patient was discharged, there was steady improvement. When he left the hospital there was still a fistulous opening in the chest-wall, and the left lung was almost entirely collapsed, but the right lung was healthy and had expanded considerably.

October 17.—Patient was seen to-day. He is pale and somewhat emaciated, but has been able to do a little light work, and has had two or three weeks' work in the hop-fields. There is an opening on the left side, from which there is a free discharge of pus. There is dulness on the same side as high as the clavicle in front and the spine of the scapula behind. He complains somewhat of pain in the left side, but has little difficulty in breathing unless when called on for more than ordinary exertion.

CLINICAL TEACHING—REMARKS ON HERNIA AND DISEASES SIMULATING IT.

(By Mr. HENRY HANCOCK.)

On October 16, Mr. Hancock began a course of three lectures, giving some of the results of his experience in the treatment of hernia and other abdominal diseases. Mr. Hancock began by explaining what is meant by hernia, its forms, and its ordinary situation.

A man comes complaining of dragging pain about the lower part of the abdomen; he has not the same power of expelling fæces that he had; he is worse towards night, but feels comparatively well in the morning; and finally, there is a swelling in some part of the abdominal wall—in fact, he has all the symptoms of a hernia, and there is no doubt about his case.

But the cases are not always so clear. There were two at present in his mind which he had seen recently in the country, and which were highly instructive.

The first was that of a lady to whom he was called. When seen, she had that extreme anxiety of countenance which it is difficult to describe; her complexion seemed leaden, her skin was clammy, her pulse small, thin, and miserable—the aspect common to patients who are suffering from severe injury to any vital organ. This patient did not complain of that pain about the navel which books describe as constant in hernia, and which is present in about nineteen out of twenty cases. In this connexion Mr. Hancock remarked that he had observed this symptom in a case of fistula in ano, in a case of cancer of the rectum, and in a case of penetrating wound of the lower end of the rectum, in none of which was there any pain at the seat of disease.

However, in this case the lady complained of intense pain about the loins, over the hip, and round to the groin. Now, there is such a thing as gravel, and the passing of a small piece of stone down the ureter will give rise to just such symptoms as were seen in this case. A great tall fellow who could eat you up will groan and cry and roll himself over in intense agony; but a little rubbing over the part gives comfort, and patient's attention can be diverted by a little conversation for a minute or two, when it will perhaps be found that the seat of the pain has shifted. In such a case give a good stiff glass of gin-and-water, give diuretics—flush the sewer, as it were—and when the piece of gravel has passed into the bladder, pain for the time will cease.

But in this case the patient was afraid of pressure, the pain did not shift, the knees were drawn up so as to relax the abdominal muscles (this is a point especially to be noted, as contrasted with the rolling and shifting of position in gravel), and on examination a femoral hernia was detected in the groin. This was returned, and on the following day all symptoms had subsided, the patient had a truss applied, and was soon as well as ever.

The other case was that of a gentleman to whom Mr. Hancock was also called. Here he remarked that he had

nearly always found that abdominal symptoms were much more marked in women than in men. This might be accounted for by the existence of the ovaries in the female. Pressure on these creates irritation, and so sets up a spurious hysterical excitement in addition to the ordinary symptoms.

In this case the symptoms were not strongly marked. The patient believed he had lumbago, but the seat of pain was at the sacro-iliac synchondrosis. This had existed for some time. On examination there was a bubonocele; this was treated by a well-fitting truss, and the patient became quite well.

Mr. Hancock next spoke of strangulated hernia. Here we find constant desire to pass motions without power to do so; we find a tumour, with pain in the immediate neighbourhood of it, not extending at first over the whole abdomen. In thirty-six or forty hours comes sickness; at first the contents of the stomach are evacuated, then comes frothy mucus, then green biliary matter forced upwards from the duodenum by the peristaltic action of the intestines, and at last the vomit becomes stercoraceous. Next comes the stage of hiccoughing, showing that there is great injury to the gut, probably sloughing.

Without dwelling further upon this, he went on to speak of cases simulating strangulated hernia, and first of obstinate constipation with impacted fæces. Now, this is a very common complaint with ladies, old and young. They seem to consider it not delicate to go to the water-closet, but not indelicate to make of themselves walking water-closets. In a few cases he had seen the colon distended by fæculent accumulation to considerably beyond the size of his two fists. In women, where the ascending and descending colon lie in the front of the ovaries, very pronounced hysterical symptoms often arise from this over-distension, and it is surprising how exceedingly hard these masses of fæces become—so hard as only to be removed per rectum by the vigorous and persistent use of such an article as the handle of a spoon. In one case he found a mass so hard that he could make no impression on it, and only succeeded, after an hour or two of hard work, in chipping off little bits, and so breaking it up.

One case he remembered being called to was that of a lady who had been confined about three weeks before. In this case she seemed about to die. The physician-accoucheur in attendance had given her up, and such was her state that it was impossible to say whether she would live from one hour to another. Here, on examination per rectum, he found such a dense hard mass as has just been described. The abdomen was tympanitic, and he was convinced that here the rectum and the rest of the large intestine were completely impacted, and that the symptoms were due to this and to ovarian irritation, and that there was more than simple irritation. There was pronounced enteritis. He dared not bleed, although it was in the days of much bleeding. He was sure that a good many were killed by it. But there was often much good done by bleeding, especially in enteritis, where a weak pulse would become stronger by the abstraction of blood. In the extreme prostration of enteritis much of the mischief depends on the organ affected more than upon the intensity of the disease.

In this case Mr. Hancock gave calomel and opium—a grain of the latter to half a grain of the former, every two hours. This treatment with the removal of the fæces was successful. A great deal depends upon the way in which opium is administered. In a case of umbilical hernia with great inflammation, Mr. Hancock was consulted by a general practitioner. Here calomel and opium were being given, one grain of opium with three grains of calomel every six hours. He ordered half a grain of calomel with one grain of opium every two hours. Under the former treatment the patient was not improving; with the latter the acute symptoms subsided before the day was over, and the patient ultimately recovered. This result he attributed to the fact that by giving the opium frequently its effect was not allowed to die out, but was kept up uninterruptedly until there was permanent relief.

How long should such treatment be kept up? He could not say; it might have to be kept up for twelve hours or for twelve days. If the impression be marked—if the pulse improve, the belly become softer, the countenance less anxious, the eyes more brilliant, the vomiting cease or lessen, the skin become soft—continue the treatment until all urgent symptoms have subsided.

Mr. Hancock has a great prejudice in favour of the common tinct. opii. He has seen nothing like the benefit in his experience from morphia, Battley's solution, or the other opiate preparations. He believes that the tincture acts both as a sedative and a cordial, and that it is a great mistake to believe a little stimulant is hurtful. He has given brandy-and-water with the best effects when the pulse was exceedingly low; and when depression from want of strength is a prominent symptom, his practice has always been to combine brandy with the opium.

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Medical Times and Gazette.

SATURDAY, NOVEMBER 2, 1878.

THE PROSPECTS OF THE ARMY MEDICAL DEPARTMENT.

In previous articles we have reviewed somewhat generally the Report of the Committee on the Army Medical Department; we have glanced at the excuses made for former changes, which tended to make the position of the Medical Officer unsatisfactory; we have dwelt upon the disadvantages arising from the abolition of the regimental system, and we have tried to throw light upon the various suggestions, half buried in paragraphs of the Report, which at first sight treated of other subjects. We noted that the Committee themselves appeared to have doubts as to the value of their own recommendations, and that the suggestion that civilian practitioners should be more largely employed was probably based upon the more than possible contingency that young medical men would still be reluctant to enter the Army.

It may be as well now to pass on from the grievances of the past, and, shutting our eyes to the policy of a far future, simply consider the prospects of young medical practitioners should they enter the Service after the Recommendations of the Committee have been approved by the authorities.

The inducements to enter may be divided into two classes. There are the substantial advantages, which appeal to all; and the more fanciful allurements which the Committee have recommended, in the hope, we suppose, of catching the

less thoughtful of the medical students. It seems to us that the time for appealing to the delights of a military life as an inducement to enter the Army Medical Service (for there was a time when Surgeons and Assistant-Surgeons were members of regiments) has passed away, and we suppose for ever. Unification means more work and less play; true, it entails duty with regiments, but no share in their inner life; and it abolishes once for all the dream that "relative" rank could ever give social advantages or insure the tokens of respect paid to the rank that was "positive." In point of fact, this was always so, but the Assistant-Surgeons in the past did not appreciate the fact, and they entered the Service, more military in their bearing and more precise in dress than the *beau sabreur* of the regiment. But the young medical men of the present day can be under no such delusions. They must know now that they will be "doctors" when they enter, and "doctors" when they leave the Service; that military men care nothing for their relative rank, and civilians just as much, or less, for their half-pay official titles. The public generally have learned to attach a certain meaning to the word General or Colonel or Major, and the holders of such rank meet in society with a sort of respect and deference; but who would care to try and understand what a Brigade Surgeon meant, or the social position of a Deputy Surgeon-General? Yet some of the trifles which tempted men formerly are retained in the list of Recommendations evidently because the Committee are aware that the substantial advantages are not yet enough. Clause 35 of the Report says, "It can scarcely be hoped that the pecuniary attractions of the public service will rival, except perhaps quite at the commencement of the career, those of civil life."

Glancing at the minor Recommendations, let us notice some which we think will have little or no effect in inducing young men to join the Service. No. 2, for instance, says "that horses be maintained at large stations by the Army Service Corps for the use of medical officers requiring to be temporarily mounted." Now, this is no boon. If a doctor requires to be mounted, Government must pay for the mount, and it is, no doubt, cheaper for the authorities to provide a troop-horse than to satisfy the claim of a livery stable keeper; but where is the advantage to the medical officer? He is not advanced one atom in his natural wish to keep a horse for his own private riding or driving, and he must envy the Colonel or the Major, with whom he nominally ranks, when he sees them pass by in a four-wheeled vehicle drawn by the chargers which had already done their duty on the morning parade. We do not set much value either on Recommendations 13 and 14, which define the relative rank of Army Medical Officers. We believe that one really good point as regards relative rank consisted in the right it gave to Surgeons to a choice of quarters, but if we turn to Recommendation No. 3 we find this right is impaired, and it is proposed "that a medical officer placed in barracks be allowed a distinct medical officer's quarter." We have in a former article expressed our opinion on No. 16 of the Recommendations, which proposes "that at certain large stations medical institutes be formed," that it is satisfactory enough in every sense but a social one. These institutes may advance science, but will hardly be substitutes for the mess-table.

Let us turn now to the Recommendations which have a real meaning, and will exercise a substantial influence on the career of a young doctor entering the Army. They treat of pay in the present, and pension after long service, and they bear, too, upon the whole of his professional life after he has ceased to serve in the Army. There are two courses which the coming Army Surgeon may pursue. He may retire after ten years' service, or subsequently after fifteen or eighteen years, receiving a proportionate gratuity, varying from £1250 to £2500, or he may hold on and retire as a Surgeon-Major with a pension ranging between £1 and £1 5s. per diem. We need not speak here of the men selected for "Brigade Surgeons," from whom, again, the Deputy Surgeons-General will be chosen. They will not be a numerous class, and we are considering the prospects of the great majority who will retire as Surgeons or Surgeons-Major, and we think there are reasons why a man should hesitate before he enters the Army with a view either to taking the gratuity or earning a pension. Those who retire with a gratuity will probably do so with the view of commencing private practice; and those who retire with a pension will possibly be obliged to commence professional life again, much against their will, and possibly contrary to their views. The pension is too small for a man to support a wife and family upon, and prudence will hardly enable the half-pay officer to make both ends meet. Taking, therefore, private practice as the only available resource of retired or half-pay medical officers, let us consider their chances as affected by the Recommendations of the Committee. No. 29 is most important, and must be carefully studied; it says, "That all medical officers retiring before the age of fifty-five shall be liable until that age to be called upon to serve in time of declared national emergency." It is perfectly clear that an old Army man who had made a civil practice for himself would, if called upon, have to sacrifice his practice, or resign his pension if the alternative were permitted; and the doctor who had retired with a gratuity would be in much the same predicament, although he could hardly be forced to return his money. It is a question, then, if a military medical man on quitting active service would not run a great risk of forfeiting a private practice if he should be successful in creating one, and we do not see that colonial life would be free from the same risk if emigration were indeed permitted before the age of fifty-five had been reached. We would not suggest that a call might be made for the services of retired medical officers, for the unsatisfactory reason that they had established "practices," to save which they might be prepared to relinquish pensions, were it not that we have heard that such calls were not unusual after "Waterloo" had placed great numbers of medical men upon half-pay; and if we must excuse our suspicion further, we could point to the enormous space taken up in the Report itself by endeavours to clear up "doubtful acts" on the part of the authorities in days long subsequent to "Waterloo." In conclusion, we think the Committee have made some recommendations which may perhaps decide a certain class of medical students to try the Army. There is work there without much drudgery for young men, and there is a fairly good pension for those who only need to supplement an income, or whose personal wants are few. There is a certainty of travel and a chance of a campaign; and for those whose good professional qualities are further favoured by luck, accomplishments, and dash, there are prizes not to be despised in the Administrative ranks, and in the honours and the decorations which the Crown can bestow. But there will be a still larger class of equally valuable students who, while acknowledging an improvement in the terms offered, will decide to think a little before joining the Army Medical Department.

THE INDIAN FAMINE OF 1876-77.

Through the courtesy of Surgeon-Major Cornish, the Sanitary Commissioner for Madras, we have been favoured with an early copy of his Report on the Sanitary and Medical Aspects of that calamity. It is a most instructive and ably-written document, and the readers of the *Medical Times and Gazette* must by this time be so well acquainted with Surgeon-Major Cornish's high character as a sterling, conscientious worker,

that it is almost unnecessary for us to add that his report is based on and chiefly consists of most carefully made and recorded observations and facts. There is no superficial or theoretical work in it. It is not a result of rapid inspections of relief camps and labour gangs, made at intervals by "special" inspectors; but the outcome and focussing of the experience and knowledge of skilled observers, who lived among the famine-striken populations; who watched, day after day, week after week, and month after month, the effects of an insufficiency of food, the signs and symptoms of a failing nutrition, and the stealthy but sure approach of the diseases and deaths due to the "chronic starvation" that, during a famine, slays its thousands for every victim starved to death by absolute deprivation of food.

The Report, being in itself a summary, does not easily admit further condensation; nor would a mere abstract of it, had we time to attempt to make one, be of much use or value, but we may be able to give such an idea of the character and extent of the information contained in it as may induce our readers to carefully study the paper itself. After some remarks on the want of accurate knowledge regarding the effects of food-dearth in the production of disease and death, and as regards the social habits and mode of life of the Indian poor, and upon the duty of public health officials in popularising knowledge of the different forms of starvation, Mr. Cornish treats, in Chapter II., of "Food, Labour, and Wages in Non-Famine Times." He points out that a great deal too much has been made of the supposed simplicity of the diet of the people of India. All classes of the working people, he says, use milk and curds freely, and butter; and he believes that, throughout India, "the labouring poor (though some may have religious scruples about eating cow's flesh) do not reject fish, fowl, mutton, or goat flesh." Further, with regard to the cereal grain used, he states as a fact that, with the population of Southern India and the Deccan at any rate, "rice is *not* the staple food of the working population," and that "at the least five-sixths of the agricultural poor use this grain only as a luxury, their daily food consisting of millets, such as cholum, ragi, cumboo, and several other species of millets." A large amount of evidence is adduced, much of it from inquiries made a few years ago by the Madras Government, to show "that the assumption of Sir Richard Temple—that in ordinary years the labouring man in Southern India could not afford to eat more than a pound of grain a day—was without any foundation in fact." Much interesting information is given also regarding the condition and earnings of other classes of labourers besides the agricultural or farm labourers.

Chapter the third deals with the physical signs of chronic starvation, and though it does not contain perhaps much that is very new to medical men, it is well worth reading on account of the careful minuteness with which the observed facts are recorded; and it may be remarked that much that is contained in this chapter, and in the still more instructive and interesting chapter on the "general diseases" and the "special diseases" of famine, is supported by the valuable report, by Surgeon-Major A. Porter, M.D., on "Pathology in Famine Diseases," which is added to Mr. Cornish's report.

The early indications of chronic insufficiency of food—anæmia and undue waste of tissue—are unhappily familiar, as Mr. Cornish remarks, to most medical men; but fortunately we do not often see the signs of chronic starvation in the extreme degree witnessed in famine-periods, when the wasting, confined primarily to the fatty and cellular tissues, goes on to affect the muscular and other structures of the body. Then may be seen, as "an unequivocal and almost universal sign of chronic starvation," *flattening of the nates*. "The rounded buttocks, whether of man, woman, or child, disappeared, and became perfectly flat with the trunk; the muscles of the limbs shrank away and atrophied, leaving the elbow and knee joints protruding like hard knobs"; and all the muscles of the body disappeared in a similar degree. At the same time, the internal structures also wasted and degraded. "The mucous membrane of the alimentary canal, and the special anatomical structures engaged in the absorption of albuminous nutriment from food, waste away under chronic privation, just as all other structures of the body;" and when these changes within have occurred to such a degree as to interfere with the digestion and assimilation of food, the danger to life is of course enormously increased. And Mr. Cornish remarks that "the progressive dangers are so gradual and so little noticed either by the individual or those about him that he may be mortally stricken before anybody is aware of it." The degree to which the wasting may proceed is proved by the observations of Dr. Porter and other medical officers. Dr. Porter made careful examination, in 1877, of the bodies of 181 males and 121 females, all adults, who had unquestionably died of the results of chronic starvation, and has given the following account of their heights and weights:—"There were 181 males, averaging in height 5·4 feet (extremes 4·58 and 5·92 feet), and in weight 77·1 lbs. avoirdupois (extremes 54 lbs. and 113 lbs.); and 121 females, averaging in height 5·0 feet (extremes 4·58 feet and 5·66 feet), and in weight 61·4 lbs. (extremes 40 lbs. and 102 lbs)." This and other evidence proves that in chronic starvation in famine times "the body gradually wastes from an average of, say 115 lbs. for men, down to 77·1 lbs. at the time of death, and in women from 95 or 100 lbs. to 61·4 lbs."; and Mr. Cornish's comment on this is, "Experience in thousands of cases in our relief hospitals shows how futile are the efforts to deal with the effects of famine where the people have been permitted to waste away. Public money spent on comforts for the sick, while soothing the path to the grave, was entirely wasted so far as a restoration to health was concerned. The only economical application of State funds in famine times is in the early help of the able-bodied poor to maintain their vigour, and the mode of accomplishing this end is a task demanding the exercise of the highest qualities of famine administrators." It is shown by the pathological observations of Dr. Porter, that the nervous system shares in the general waste of the body. Dr. Porter's own conclusion from his investigations is, "that the brain wastes in starvation like other tissues of the body, but in a less degree; and this atrophy of the brain would account for the effusion of serum into the arachnoid cavities and sulci of the brain, that is so frequently found in these cases"; and Mr. Cornish observes that the dulness, the apathy, the unfitness for labour, and the unwillingness to use the smallest exertion to better their condition, so often shown by the famine-stricken, "are a part and parcel of the disease 'chronic starvation,' and must in future be so regarded and treated." They are not to be disposed of "by statements of loose observers" that the people are idle or obstinate. Other consequences of prolonged privation—viz., scorbutic affections, or a form of scurvy, dropsies, disorders of the alimentary canal, "famine skin," arrest of growth and development, retardation of puberty, and diminished fertility of population, and so on—are dwelt on at some length, and with much useful fulness of proof, in the Report; though some, at least, of these effects were known to us already from Dr. Donovan's account of the Irish famine, and Surgeon-General Gordon's observations during the siege of Paris; but Mr. Cornish gives some curious, to us quite new, notes on the alterations in the pigmentation of hair in the famine-stricken: the pigment cells becoming, apparently, atrophied, and the ends

of the hairs, and sometimes the whole length, "becoming red, auburn, yellow, or straw-colour," instead of black. The point, however, on which he lays the greatest stress, on account of its serious effects on the normal increase of population, is the effect of chronic starvation on the reproductive system. He has been at great pains to obtain trustworthy evidence on the matter, and gives a series of diagrams showing the immense lowering of the registered birth-rate of some of the chief famine areas after the food scarcity, compared with the average registration of former years.

When treating of the "general diseases of famine," Mr. Cornish especially urges the great importance of "the fact that the ordinary causes of mortality in an Indian population, such as cholera, small-pox, and fevers, are aggravated either by the depraved condition of health and lowering of vitality from bodily wasting, or by the circumstances of the food-dearth bringing the people under peculiar insanitary conditions." It has become the more necessary to insist upon this, because some of the "authorities" in India seem inclined to under-estimate the significance of the mortality returns in famine times, and to attribute a large part of such mortality to disease, and not to famine. And this tendency has been especially marked with regard to the death-rates during the Madras famine, perhaps because there were special reasons for making out that the relief system then adopted was a success. The Report shows, first, that when cholera is present in a province during a season of drought and food-scarcity, its effects on the population are intensified: the people resort to unusual kinds of food, which tend to disorder the digestive organs, ordinary cleanliness is neglected, the people are crowded together on relief-works and in centres of relief, water for domestic use becomes scarce, and the sources of supply available are liable to be fouled in every conceivable way,—and all these circumstances tend to aggravate the intensity of a cholera epidemic; second, the intensity of cholera was coincident with the early period of food-distress when these conditions began to prevail, and it had declined before the worst period of the famine had arrived; and third, there was a general tendency to ascribe to cholera mortality really due to starvation—cases of famine-diarrhœa were very frequently mistaken for cholera, and removed by competent authorities from the cholera-sheds in which they had been placed. Thus, Dr. McNally, one of the sanitary inspecting officers, reports, in July, 1877—"Went out on the Royachotti road to see some coolies supposed to have cholera. They were all cases of famine-diarrhœa, and were directed to be brought into the relief camp." The Inquiry Commissioners recorded similar errors of diagnosis during the Orissa famine.

Throughout the Orissa, the Behar, and the Rajputana famines, and again during the famines in Southern India, there was a marked absence of "fever." But in all instances, after the rains had set in, fever of a malarial character appeared, and carried off the famine-stricken people in immense numbers. In Southern India this was observed especially after the rains of September and October. Mr. Cornish says that then "fever, always of the malarious type, either intermittent or remittent, became exceedingly prevalent. . . In Kurnool and Cuddapah public business nearly collapsed owing to the subordinate officials being stricken down with fever. . . . Thousands of the half-starved survivors of the worst period of the famine fell victims to the fever. They had no strength or vital force to enable them to rally." It may be remarked here, by-the-way, that no "relapsing fever" or other contagious fever was observed in Southern India during the famine.

The lesson conveyed by the above remarks is, that the mortality due to cholera, fever, etc., during famine times cannot be separated from the famine-mortality. Some authorities endeavour, at such times, to dispose of the mortality "from cholera, small-pox, and fevers, as something quite apart from, and uninfluenced by, food-dearth"; but famine officers of experience know better, and recognise that, as Mr. Raban reported with reference to the Orissa famine, "there are many cases of disease so modified by the want of proper food, clothing, and comforts, that it would be impossible to separate the effects of specific disease from those of famine." The truth of this observation has yet, Mr. Cornish remarks, to be appreciated as it deserves; and he adds, "registration of the causes of mortality in India is too rough and imperfect at present to give more than general indications; but when the death-registers show that the people are dying in the proportions of 300 or 400 per cent. above the usual average in a famine area, and that no excess of mortality is occurring outside the famine districts, it would be as untrue, as it would be unphilosophical, to say that the famine was not answerable for the mortality."

The Report we have been noticing does not deal directly with the amount of mortality due to the famine. Diagrams are given of the death-rates in the affected districts, and for fuller information we are referred to papers communicated to the Statistical Society; but in speaking of the importance of death-registration, Mr. Cornish gives us some information on the famine-mortality. At an early period of the famine he called attention to the significance of the death-rates, feeling especially compelled to do this, "inasmuch as the official delegate of the Government of India, the Honourable Sir Richard Temple, in all his voluminous minutes on the famine in Madras and Bombay, never once gave any reason to suppose the people were dying in unusual numbers." In May, 1877, in his "last contribution to the discussion in regard to the sufficiency of the scale of wages calculated on one pound of grain as the daily food of an adult," Mr. Cornish hazarded the forecast that, making due allowances for defective death-registration and for the inevitable mortality that must outlast the dearth of food, "the population of the affected districts would be reduced in eighteen months' time by one-fifth or one-sixth of the numbers living before the scarcity began." The Government of India directed a census of selected areas in the famine districts to be taken at the end of the famine; and the result, Mr. Cornish tells us, has proved most convincingly that his estimate of May was too low. "Instead of one-sixth to one-fifth, I should have been nearer the truth if I had said that from 20 to 25 per cent. of the population of affected areas would be missing at the close of the famine"; and in a foot-note he calculates that the total loss of population in the Madras Presidency has been more than three millions.

The great intention of this valuable Report is to teach official minds the real meaning and proper use of the word "starvation," which to them means only death by deprivation of all nourishment. Mr. Cornish most rightly feels that public health officers are bound to teach the truth on this subject, and "to demonstrate to those who have no scientific training, that chronic insufficiency of food among a people gives rise to diseased conditions of humanity that are more fatal in their effects than all the pestilential disorders that have ever afflicted the human race, and thus to bring home to the comprehension of famine administrators that chronic starvation is one of the most terrible disasters that can happen to a population." Right well has Surgeon-Major Cornish done his part towards diffusing this knowledge. That the teaching is sorely needed, the whole history of the Madras famine has shown only too well. The Government of India, in sanctioning the new relief-rate during the Madras famine, declared "no man, woman, or child shall die of starvation," and in February Sir R. Temple telegraphed to the Government, "Over the whole of the Madras Presi-

dency famine is successfully combated, and starvation prevented." The results of the relief-rate, adopted as an "experiment," are well known, and that they were not still more disastrous is very largely due to the courageous efforts of Mr. Cornish. We need not repeat here the story of how he, as soon as possible, boldly protested against the Temple experiment, and, though his statements were denied, and an attempt, which met with a crushing reply, was made to refute his arguments, he was vigorously and steadily supported by the Madras Government, and he had the satisfaction of wringing from Sir Richard Temple and the Supreme Government of India such modifications of the relief-rate as no doubt much lessened the threatened evils. Mr. Cornish's labours have been recognised by both Governments—but in very different ways. The Governor of Madras (the Duke of Buckingham and Chandos) placed his name at the head of the officials recommended for the honour of the Companionship of the Star of India, in the Queen's Birthday Gazette this year; and the Calcutta Government, to mark their sense of his efforts to perform his duty regardless of possible consequences, and to encourage other officials, erased his name altogether from the list they sent to her Majesty!

THE PUDDING POISONING CASE.

The case of poisoning at Barnsley, apparently from the consumption of an ordinary bread-pudding, and to which we briefly referred on a former occasion, seems, on further inquiry, to be much more curious (if we may apply such a term to a serious accident) than appeared at first show.

As briefly as we can put it the facts were these:—A man named Thresh, living at Barnsley, had, not unlike a canny Yorkshireman, two strings to his bow. He was an auctioneer, and at the same time was proprietor of certain dining-rooms in Barnsley. He did not live on these premises, but at some distance, and his wife had taken no share in the management of the business. The cook at the eating-house received orders from her master to prepare some bread-pudding. The materials were partly supplied from a kind of bin or store where scraps of stale bread were kept, and partly procured by the woman from the grocer. The bread was soaked all night, and the pudding was made in the morning; it was placed in two dishes, a larger and a smaller, the larger being baked in front of the fire. Part of the pudding was consumed on the premises, part of one was sent to Mr. Thresh's house, and was eaten by his children at tea-time. At the dining-rooms the cook ate a small quantity of the pudding for dinner. She tasted nothing unusual about the pudding, and was not taken ill until about ten o'clock; then she was purged and vomited. A miner who called in for his dinner also ate some of the pudding; he had to walk some distance home, and before he arrived there he vomited and was purged. The pudding that was sent to Mr. Thresh's house was partaken of by all the six children. They did not complain until they went to bed, about eight o'clock; they vomited and were sick all night. All of them were seriously ill, and one girl, aged three, died; another was almost as bad, but was recovering at the time of the inquiry. In the case of the child who died, Dr. Stewart records the symptoms and appearances thus:—When first seen, she was suffering from vomiting and purging. He was told she had eaten some pudding (part of it was produced in a bowl) with four others. It smelled very sour at that time, as if some of the ingredients had commenced to putrefy and ferment. Mr. Thresh, his two sons, and a daughter, were in the house. They were all suffering from similar symptoms. The deceased from her age was not able to bear the amount of sickness which the others could. She became insensible the same night. All the others were somewhat delirious during a part of the night. He saw the deceased again in the middle of the night. The child died at twenty minutes to three o'clock. He found that the stomach contained only a dessert-spoonful of thickish liquid, of a slightly yellowish colour. The coat of the stomach was inflamed. The inner coat was slightly softened. The kidneys were congested, the spleen somewhat enlarged and congested, the liver enlarged, paler than usual on certain parts of the surface, extending a little way into the substance. The gall-bladder was largely distended with fluid, the heart was healthy, as were also the lungs. The brain and its membranes were highly congested.

Meanwhile, of those who had partaken of the pudding at the dining-rooms, one, a girl who assisted there, and who had taken some, complained of no bad symptoms. The proprietor himself, who had also partaken of the pudding, was engaged in the market, but about five o'clock he felt ill, and was purged. But the most serious case of all seems to have been that of a man named Mason, aged fifty-two, who had formerly been a shopkeeper, but was at the time waiter and manager for Thresh. He too had eaten some of the pudding—how much is not known; he had, it is said, been subject to diarrhœa, and was fond of going to the tavern for relief. He returned home about nine in the evening, and went to bed. He was much purged, but only vomited once during the night. Next day he was no better, and Dr. O'Connell saw him. The day after, he became unconscious, and never recovered his consciousness. He died a week after partaking of the pudding. Dr. O'Connell described the condition thus:—When he saw his patient, Mason was in a state of collapse, and unconscious, but he rallied from the collapse. The diarrhœa was most severe, but was checked. Death came about by convulsions and coma. Post-mortem, the whole of the membranes of the brain were found to be inflamed, especially towards the centre. There was a lymphy exudation over the surface of the brain. The bloodvessels on the right cerebral hemisphere were congested. The general contour of the brain was congested. The lateral ventricles were filled with serous fluid, about an ounce. The vessels at the base of the brain contained blood, and the sinuses of the brain were filled with blood. The stomach was intensely congested, and contained about six ounces of a yellowish-brown liquid. The lower part of the smaller intestines was quite black, nearly gangrenous, and filled with a dark liquid resembling coffee-grounds. The whole track of the intestines presented an intensely congested appearance. The left kidney was considerably enlarged and congested; the right kidney was healthy. The liver was mottled on the surface with patches of an ashy grey appearance, but otherwise was extensively congested. The lungs were congested, and the heart normal in size, the valves healthy, the spleen and other parts being also healthy. The bladder was empty and contracted.

Under such circumstances the question of poisoning could not fail to be raised. The whole history and symptoms, as well as the post-mortem appearances, pointed to it. Accordingly, the analyst for the district (Mr. Allen, of Sheffield) was called in, and carried out, under the orders of the coroner, what seems to us a most careful and minute investigation of the whole circumstances of the case. Nor did matters rest here: the coroner asked for help from the Home Department; and this to a certain extent was granted. Moreover, many who took interest in the matter communicated their views, so that the case may fairly claim to have been properly investigated. Chemical examination demonstrated nothing. The poison, whatever it may have been—and the evidence above summarised shows almost infallibly that there must have been such a thing—could not thus be detected. Certain of Mr. Allen's experiments and inquiries,

as narrated in his evidence before the coroner, may here be given. He examined the intestines of Mason, and the liver and lungs of Emma Thresh, without finding any traces of poisonous metal. The remainder of the currants, sugar, and nutmeg used in making the pudding were carefully examined, with negative results. The glaze of the basin in which No. 1 pudding was made was proved free from lead and other poisonous metals. No. 1 pudding was most carefully and exhaustively examined, and the absence of all the following poisons directly proved:—Arsenic, antimony, mercury, bismuth, silver, copper, lead, zinc, chromium, barium, oxalic acid, oxalates, prussic acid, strychnine, savin, eolocynth, elaterium, Calabar bean, aloes, lobelia, veratria, colchicum, white and green hellebore, aconite, opium, digitalis, belladonna, stramonium, tobacco, dulcamara, hemlock, and cantharides. The pudding produced neither purging nor other poisonous effects on a puppy that was fed on each of them for two whole days. Mr. Allen confirmed this by administering an alcoholic extract of No. 1 pudding to a mouse, with entirely negative effect. From these experiments, together with the absence of any special characters or symptoms, the absence of the following poisons might also be inferred:—Phosphorus, ipecacuanha, wormwood, jalap, scammony, yew, croton, gamboge, darnel, squills, henbane, mazerion, fool's parsley, water-hemlock, and holly. In 1829 an investigation was made in France into the cause of illness due to eating decayed bread, and it was proved by experiments on animals that bread in a particular state of mouldiness or decay might not only produce symptoms of poisoning, but actually cause death; and it was found to be impossible to distinguish the harmless from the dangerous kinds of mould. The reaction considered most characteristic, and conclusive of the presence of ergot—viz., the production of a smell of herrings when the substance was heated with a solution of soda—was distinctly recognisable when the test was applied to the pudding. On employing another reaction of ergot, the production of a purple colouration on treatment of the substance with a dilute alkali, the pudding gradually assumed a bright red colour, and the alkaline liquid became tinged of the same hue. The colour took several hours to become really developed, but was very permanent. It was destroyed on addition of acid, but reappeared on neutralisation. No. 1 pudding reacted more powerfully than No. 2. Portions of pudding which were visibly mouldy to the naked eye did not respond to either of the above tests. A bread pudding prepared from pure materials for the purpose of comparison responded to neither of the above tests. From these results Mr. Allen was led to look most carefully for actual particles of ergot. Ergotised flour and bread have a most distinctly violet shade, and this character would scarcely have been absent had ergot been present in poisonous amount. He carefully examined microscopically and chemically a sample of flour said to be the same as that used for making the bread supplied to Thresh's eating-house, but found no trace of ergot. A sample of rye-meal obtained from the same baker contained only a doubtful trace of ergot. He also failed to detect ergot either by the naked eye or by the microscope in the pudding itself, and it appears therefore that the pudding contained a substance giving chemical reactions similar to, but not quite identical with, those of ergot, and that this substance was more abundant in No. 1 pudding than in No. 2. It might be fairly assumed that the substance which gives chemical reactions allied to those of ergot was itself a fungus or mould. It appeared to exist throughout the mass of the pudding. He tried to grow the fungus by inoculating bread soaked in milk and sugar with No. 1 pudding, and obtained evidence of its propagation. From these experiments and observations Mr. Allen considered it demonstrated that the pudding contained a substance which resembled ergot in its chemical reactions. This body was in all probability a fungus, and might be strongly suspected of poisonous properties, at least in a certain stage of its growth. The pudding was made from bread strongly suspected to have been mouldy, and which was several weeks old and had been in contact with ham, butter, and miscellaneous scraps. The bread was kept in a manner said by bakers to be the worst possible. The cook soaked the bread overnight in cold water. The pudding when made was sloppy, and had the appearance of being imperfectly baked. There was no trace of browning or crust, and the starch was not gelatinised, and hence the heat must have been very slight. Several partakers observed a peculiar or sour taste.

It is hardly possible to withhold our sanction to the above opinion. That the materials of the pudding were unfit for use is plain, whether they contained fungi or not; but in the absence of all known poisons capable of producing such sequence, we are forced to fall back on the conclusion that either the substances themselves, or something developed from them, had the disastrous effect we have seen. Neither of the victims were of strong constitution; for this reason, probably, they alone succumbed. Be that as it may, the lesson is plain: the use of such decayed articles of diet should be interdicted as sternly as is the sale of improper animal food.

THE WEEK.

TOPICS OF THE DAY.

The most recent accounts received from the United States seem to confirm the statements that the outbreak of yellow fever is at last subsiding; on the 23rd ult. there were only nineteen deaths recorded at New Orleans, and fifteen at Memphis. The *Journal du Commerce Maritime* recently published an extraordinary story of an alleged cure of yellow fever at New Orleans, which probably refers to the case reported by our American correspondent in our last week's issue, though a different physician is there credited with the cure. A man who had been attacked with the fever, and was lying in a dying state at the Charity Hospital, having been for twenty-four hours in the last stages of the disease, was made the subject of an experiment by a Dr. Samuel Choppin, who, seeing that there was not the slightest chance of saving his life by any recognised methods of treatment, determined to put into practice a theory of his own by trying the effects of ice practice. The patient, divested of all clothing, was placed in a kind of net, under which an indiarubber sheet was hung, and constantly syringed with iced water. At the end of two hours and a quarter the heat of the body was reduced from 105° to 58°(?), and the beating of the pulse from 100 to 90 a minute. On stopping the use of the iced water, the body regained its normal temperature, the fever disappeared, and the patient slept!

The Town Council of Glasgow have had before them a report by Mr. J. F. Bateman, C.E., as to the collection and disposal of the sewage of the city and surrounding district. The area included in Mr. Bateman's scheme contains about 14,800 acres, and the population of the district is estimated at 710,000. Of these, 546,000 persons were in 1877 within the municipal boundary, on an area of about 5800 acres, or about 70 persons per acre, thus showing an increase in the population of about 37½ per cent. in sixteen years. At this rate of increase the present population would about double itself in forty years. The drainage scheme is therefore prepared with the view of providing for a population of nearly a million and a half. It is proposed to carry the sewage to a place some distance below the city, either at Govan on the

south or Dalmuir on the north side of the river, and there, by a process of precipitation, to separate the liquid from the solid the former being poured into the river in a clarified state, and the latter carried off in barges and thrown into the Firth of Clyde. This great scheme, which, it is estimated, will cost close upon a million sterling, will shortly be discussed at a special meeting of the Town Council.

The movement for organising aid to the injured is still steadily progressing; a fresh class for working-men, numbering about forty, has recently been opened by Mr. Harford Pearson, Commissioner for London of the St. John Ambulance Association. A new centre has also been formed at Cambridge-street, Regent-street, for the instruction of both men and women. The number of names on the register of the Association at the present time is 2000, as against 1100 in June last. It is contemplated in the course of a few weeks to open branches of the Ambulance at Exeter and Leeds.

Sunday, the 10th inst., has been fixed upon for making the annual hospital collection in Dublin. A meeting of the Council was held last week, presided over by Lord Meath, at which a satisfactory statement of the prospects of the fund this year was read by Dr. Grimshaw, the honorary secretary. This gentleman reported that 230 clergymen and authorities of different places of worship in the province of Leinster had consented to join in the movement, and he confidently expected that the amount realised by the collection would exceed the average of former years. A discussion took place at the meeting as to the propriety of suspending, in favour of the Orthopædic Hospital, a rule which requires that an average of three years' claims must be taken with respect to any hospital before it can be admitted to a share of the fund. Lord Powerscourt, Sir J. Barrington, and others, supported the motion; but it was opposed by the Dean of the Chapel Royal, who deprecated the multiplication of hospitals, and ultimately the Council decided to adhere to the rule as it now stands.

The gentleman who recently offered to present the sum of £100 to each of ten metropolitan parishes, to be laid out in the purchase and planting of plane-trees in the principal thoroughfares, has made a similar offer to the Hornsey Local Board of Health, for the purpose of providing trees to be planted in Highgate, and at a recent meeting of the Board it was decided to accept the offer, and thank the generous donor for extending his contribution to Highgate, although that parish is not comprised within the metropolitan district.

It is evident that some modification is imperatively called for in the law respecting the burial of the bodies of persons found drowned. At the Kent County Sessions, held last week, the county justices refused to reimburse Woolwich parish the sum of £1200 expended in the recovery and burial of the bodies of the unfortunate sufferers in the late disastrous collision. Application is to be made to submit the case to the Queen's Bench for decision. The loss to Woolwich parish will be equal to a rate of 3d. in the pound on all the rateable property in the parish. It was stated at a subsequent meeting of the Woolwich Local Board of Health, that, according to the decision of the county justices, all bodies in future must be allowed to float up and down the Thames until cast on shore. When that takes place, the duties of burial will fall on boards of guardians, but those boards are prohibited by law from paying anyone for taking bodies out of the river.

The Lord Mayor last week presided at a public meeting held in the Beaumont Hall, Mile-end, for the purpose of inaugurating a branch of the London Hospital Maintenance Fund for the Stepney district. The appeal for a special maintenance fund of £25,000 a year for five years was started at the Mansion House on April 4 last, but up to the present time a little under £4000 a year for the period named (or its equivalent, about £19,000) has been subscribed. Local branches have therefore been formed, and have been for some time in operation in the various districts around the Hospital, in order to collect such smaller contributions as these poorer districts can afford. At the meeting under notice, a branch for Stepney was formed, and a resolution was passed urging the necessity of providing the funds necessary for the proper working of this charity.

The Metropolitan Board of Works at their last meeting decided to accept the offer of Messrs. Ransome, Sims, and Head, to place at their disposal, under certain trifling conditions, an engine of twenty-horse power nominal, indicating fifty-horse power, amply sufficient to drive a twenty-light Gramme machine, to assist in carrying out experiments with the electric light on the Thames Embankment. The Board has also received applications from other electric light companies, suggesting that Cockspur-street or Trafalgar-square would form eligible sites for trial, and offering to place all the necessary apparatus at the disposal of the Board upon similar terms to those arranged with the French Company. These applications were ordered to be referred to the Works and General Purposes Committee for consideration and report.

The report of Dr. John Whitmore on the health of the parish of St. Marylebone during the months of August and September last, records an exceptionally low death-rate, equivalent to an annual death-rate of 19 per 1000 of the population of the parish, being 4·36 per 1000 less than in the month of July, and 1·30 per 1000 less than in the months of May and June. The cause of this low rate of mortality is referred by Dr. Whitmore to a considerable reduction in the death-rate from infantile diarrhœa, consequent upon the absence of the high temperature usually so prevalent in the early weeks of the summer, and in a lesser degree to the low death-rate from zymotic diseases, as, with the exception of whooping-cough, they were all considerably below the average. Dr. Whitmore records his opinion that small-pox is no longer epidemic in the metropolis,—within the last month he has heard of only one case occurring in the parish of St. Marylebone; and he offers a suggestion that if every infant could now be properly vaccinated before arriving at the age of two months, and every boy and girl on reaching the age of twelve or fourteen years could be properly revaccinated, the efficacy of such a protection against small-pox epidemics in the metropolis would be fairly and fully tested.

The sewage farm at Abingdon, after having been held by the Corporation, has recently been let on lease at £4 10s. an acre, the tenant taking upon himself the duty of distributing the sewage. This will yield to the Corporation of Abingdon a return on the cost of the farm of 2¼ per cent., leaving the ratepayers to make up the difference between this return and the annual charge of 5 per cent. by which the first outlay will be repaid. The principle on which the farm was laid out is that of a combination of intermittent filtration with irrigation, by which the difficulties of ordinary sewage-farming are removed.

At the meeting of the South Dublin Union held last week, Mr. O'Brien, the Local Government Board Inspector, stated that small-pox had for the last three weeks been remarkably stationary in the city, the total number of cases under treatment in the hospitals remaining about ninety-five during the whole of that time.

The amount of the collections made last Sunday in Birmingham at the different places of worship, in aid of the Queen's Hospital, is stated to have reached a sum of £5400.

THE ENTRIES AT THE MEDICAL SCHOOLS.

The following is an authentic list of the new entries of students at the various metropolitan hospitals; it has been obtained by personal inquiry at the different schools:—

Hospital.	Full entries.	Partial entries.	Total.
St. Bartholomew's	—	—	145
Guy's	102	13	115
London	55	47	102
St. Thomas's	59	25	84
University College	70	11	81
King's College	46	8	54
Middlesex	43	4	47
St. George's	36	3	39
Charing-cross	31	5	36
St. Mary's	20	6	26
Westminster	14	8	22

The numbers given above as full entrics represent first year's students; and at St. George's, men who have had one year at Cambridge and are now commencing their medical studies in London. No distinction in registering new entries is made at St. Bartholomew's and University College between first year's men and those who have previously been students of medicine elsewhere. The numbers given for University College are therefore approximate only. Under the heading of full entries at St. Thomas's are included three students in their second year, five in their third year, and two in their fourth year, who have entered for the entire courses of their several years. The full entries at Middlesex include ten dental students. These figures scarcely represent fairly the prosperity or usefulness of the medical schools. More instructive statistics will be afforded by the comparison next April of the numbers sent up to the College of Surgeons for the primary examination with the number returned twelve months ago as "fresh entries" at the various hospitals.

CHARING-CROSS HOSPITAL: TESTIMONIAL TO MR. CANTON.

The annual *conversazione*, which inaugurates the winter work of the Medical Society of Charing-cross Hospital, was held in the Board-room of the Hospital on the evening of Friday, October 25, under the presidency of Mr. Hird, Senior Surgeon to the Hospital and Dean of the Medical School. The introductory address on this occasion was delivered by Dr. Green, who made some very able remarks on the objects and uses of such societies for medical students. The chief feature of the meeting, however, was the presentation of a testimonial to Mr. Canton, who has during the present year retired from active duties at the Hospital. As student and teacher Mr. Canton has been intimately connected with the Medical School and the Hospital for upwards of forty years, and on his being placed on the consulting staff his old pupils determined to mark in some tangible form their appreciation of his great services and rare qualities as a surgeon and teacher. The testimonial took the form of a handsome silver salver, with a substantial accompaniment, and was presented in the name of the subscribers by Mr. Cantlie, who mentioned that the list of contributors included the names of many well-known former students of the Hospital, such as Sir Joseph Fayrer, Professor Huxley, etc. The meeting was a large one, many of Mr. Canton's old pupils and well-wishers being present to do honour to their valued teacher and friend.

QUALIFIED ADVICE AND MEDICINE AT FOURPENCE A HEAD!

Notwithstanding the numerous prosecutions of prescribing chemists for illegal medical practice, the records of the coroners' courts show that the evil still prevails in the metropolis to a very large extent. A few days ago, Dr. Danford Thomas, Deputy Coroner for Central Middlesex, held an inquiry at the Clerkenwell Coroner's Court relative to the death of an infant aged seven weeks, whose parents resided in Little Bath-street, Clerkenwell. When the mother found the child was ill, she took it to a neighbouring chemist, who prescribed a mixture. The child continued to get worse, and two days after she again went to the chemist, who advised her to consult a medical man. She at once went to Mr. Betts, surgeon, who found that the child was dying from inflammation of the lungs. Mr. Betts complained to the Coroner that such cases were of frequent occurrence, and during the nine years he had been in Clerkenwell numerous instances of chemists prescribing for patients in a dangerous state had come under his notice, and a medical man was only called in when the patients were at the point of death. To meet the wants of the poor he had opened a dispensary where those who did not like to go to the parish doctor could have advice and medicine for the small sum of fourpence. That persons should go to chemists for medical advice when the services of a qualified practitioner can be obtained for such a modest sum is not easily to be understood. The evil may, however, be remedied in a great measure by a judicious application of the provisions of the Apothecaries' Act, and Mr. Betts would advance his own interests and do the public a service by taking immediate steps to put the Act in operation.

COMPULSORY REGISTRATION OF INFECTIOUS DISEASES AT BOLTON.

At the recent meeting of the Sanitary Congress, Mr. E. Sergeant, the Medical Officer of Health for Bolton, gave a very instructive address 'On the Compulsory Registration of Infectious Diseases, with especial reference to its practical working in the Borough of Bolton," and spoke especially of the difficulties which had arisen as regards the medical profession in that town in carrying out the provisions of the Act. A mutual consideration of their complaints by the Corporation and the Bolton Medical Society resulted in the following amicable arrangement being come to (June 19, 1878) for carrying out the provisions of the compulsory clause:—1. That certificates be given only in the case of any of the following diseases—viz., small-pox, cholera, measles, scarlet fever, typhoid fever, typhus fever, puerperal fever, and diphtheria. 2. That a book of certificates, stamped and directed for transmission through the post, be delivered to every medical practitioner, and that the medical practitioner in attendance report the case, by forthwith sending a certificate to the Town Hall. 3. That a further certificate be not given in respect of the same disease attacking any other inmate of the same building within thirty days after the giving of the first certificate (the carrying out of these suggestions to be sufficient, so far as the medical profession are concerned) until the Corporation give notice, or make other arrangements to the contrary. The working of the Act with this alteration, Mr. Sergeant explained, although not all that could be desired, is yet fairly satisfactory, and promises to do away with many of the objections previously complained of. It will, moreover, afford valuable experience for guidance in framing any future amendment which may be sought from Parliament.

THE HEALTH OF THE HACKNEY DISTRICT.

The report on the sanitary condition of the Hackney district for the year 1877, by Dr. Tripe, the Medical Officer of Health, contains some very useful details on the subject of the recent epidemic of small-pox. If this district had not suffered to a greater extent than all London, Dr. Tripe says, there would not have been much cause for surprise at this disease having again appeared in our midst, as its tendency to recur in an epidemic form once in four years in this metropolis is so marked as to have almost induced an expectation of a considerable mortality from it in 1875, when, however, the number of deaths was very much below the usual minimum. Had it not been

for the continued prevalence of small-pox the year 1877 would have been characterised by the smallest death-rate recorded in the Hackney district since 1845; as it was, the mortality was unusually small, having been below the average of the ten years 1861-70. The mortality from the zymotic class of diseases was 3·80, or about the same ratio as in 1876, when it was 3·79 per 1000. The death-rate from tubercular diseases was nearly the same as usual, having been 2·90 against 2·91 in the preceding year; but from inflammatory diseases of the lungs it was in excess, having been 3·42 against 3·25 per 1000. From convulsive and wasting diseases of infants the mortality was rather smaller, viz., 2·0 against 2·24 per 1000. The toll levied on the human race by these diseases, Dr. Tripe explains, varies but little in the Hackney district from year to year, although, as the density of the population increases, a larger death-rate might be expected from most of these diseases, except perhaps from inflammatory diseases of the lungs. Alluding to the density of population, the report states that this is very high in some parts of the district—for instance, at Hackney Wick, in 1876, there were above 2100 inhabitants residing on ten acres of ground, or 210 persons per acre; and in some parts of the district the number per acre is still greater. The mortality at Hackney Wick was very high both in 1876 and 1877, partly from the number of deaths from small-pox, but chiefly from other diseases, as in the former year the death-rate was 37·3 per 1000, and in the latter year 32·9, or, excluding small-pox, it was 28·3 in 1876, and 26·9 in 1877.

THE MEETING OF THE SOCIAL SCIENCE CONGRESS.

The Social Science Congress commenced its proceedings at Cheltenham, on Friday last, under the presidency of Lord Norton. Amongst those present were Lord Hampton, Sir Walter Stirling, Hon. E. C. Leigh, Mr. Hastings, Dr. Farr, Dr. Gladstone, Mr. Heywood, Hon. Mr. Brodrick, Professor Bonamy Price, etc. Lord Norton, after opening the proceedings, called upon the Hon. G. C. Brodrick to read an address on National Education, at the conclusion of which the different sections went off to their respective halls. The Health Department was presided over by Mr. W. H. Michael, Q.C., and the special question set down for discussion was the better regulation of house-building generally, and the best mode of improving the sanitary condition of existing houses. The first paper read was by Dr. Alfred Hill, Medical Officer of Health for Birmingham, on "The Sanitary Conditions to be observed in House-Construction." Mr. F. W. Waller followed with a paper on "The Sanitary Condition of Houses"; and was succeeded by Mr. Henry Robinson, C.E., who read a paper on "Vestry Neglect in Sanitary Matters." On the second day, Dr. Wilson, in the absence of Mr. John Marshall, read a paper on "A Circular System of Hospital Wards," but in the discussion which followed, the general opinion of the section appeared to be adverse to Mr. Marshall's propositions. Dr G. W. Child afterwards contributed a paper on "The Working of the Public Health Acts of 1865 and 1872." On Monday last, Lord Norton read a paper on "The Utilisation of Town Sewage"; and on the following day, Dr. Norman Kerr contributed a paper on "The Mortality from Intemperance." The sections of the Congress have been fully attended, and the proceedings have passed off in a satisfactory manner.

A NOVEL POINT IN SANITARY LAW.

At the Petty Sessions Court at Monasterevan, County Kildare, a rather novel case came before the presiding magistrates on Friday, October 25. A man named Daniel Traynor was accidentally killed on the night of October 1 by falling with his horse and cart into a deep ditch on the roadside between Monasterevan and Kildare. The police brought the corpse into Monasterevan about twelve o'clock that night, and demanded admittance for the body of the deceased of three or four licensed publicans of the town, all of whom obstinately refused to admit the body. For this supposed offence the publicans were summoned by the police before the magistrates at the Petty Sessions Court. Mr. Fitzsimons, solicitor, of Maryborough, defended the licensed publicans, and contended that they were perfectly justified in refusing to admit the corpse into their houses or premises, even although they were asked to do so by the police, who, it appeared, were under the impression they had acted legally in the matter. After a very short deliberation, the magistrates dismissed the case.

SANITARY EXPENDITURE IN DUBLIN.

As the result of the late inquiry, which we have already noticed, we understand that the Local Government Board for Ireland have decided to transfer the incidence of the sanitary expenditure of the Public Health Committee of the Corporation of Dublin, acting as the Urban Sanitary Authority of that city, from the Borough Fund to the Improvement Rate. According to the plan proposed by the Corporation, this arrangement will add nothing to the gross taxation of the city —2d. being taken off the sewer rate and added to the improvement rate. It remains to be seen how this new adjustment of taxes and altered incidence of sanitary expenditure will operate.

FROM ABROAD.

Curare in the Treatment of Epilepsy.

At the recent meeting of the German Association at Cassell (*Allg. Wien. Med. Zeit.*, October 1), Dr. Kunze gave an account, in the Section for Internal Medicine, of the trials which he had made of curare in the treatment of epilepsy. Of eighty cases treated, six he regards as cured, the epilepsy having ceased for five years or more. At the very least, then, his remedy has a great advantage over the bromides, which only postpone the attacks for some half-year. Commencing in his trials of the remedy with doses of a milligramme, and working upwards, he soon found that even large doses could be borne, he remaining with his patients after these were administered in order to observe their effects. The doses to which he did attain would excite surprise. Thus to three grammes of water he added five decigrammes of strychnia, using this for eight injections. The early symptoms of narcosis, such as a little giddiness, and a misty veil before the eyes, passed away in three-quarters of an hour. He soon diminished the above quantity, adding only three decigrammes to five grammes of water and a drop or two of hydrochloric acid, and dividing into eight injections. No symptoms of poisoning were induced in the cases treated; but it is with this remedy as with strychnia, which exerts no influence if noises in the ears are not produced—so here no effect is produced unless there is a veiling of the vision. An important point to note is that the cases may be divided into two classes as regards this treatment. First, there are those in which there have been only one or two attacks, or in children, in which a single injection may suffice; but, as a rule, a second attack follows in three or four weeks, and then we should observe what time has passed between the injection and the new attack, taking care to make the new injection before the same period of time has again elapsed.

Professor Lister on the Antiseptic Method.

When Prof. Lister was in Paris in the summer he addressed an oral communication upon this subject to the Paris Société de Chirurgie, and we reproduce from the last number of the *Bulletin* of the Society the succinct and interesting statement which he then made.

Several members of the Society having expressed a wish to hear some observations upon the antiseptic method, I feel great pleasure in complying with their desire.

Union by the first intention is no new thing, and when surgeons attempt it for small wounds, as in hare-lip, they do not always obtain it. The object of the antiseptic method is to obtain it as the ordinary result, and to accomplish cures which, without it, they could not hope for. Let us take, for example, cold abscesses. If we do not open them, no inconvenience arises, except from their size. If we open them by small incisions, fever supervenes, with accidents of putridity leading to hectic and death. If to avoid this danger we practise punctures with aspiration, in the majority of cases the pus will form again, the operation has frequently to be had recourse to again, and the patient is not cured. But it will be entirely otherwise if the abscess be largely opened, if a drainage-tube be inserted to obtain a free issue of the discharge, and if, after having operated by the antiseptic method, we apply a good antiseptic dressing which is continued with great care until the cure is complete. The first results obtained are a cessation of the fever and the production of a serous discharge, which becomes so slight in a few days as to require the dressing only to be changed once a week. If with this mode of dressing we combine the precaution of insisting upon the horizontal position being kept, we may effect the complete and radical cure of our patients. I have, thanks to this treatment, obtained an absolute cure in a great number of cases, in some of which there have been caries and sequestra of the bodies of the vertebræ. This is a result which, it appears to me, it would be difficult to obtain by any other mode of treatment.

The pyogenic membrane of these congestive abscesses does not produce pus unless it is irritated. Prior to the opening of the abscess there is an irritative tension produced by the accumulation of pus; and if we open the abscess without antiseptic treatment, we relieve the pressure, but we introduce another cause of irritation—putrefaction. Prior to opening the abscess, inflammation of the bone and then the tension induce suppuration; and after opening, putrefaction acts in the same way. If we suppress these causes of suppuration, and also suppress the mechanical irritation produced by the vertical position, these lesions are found to differ in nowise from other inflammations—the inflammation ceasing when the cause of external irritation has disappeared.

During the first days after the formation of a wound there is no pus, whatever kind of dressing may be employed; but some days after we find pus and granulations which have preceded the pus; for when granulations have formed there is, as in the cavities of cysts, no tendency to suppurate unless irritation is present. Thus, in Reverdin's method of skin-grafting, if we place a graft on a granulating surface, graft and granulations unite by the first intention. Granulations, then, do not possess the property of forming pus. The epidermic graft acts as a dressing protective against all irritants; and when a granulating surface is thus protected, it ceases to furnish pus, or even serum. If we employ a topical antiseptic, as chloride of zinc or carbolic acid, pus and granulations are produced; but if between the antiseptic and a recent wound we place a non-irritant substance capable of protecting the wound from the irritation of the antiseptic, no suppuration will be produced. If in large, deep, and widely separated wounds, filled with coagula of blood, we place a portion of protective substance, and over this the antiseptic, the coagula do not putrefy and there is no suppuration. On removing the upper layer of the coagulum we find a cicatrised surface, without suppuration and even without granulation. As yet we have not been able to obtain a protective sufficiently perfect to avoid all suppuration from a wound covered with granulations, bnt we are able greatly to diminish its abundance. Antiseptics, then, exert a direct action on the tissues, and at the commencement of my researches I was much astonished at finding pus, even when the causes of putrefaction were kept at a distance—the antiseptics themselves inducing the irritation of the wound. Putrefied substances are irritating, and if antiseptics are capable of developing suppuration, how much more will this be the case with substances in a state of putrefaction! But a great difference is to be observed here—irritation from the antiseptic only acting upon the point with which it is in contact; while putrefaction, being fermentation, extends wherever there is the material capable of serving as alimentation for the vibriones. Thus, we may admit three causes of suppuration, one proceeding from inflammation without putrefaction, the second produced by the irritation of antiseptics, and the third caused by substances in a state of putrefaction.

I do not wish to enter into all the details of the dressing, but I am desirous of giving some account of the employment of the protective. This, which is nothing but a piece of varnished tissue, does not possess any antiseptic property, and if it is dipped in carbolised water prior to its application, this is only in case any septic body may exist on its surface having a tendency to mix with the pus. But the carbolic acid thus existing in small quantity on its surface rapidly disappears; and unless it did so the protective would become irritating and its application meaningless, as its office is to shelter the wound from the irritation of the antiseptic. An important point, to which I cannot draw too much attention, is, not to allow the protective to pass beyond the dressing, as the causes of putrefaction might penetrate beneath it. The antiseptic dressing must on every side project beyond the protective, as if this were the wound itself. If some rags dipped in a carbolised solution were only employed as an antiseptic dressing, and the discharge was very abundant, putrefaction would take place in twenty-four hours, because the liquid proceeding from the wound rapidly displaces the antiseptic, the wound being then no longer preserved. It is, therefore, indispensable that, whatever substance may be employed, there must be for it a kind of receptacle holding the antiseptic substance in reserve. On this subject allow me to allude to a point to which attention has been drawn by my late colleague Sir Robert Christison, namely, that the force of action of a medicinal agent in solution does not depend alone upon the quantity of this dissolved, but also on the manner in which it comports itself with the vehicle. Thus, water having but little affinity with carbolic acid, and oil a much greater affinity, an aqueous solution of a twentieth of carbolic acid is almost caustic, while the irritating action is much less strong with a tenth in oil, and if we employ resin a mixture of a fifth is almost insipid. For the purpose of cleansing an instrument or the hands, we resort to the aqueous solution, the action of which is strong but temporary; but for a dressing intended to remain on for some days it is necessary to employ a vehicle which has more affinity for the acid. With this the discharge may traverse the dressing without removing all the antiseptic which is held in reserve. It is with a mixture of carbolic acid and resin (to which some paraffin is added to render it less agglutinative) that the gauze is prepared which is the true receptacle of the antiseptic. The discharge cannot remove the resin, which strongly retains the carbolic acid. Besides the protective and the gauze there is also the macintosh, the object of which is the prevention of the direct passage of the liquids of the wound through the dressing, and also the increase of the antiseptic effects of the gauze. When a dressing has been left on for several days after application, sometimes it becomes displaced in consequence of the movements of the patient, especially in cases of cold abscess; and in order to obviate this inconvenience I place an elastic bandage around the edges of the dressing, and which may be applied with a certain amount of force without inconvenience and without obstruction to the circulation. For superficial wounds I sometimes employ boric acid instead of carbolic; and in order to obtain boric lint I dip lint into a boiling solution of boric acid, and thus procure a rich antiseptic receptacle. This mode of dressing has furnished excellent results in ulcers of the leg. I first purify the surrounding epidermic surfaces by means of a carbolic solution (one in twenty) which thoroughly penetrates the epidermis and purifies even the hair follicles. When gangrene exists on the granulating surface of the ulcer, it is necessary to apply something stronger than carbolic acid; and until of late I made use of the chloride of zinc, but as this, when the wound is large, has the inconvenience of inducing very severe pain, I have replaced it by iodoform. After the wound has been washed with carbolic acid solution, the iodoform powder is applied, then the protective, the boric lint which covers this extending beyond its margin on every side. There is very little suppuration, and after two or three daily dressings these may be left on without removal for several days. The protective has a double object—the preventing the direct irritation of the antiseptic, and the maintaining the surface of the wound in a constant state of humidity, which prevents the formation of a crust under which pus might accumulate and cause, through tension, inflammatory suppuration. If the formation of these crusts were not avoided by means of the protective when the dressing was removed, the epidermic layer of latest formation might be easily torn off. I also employ chloride of zinc for a special action it exerts. A single application of a solution of one-twelfth prevents putrefaction in a wound, even when the causes of putrefaction cannot be removed. Thus,

after amputation of the tongue, if the wound be touched with it a single time, no odour will arise until granulations appear. There must certainly be a layer of mortified tissue, but it must be almost microscopic, since it is not appreciable, and does not prevent union by the first intention. Chloride of zinc may preserve wounds from putrefaction in cases in which it would seem difficult to avoid it, such as those of cystotomy and fistula in ano. In cases in which I am unable to remove all the fistulous tracks, I scrape them with a curette, and apply the chloride, with excellent results. If putrefaction supervenes, it does not appear until after three or four days, and the patient is protected, at least during the earlier period, from the accidents of infection.

In answer to some observations by M. Desprès, who stated that he believed Prof. Lister would still meet with relapses in the cases of cold abscess dependent on disease of bone which he supposed to be definitely cured, Mr. Lister replied that he regretted not being able to exhibit the patients who, having reached the last stage of hectic fever, immediately after the application of the antiseptic treatment found it disappear. He did not mean to assert that relapse never took place, but he affirmed that in the majority of cases a definite cure was obtained. In order that relapses may be avoided, the patients must be prevented from getting up. When the fistulous openings have become cicatrised, repose for six or seven weeks must still be exacted, when a quarter of an hour's walking may be allowed. If pain is produced, rest must again be insisted upon, awaiting a new attempt.

REVIEWS.

Clinical Lectures on Stricture of the Urethra, and other Disorders of the Urinary Organs. By Reginald Harrison, F.R.C.S., Surgeon to the Liverpool Infirmary; formerly Lecturer on Surgery at the School of Medicine, and Surgeon to the Liverpool Northern Hospital. London: J. and A. Churchill, New Burlington-street. Liverpool: Adam Holden, Church-street. 1878.

In this volume of 193 pages the author has gathered together the views held by him, and his criticism upon the views of other surgeons, upon points of practice in the treatment of some of the diseases of the urinary organs. The Lectures are eighteen in number, and treat of Stricture, Urethral Fever, Retention of Urine, Injuries to the Urethra, Urethrotomy (Internal and External), Foreign Bodies in the Bladder and Urethra, Prostatic Diseases, Cystitis, Calculous Disorders, Tumours of the Bladder and Prostate, and Ulcerations of the Bladder. The pathology of stricture is first dealt with. Gonorrhœa necessarily plays an important part as a cause; and sound advice is given on the great importance of suiting injections, as to quantity given and strength, to the period of the disease and the sensitiveness of the urethra. No doubt a more general appreciation of the value of injections whose strength has been carefully regulated would lessen the prejudice that exists in their disfavour; and Mr. Harrison well remarks—"An injection appropriate in strength to a first gonorrhœa is like a drop of water on a duck's back in the case of an *habitué*."

The use of aconite and quinine in urethral fever is highly commended; indeed, Mr. Harrison's experience of the former drug must have been unusually successful, as he considers that "an almost certain prophylactic" is to be found in the administration of two-minim doses of Fleming's tincture immediately after catheterism, as first suggested by Mr. Long. In the sixth lecture the treatment of retention is fully discussed. For cases of impassable stricture, treatment by aspiration (the smallest needle of the aspirator being plunged into the bladder above the pubes) has of late years found increasing favour with surgeons, and bids fair to supersede the old-fashioned trocar introduced by the rectum. The author adopts the practice of aspiration, and answers the objection that the relief thus afforded is only temporary by saying—"In the majority of cases it is spasm, superadded to the stricture, determines the retention, and if temporary relief is afforded, the power of micturition becomes re-established." In cases of extravasation he retains, if possible, a catheter in the bladder, and makes the usual incisions. Menzel's view that healthy urine when extravasated becomes absorbed, and that it is only the property of decomposed ammoniacal urine to destroy the tissue, is doubtless too fine a distinction to affect the general treatment. Dr. Otis's plan of treating all urethral contractions by internal urethrotomy meets with no favour, the author's experience agreeing with that of others in this country, that the operation is both uncertain and dangerous. The urethrotome designed by Mr. Harrison has a double cutting edge, the advantage lying in the strictured urethra being divided in two places instead of one.

In the thirteenth lecture, on prostatic enlargement, the advantages of supra-pubic aspiration are again advocated. No account, however, is given of the plan recently tried by Sir H. Thompson, of establishing a permanent fistula in this region.

The use of vesical pessaries for pain and irritability of the bladder is recommended. These are introduced by a catheter of special construction. "A grain of morphia introduced into the bladder in this way, and repeated twice in the twenty-four hours, has in several instances completely and permanently relieved the most distressing symptoms of irritation."

The remaining chapters are devoted to lithotomy and lithotrity. Following the general custom in lithotrity, he does not retain an instrument in the bladder more than three minutes at a sitting. Possibly, however, the cases recently published by Bigelow, advocating a thorough crushing of the stone at a single sitting, and who has kept a lithotrite in the bladder for an hour or more without harm, may cause considerable modification of the existing views on this subject.

These lectures of Mr. Harrison contain an able record of an extensive experience. The cases chosen to illustrate his views are well selected, and in themselves form a collection of clinical observations of no small merit.

A Monograph of 248 Cases of Lateral Lithotomy Operations performed in the North-Western Provinces during a period of Twelve Years. By Rai Ram Narain Dass, Bahadoor, Assistant-Surgeon, late in charge of the Cawnpore Government Dispensary, and of the Civil Station of Budaon, N.W.P., etc.; now Lecturer on Surgery to the Campbell Medical School, and First Surgeon to the Campbell Hospital. London, Calcutta, and Bombay: W. Thacker and Co.

This work is really valuable as the record of the large experience and success of one surgeon as a lithotomist; but it has a special interest and value from the fact that the writer is a native of India, and educated in the Indian medical schools. The first eleven pages of the book are devoted to a "history of the cases"; then the etiology" of calculi in the North-Western Provinces is discussed in a few pages. The author states that while in charge of the Budaon Dispensary during a period of a little more than five years, he operated on 220 cases of stone, and that among these patients the Hindoos were six times more numerous than the Mussulmans. This he attributes chiefly to the fact that "the low classes of Hindoos in the North-Western Provinces, among whom the disease is most prevalent, are in the habit of eating raw vegetables," and thus exciting acid indigestion; but he also observes that "besides the nature and character of the food of the population, and the quality of their water-supply, the geological peculiarities and climate of the country probably exercise great influence on the origin of the complaint." Five pages are given to the "operative part of the subject," the author not pretending to any new rule or method of practice. But the great bulk of the work is devoted to well-executed lithographs of 128 of the calculi, each illustration being accompanied with a brief description of the stone.

Out of the 248 cases operated upon, only seventeen died, giving the highly favourable rate of mortality of 1 in 14·5; which may be partly due to the fact that of all the patients only seven were above the age of fifty. It is very evident, however, that Rai Ram Narain Dass, Bahadoor, is a very careful as well as an able operator; and his work is undoubtedly highly creditable to Indian Surgery.

Surgeon-Major Sheppard, at present acting as instructor to the Order of St. John Ambulance Association, having been selected for service at the Cape of Good Hope, will shortly be leaving for that station.

FOREIGN AND COLONIAL CORRESPONDENCE.

FRANCE.

Paris, October.

INFANT MORTALITY IN FRANCE—IMPORTANCE OF THE SUBJECT—CAUSES OF THE MORTALITY—COMPARATIVE RATES OF MORTALITY IN FRANCE AND OTHER COUNTRIES.

ONE of the six special subjects proposed for discussion at the International Congress on Hygiene, which was held here last August, was that of the large mortality amongst infants; and such interest did it excite that it gave rise to by far the most animated debate that occurred during the meeting of the Congress—a debate which necessitated several adjournments, and in which many eminent men from various countries took part. Englishmen can form but a faint idea of the immense interest which is taken in this question by educated men of all kinds in France, nor of the attention which has been given to it with a view to solving the problems connected with it. In England the birth-rate is so very much higher than the death-rate that the population increases with a rapidity which tends to excite alarm in the minds of economists; hence it happens that with the exception of a few medical men and philanthropists who have practical experience of the way in which children are so frequently sacrificed by mismanagement or neglect, amongst the lower classes, society in England is almost entirely ignorant of the importance of the question, and, if it have any opinion at all, considers that the excessive death-rate among children is a beneficent and necessary arrangement calculated to prevent the too rapid growth of the population. In France, on the other hand, the state of things is very different. The birth-rate, instead of being 40 per 1000 per annum as in England, is only 26 per 1000—that is to say, little if at all above the average death-rate; and the population, which had been for some years at a stationary point, has begun to decrease. Since France is by no means over-populated, but could with ease support several millions of people more than she has at present, and would be thereby rendered proportionately stronger as a nation; and since her great rival, Germany, already outnumbers her, and is increasing at a very considerable rate, the population question has become one of the most pressing importance. Statesmen, political economists, scientific men, and philanthropists, are vieing with one another in the zeal with which they are investigating the subject; and it is evident that it will not be long before some very energetic action is taken to deal with the evil.

This high rate of infant mortality is no new thing, nor can the decrease in population be traced wholly to it; but whatever may be the proximate causes which have brought about this abnormal state of things, it is necessary to combat it by every possible means. To show how enormously the actual infant death-rate exceeds the necessary average, I may quote M. Bertillon, the great authority on the statistics of this subject. He asserts that the relative infant mortality in the well-to-do and in the lower classes is as about 3 : 8; that is to say, that the deaths of children during the first year for the whole of France being 200 per 1000 of all children born, the deaths among the upper and middle classes only amount to 76 per 1000. It is evident, then, that no less than 124 children per 1000 are sacrificed for want of proper care. The mortality in some of the large towns is enormously greater than this; and in Paris more than half the children die during their first year—that is to say, nearly 30,000 per annum out of a total of 54,000 born. Illegitimate children, as is to be expected, die in far greater numbers than legitimate children, the proportion being as 31 : 16; and another factor comes in here to swell the numbers of children lost to the State, for it is found that the number of still-born children amongst the illegitimate births bears a proportion to that amongst legitimate births of 76 : 40. It thus results that whilst out of 1000 legitimate conceptions 206 are dead by the end of the first year (equal to about 21 per cent.); out of 1000 illegitimate conceptions 390 are dead by the end of the first year (equal to nearly 40 per cent.); to which must be added the concealed abortions and undiscovered infanticides, which would very considerably increase the number. Inasmuch as 7 per cent. of all births in France are illegitimate, it is plain that one of the principal ends to be attained is the provision of some means for assisting unmarried women in their trouble; and this is the more necessary from the fact that, by the law of France, the father is in no way chargeable or responsible for his illegitimate child, the whole burden of whose support presses consequently upon the unfortunate mother.

As in England, so in France, a very considerable proportion of the children of married parents among the lower classes, and a very large proportion of the illegitimate children, have to be brought up by hand, in many cases because the mother is herself in such poor health or so badly nourished that her milk soon dries up; or in others, because she is obliged to go out to work all day to help to support the family, and frequently, to enable her to do so, gives her child wholly into the charge of some old woman who gets her living as a baby-farmer. There is, however, one factor in the production of a high rate of infant mortality in France which is almost absent in England. This is the custom, so widely prevalent among the well-to-do classes, of hiring a wet-nurse for young children to relieve the mothers of the burden of suckling their infants. These wet-nurses for the most part are peasant women, either married or unmarried, who soon after their confinement come to Paris with their child and seek for employment. As soon as they have obtained a situation, their own child is given into the hands of one of a body of women who live by carrying these unfortunate children back again to the country, and who often have charge of several at one time. As may easily be imagined, what with the repeated journeys, the exposure to the weather, the bad feeding to which they are subjected, and the extensive employment of narcotics to keep them quiet whilst travelling, the mortality amongst these children is enormous—few, indeed, live to the end of the first year. Wet-nurses are so extensively employed in a large town like Paris, that the results are most disastrous on the surrounding country districts, in some of which the death-rate among the children is as high as 75 and even 90 per cent. This emigration of wet-nurses has been going on for a great many years; but attention was first prominently drawn to the subject in 1865 by Dr. Monot, a country practitioner, who had been a witness in his own district of the great evil arising from this practice. Dr. Monot sent a letter to the Academy of Medicine, which had the effect of drawing forth a number of other communications from men who had studied the question; and from these it appeared that not only were a large number of peasant children sacrificed in the way above described, but that an emigration of another kind was going on at the same time. An immense number of children, amounting to 20,000 per annum, were being sent from Paris into the country districts to be brought up by peasant women, and it was ascertained that of these no less than 75 per cent. died before reaching the end of their first year. At the Congress recently held, this great evil was afresh described in the most graphic terms by an able country doctor, M. Charpentier, who stated that the great object which peasant women for the most part have in view in undertaking the care of a child from Paris, is to obtain the means and to have an excuse for a journey to the capital; that the journey once over, the child is neglected in every possible way, and in the great majority of cases is dead within a few weeks. He states that in his own district it has become quite the custom to say, when a child's coffin is carried by, "There goes a little Parisian!" The child being dead, the woman makes a fresh journey to Paris, takes possession of a fresh victim, and the tragedy is repeated in all its details.

A third cause for infant destruction must be sought for in the number of criminal abortions and infanticides in France. It is manifestly impossible to obtain any accurate statistics upon this point; but M. Bertillon has estimated that there are over 3000 infanticides every year, though the actual number reported to the authorities is not more than 300 per annum. Of the rest, M. Bertillon believes that about one-half are registered as still-born children, and the other half allowed to die gradually by starvation. As regards criminal abortions, we may obtain some idea of their frequency from the statement of M. Marjolin, one of the greatest authorities on foundling hospitals, that out of ninety of his medical brethren whom he had consulted on the subject, there was not one who had not either been solicited to perform the operation, or had to treat its after-results. It is needless to say that if it rested only with the medical profession to operate in these cases there would be but few abortions

produced; but in France there is a very numerous body of trained midwives, many of whom are at the head of a small *pension*, into which women are received to undergo their confinement. As a body, these midwives have the worst reputation, and the *maisons d'accouchement* were described so long ago as 1849, by M. Girard, a member of a government commission appointed to inquire into the subject, as "places for the production of abortion, often enough centres for prostitution, and sometimes even depôts for an odious commerce in the substitution of children." Notwithstanding that this is well recognised to be the case, the law of France gives them the privilege of secrecy; no kind of surveillance is allowed; and it follows that all kinds of iniquities can be carried on in them without any fear of detection.

To the causes for infant mortality already alluded to must be added some others of perhaps minor importance. One of these is the regulation which obliges all children to be taken to the Mairie for registration within the first three days after their birth, by which new-born infants are liable to be exposed to the most intemperate weather, and there is no doubt that many children have been sacrificed in this way. Dr. Loir pointed out the great want of consideration for the safety of the children which was evinced in this law, and through his exertions the mayors of several of the large towns arranged to have the registration made at the residence of the child's mother. Another bad regulation which diminishes the chances of life for the child is that which ordains that women shall be discharged from the lying-in hospitals upon the ninth day after their confinement. As most of the women have to return at once to hard work and poor feeding, their milk very frequently dries up, or where it continues to be secreted is scanty and poor in quality.

Such, then, are the principal causes which have tended to produce the large rate of infant mortality in France. In some respects they are the same as those existing in England and other countries, but certain of them are peculiar to herself and dependent upon the constitution of French society. It must not be assumed that, because she is devoting so much attention to the matter, France is worse than her neighbours in this respect, for in reality the death-rate of children under one year is not very greatly in excess of that in England (179, as against 154 per 1000—still-born children not included), whilst it is much lower than that which obtains in many other countries—such, for instance, as Prussia, where the death-rate is 218; Austria, where it amounts to 259; and Bavaria, where it is as high as 323 per 1000. But in all these countries the birth-rate is higher than in France, and hence the infant mortality has not risen to the importance of a national question. In France, as I before said, it is far otherwise. In my next letter I hope to give some account of the measures which have been already taken with the view of staying the evil, and of the success which has attended them, and I shall conclude by describing the further measures which are recommended for the purpose of combating the very serious condition of things which now exists.

German Medical Students.—According to the most recent University Calendars, the number of medical students for the summer session of 1878 were—Vienna, 658; Würzburg, 475; Munich, 456; Dorpat, 387; Berlin, 346; Leipzig, 335; Greifswald, 233; Zurich, 184; Freiburg, 181; Breslau, 178; Strasburg, 168; Tübingen, 164; Graz, 161; Bonn, 154; Bern, 137; Königsberg, 135; Erlangen, 132; Halle, 117; Giessen, 108; Heidelberg, 103; Kiel, 92; Jena, 87; Basle, 70; and Rostock, 39.—*Berlin. Klin. Woch.*, October 7.

The University of Brussels.—At the anniversary of the Free University of Brussels, held on October 16, M. Van Schoor, the administrator, congratulated the large assemblage which had met to celebrate it, that in spite of all the efforts of the clerical party, and the gross partiality of a clerical Ministry, the institution had continued to rapidly progress. While the inscriptions for the year 1865-66 only amounted to 434, they have increased in 1877-78 to 861—that is to say, the entries have doubled within a period of twelve years. They were, in 1877-78, thus distributed—Faculty of Letters and Philosophy, 101; of Laws, 243; of Sciences, 234; of Medicine, 283: total, 861, to which are to be added 121 pupils of the Ecole Polytechnique.—*Presse Méd. Belge*, No. 43.

GENERAL CORRESPONDENCE.

THE PATHOLOGY OF TETANUS.

Letter from Dr. James Ross.

[To the Editor of the Medical Times and Gazette.]

Sir,—I trust you will permit me to make a few remarks on the very remarkable and suggestive paper which appeared in your issue of October 26, from the pen of Dr. Hughlings-Jackson, entitled "Remarks on the Comparison and Contrast betwixt Tetanus and a certain Epileptiform Seizure." I also have been led to adopt, independently of Dr. Jackson, a somewhat similar view to the one advanced by him with regard to the pathology of tetanus; but were I not able to adduce a certain amount of confirmatory evidence in favour of what I may call the theory of cerebellar cortical discharge, I should not think it worth while to cumber your pages.

About eighteen months ago I had an opportunity of making a post-mortem examination of a boy who died from tetanus. The examination was conducted twenty hours after death, and the body was preserved in the meantime with the face downwards. Nothing struck me more during the inspection than the rosy-red injection of the membranes of the cord and of those of the cerebellum, both of which looked as if covered by a thin layer of coagulated blood. My mind, however, was so much preoccupied with the spinal origin of the affection, that I neglected to preserve a portion of the cerebellum for microscopic examination. Theoretical considerations led me soon afterwards to entertain the idea that the paroxysms of tetanus were caused by a discharging lesion of the cortex of the cerebellum, especially the superior surface of the middle lobe, and I determined to test this hypothesis at the first opportunity which presented itself. A few months ago I had an opportunity of making a post-mortem examination in another case of tetanus, and I preserved the cord and a portion of the middle lobe of the cerebellum for microscopic examination.

Microscopic investigation of the first cord showed that certain portions of it had undergone what has been described by Dr. Batty Tuke as colloid degeneration, and that this change had occurred to a very remarkable extent. And I now find that not only are similar changes found in the second cord, but that the cortex of the cerebellum and the adjoining white substance have also undergone colloid degeneration to a very decided extent. The changes in question are not minor alterations which require careful examination for their detection; on the contrary, they are so decided and remarkable that they cannot be overlooked; and the appearances presented by sections of the two cords and of the cerebellum are so strikingly similar that the least instructed microscopist could not possibly mistake their identity.

I trust no one will think that I wish to put forward a claim of priority, or indeed any other claim, with respect to this theory. I am quite content to follow at a long interval in the wake of one who has done as much as anyone living to advance the pathology and physiology of the nervous system.

I am, &c.,

Manchester, October 29. James Ross, M.D.

A POSTAL MICROSCOPICAL SOCIETY.

Letter from Dr. C. P. Coombs.

[To the Editor of the Medical Times and Gazette.]

Sir,—Will you allow me to call the attention of your readers who are or would be microscopists to the Postal Microscopical Society. It was formed about four years ago for the circulation of slides through the post. A box containing about a dozen slides and a book of notes and illustrations are sent to each member for three days' inspection at intervals of two or three weeks. Of the 130 members, about nineteen are medical men; if more would join the society, a special histo-pathological department might be arranged, a box of slides of this class to be sent (in addition to those of general interest) to the medical members. The annual subscription to the society is ten shillings; the postage of the slide-boxes is additional, but is very small when two or more members live near each other. Mr. Alfred Allen, of 1, Cambridge-place, Bath, is the secretary. He will be happy to send a copy of the rules, or any information, to anyone interested in microscopy. Mr. Tuffen

West is the president, and contributes excellent drawings; and besides those lent by amateurs, valuable slides are circulated by such members as are professional mounters.

I am, &c., Carey P. Coombs, M.D. Lond.

Castle Cary, Somerset, October 23.

THE FORESTER GASTEL.

Letter from Dr. R. Neale.

[To the Editor of the Medical Times and Gazette.]

Sir,—In your issue of October 12, page 448, there is a note, copied from the *Leipsic Journal* of September 3, regarding the treatment of hydrophobia by a "forester Gastel." If you refer to your journal, vol. ii. 1859, page 272, the very identical paragraph is inserted, beginning as in 1878—"The forester Gastel, now in his eighty-second year," etc.

This is only one of the numerous instances the "Medical Digest" (section 527-6) constantly brings to light, where old matter is served up as new. I am, &c., R. Neale.

60, Boundary-road, St. John's-wood, N.W.

ON SANITARY PROGRESS.

[To the Editor of the Medical Times and Gazette.]

Sir,—There are times and seasons when the sanitary reformer almost loses heart, when he repeats to himself, "The thing that hath been, it is that which shall be; and that which is done is that which shall be done: and there is no new thing under the sun." The earth is very small, and is always going round; day is followed by night; but chaos began and chaos will end the struggle—dirt and muddle will win in the end; and the drill-sergeant was right, who in despair ordered his bucolic recruits to advance three paces backwards, and dress on the gutter! You will excuse this outburst of despair when you learn that I have lately visited "Honiton." I daresay you believe that it is a pretty little town in the West, inhabited by enlightened Englishmen, and that the South-Western Railway passes through it. But I doubt whether things are exactly what they seem. The civilisation of Assyria is found to-day in Paris or in London; the lost tribes are in Afghanistan; and Thothmes, if he wants his obelisk, must come to the Thames Embankment. Honiton is no doubt geographically in England, but the Honitonians are, I think, not the true aborigines. The railway may be at the bottom of it, but I think there has been an interchange of populations, and that the majority of the present race of Honitonians are the descendants of the curious tribes so graphically described by Mr. Stanley in his story of the "Dark Continent." Mumbo and Jumbo have got into the council-chamber, and their grinning associates are playing at sanitation. I send you a report of the last meeting of the Honiton Town Council, held on Tuesday, the 15th of the present month, and I beg to call your attention to a few facts.

The Local Government Board, thoroughly dissatisfied with the water-supply at Honiton, has issued an order requiring the Town Council to commence within four months the works necessary to remedy the defect, and this order formed the subject of debate which was grotesquely illustrated by Mumbo and Jumbo. Now I will let the reporter of the *Exeter and Plymouth Gazette* have his turn at the narrative:—

"Alderman Ashley then referred to the water-supply, and said they could not have a day or two's rain but what the water came down as foul as possible. It was only last Thursday that he went and got a bucket of water from a well, and drew the Mayor's attention to it. The Mayor asked him '*Why did he not come when the water was clean?*' Alderman Hook: Didn't you put something in the bucket? Alderman Ashley: I have a pail of water which was obtained last Thursday. Alderman Hook: You don't think we are going to believe that. Didn't you put something into the pail? Alderman Ashley produced a bottle of water of a very foul-looking colour, and, holding up the bottle, said, 'This is the water from the Mayor's well.' The Mayor then held up a bottle of clear water which had been sent for, and said, 'Will that do for you?' Alderman Ashley also held up his; and this scene was followed with roars of laughter."

I am sorry to say that the darker features of Mumbo and Jumboism now came into play. I have travelled among the degenerate descendants of the unadulterated negroes who have laid a varnish of refinement over their thick-skinned exteriors, and I have witnessed the effect of passion on the savage when he began to grin the wrong way. I have seen the Obeah-water produced, and the unfortunate wretch challenged to drink the poison-draught amidst the howls of the frantic fanatics, but little did I ever think to see the dreadful performance repeated in happy England! I will let the Reporter speak:—"The Mayor then poured out a glass of water from *his* bottle, and, in drinking it, said, 'Your health, Mr. Ashley.' Alderman Hook advised Alderman Ashley to drink out of *his own bottle* himself!" And so the Council separated. And when I mention that a requisition has been handed to the Mayor, calling attention, *inter alia*, to the necessity of the immediate employment of a medical officer of health, "the office having been allowed to remain vacant for upwards of five weeks in defiance of the Public Health Act, and notwithstanding the occurrence of numerous cases of typhoid fever, several of which have proved fatal." I think I have said enough to express my horror of Mumbo and Jumbo in the wrong place, and to call the attention of the London Board to other matters beside the water-supply at Honiton. I am, &c.,

Your Roving Correspondent.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

Tuesday, October 15.

Charles Murchison, M.D., LL.D., F.R.S., President, in the Chair.

(*Concluded from page* 502.)

Sequel of a Case of Multiple Sarcoma.

Mr. Butlin gave an account of the subsequent history of a case of this kind which he had reported last session. The patient, a boy, died in August. On the day after being shown to the Society the patient was operated on, the tumour being removed from the front and back of the chest. The wound healed well so far; but before scarring was complete the growth had reappeared, and it grew rapidly. A tumour next grew in the right forearm in connexion with the ulna, sloughed out, and left a purulent discharging spot. Next a tumour appeared on the right arm; the glands of the axilla enlarged; other tumours increased in size; and finally the patient died of exhaustion. Post-mortem, the tumours were found to present the same general structure as before. There were enlarged glands in both axillæ; the testes possessed the same characters as the tumours. No secondary tumours were found in the viscera. A chain of lymphatic glands, however, ran from the brim of the pelvis, extended around the rectum, and ulcerated into it. Thus the various tumours represented several outbreaks of the first disease, and not a secondary infection. The recurrence *in situ* could not be explained by imperfect removal, for this had been complete. It was difficult to explain the freedom from invasion of the internal organs; but perhaps the time was not sufficiently long. The right testis was diminished in size—a condition that could not be accounted for, unless it were that the lymphatics had relieved this organ of the growths, the corresponding lymphatic glands being greatly enlarged.

The Histology of Rodent Ulcer.

Dr. Thin exhibited microscopical specimens illustrative of this subject. He remarked that the two cases he now brought before the Society were to be taken in connexion with two cases reported last session. The first of these was a large ulcer over the scapula in a woman, removed by Sir James Paget. As the mere naked-eye appearances were not at the time considered sufficient to settle whether the case was one of rodent ulcer or epithelioma, he had, in his account of it simply termed it a cancerous ulcer. The second was an ulcer of the scalp, diagnosed by Mr. Morrant Baker as rodent ulcer, and excised by him. These cases were histologically identical with the two cases of rodent ulcer now to be described, and that they were both cases of this variety of cancer was therefore established. In the first of these two fresh cases a wart had, in the course of four years, developed into an ulcer, one inch by half an inch, on the side of the nose and adjacent part

of the cheek. It was fissured close by the ala nasi, being covered elsewhere by a dark green irregular scab; beneath the scab it was of a deep red colour. Its outer border was nodulated. At its upper border there was thin red scar-tissue. There was some, but not much, induration about the base. The patient, a woman aged fifty-four, was under Mr. Morrant Baker's care at St. Bartholomew's Hospital. Mr. Baker excised the ulcer, and the wound healed rapidly. The other case was that of a man aged forty-one, who was, when seventeen years old, a patient of Mr. Lister's. A sore was noticed at the side of the left nostril. There was a pimple, which he scratched. It did not disappear, but remained very small till ten years ago, when it began to spread; it was then about one-eighth of an inch in diameter. In 1869 it began to make its way round the nostril into the nose, and was cauterised. A small sore remained afterwards, and broke out at intervals. Hardness was first noticed eighteen months ago, and communication with the mouth took place three months ago. The tumour, which involved the side of the nose and upper lip, was excised by Mr. Lister, as was also a separate nodule in the upper lip, which did not affect the skin and was not ulcerated. Microscopic examination showed that in all the four cases there were the same characteristic appearances. In rodent ulcer, the primary and chief feature was an epithelial growth of new formation. The cells which composed this growth, and the groups which they formed, differed essentially from those which were seen in cases of epithelioma, which began by a growth of the rete mucosum. The cells were small, had a relatively large nucleus, and were, with the exception of the border-cells of the groups, of nearly uniform size. In all the cell groups, the border-cells had a tendency to assume the columnar form. In the centre of the large groups the cells softened and disintegrated, but they never enlarged, nor formed laminated capsules or cell-nests, nor underwent horny degeneration. There were no prickle cells found amongst them. The cell protoplasm was scant, and resisted hardening agents so badly, that a cell group was usually seen as a granular mass, with nuclei embedded in it. The difference in nature between these cells and the cells of the rete mucosum was brought out in a striking manner by a double staining with eosin and logwood, the eosin staining the epidermis deeply, but scarcely affecting the cells of the morbid growth, which, on the other hand, stained deeply with logwood. The tendency of the new cells was to grow in long bud-like cylindrical masses, which insinuated themselves in the pre-existing interstices of the tissues. Where the growth met with little resistance, these cell-masses coalesced, and formed large spherical ovoid masses, which broke down in the centre. The luxuriant growth upwards of these masses in the papillary layer until they touched the epidermis, cut off the vascular supply, and produced ulceration. Whether these cell-masses produced the alveolar variety of Thiersch, or his tubular variety, was accidental. In Mr. Lister's case, the alveolar variety was represented in the nose and in the submucous tissue of the upper lip; whilst the hard nodule in the upper lip, to which the cell-infection could be directly traced from the submucous alveolar masses, was composed of the tubular variety. Both in the narrow tubular masses and in the large alveolar masses, Dr. Thin had recognised and been able to isolate a membrana propria. (Thiersch found no membrana propria.) In regard to the source of the new epithelial growth, he had been unable to find in any of the four cases that it communicated directly with the rete mucosum, sebaceous glands, or hair-follicles. Where it came in contact with these structures, it could still be distinguished from them, eosin being here specially useful. In Sir James Paget's case, and in Mr. Morrant Baker's second case, he had, however, found some sweat-glands the seat of new growth; and, although he had not traced this new growth into unbroken continuity with the cell-masses, he believed it pointed to the disease being an adenoma of the sweat-glands. He quoted cases from Verneuil and Thiersch in which he believed the drawings bore out this view. He was unable to satisfy himself that the drawings in Thiersch's Atlas bore out the interpretation put upon them by that author, that the cell-growth began in the sebaceous glands. Mr. Hulke had not found any new growths from the rete mucosum or sebaceous glands. Dr. Collins Warren had described cell-nests and large epidermic cells in the rodent ulcer. Dr. Thin had not found similar appearances, and was forced to believe that Dr. Warren had confounded with them remnants of hair-follicles or other epidermic elements which had not been completely destroyed.

Mr. Butlin said that he had examined specimens of the first three cases investigated by Dr. Thin. He considered the third case as probably one of epithelioma.

Dr. Sangster said that a few months ago he had shown some sections of rodent ulcer to Dr. Thin, who had expressed an opinion that the appearances were quite similar to what he had noticed in some material he was at work upon at the time. Dr. Sangster was able to endorse Dr. Thin's present remarks. The material was taken from an outlying nodule in the neighbourhood of a rodent ulcer; and the sections showed that the Malpighian layer, so far from being in a state of active cell-proliferation, was in a state of atrophy, apparently the result of pressure caused by the cell-growth below. The latter was spread out in the true skin in a manner suggesting its origin in gland-structure. With regard to the appearance of the sweat-tubes, in many conditions of the skin, transverse sections of sweat-tubes showed the lumen to be obscured by young cells of catarrhal origin, while those at the periphery were more or less regularly arranged, and preserved a clearly defined outline between the epithelial lining of the sweat-tubes and the surrounding structures. In the sections of rodent ulcer alluded to the peripheral cells themselves were proliferating, and the appearance of regularity in outline of the sweat-tubes thus destroyed.

Mr. Morrant Baker remarked that the surgeons had anticipated microscopists in the discovery of the individuality of rodent ulcer.

NEW INVENTIONS AND IMPROVEMENTS.

HOFF'S MALT EXTRACT.

Two or three preparations of malt, under the name of "Malt Extract," have, we believe, been for some time recommended to the public, and largely used, as medicinal food. Of these preparations Hoff's is probably the best and most widely known, and Mr. J. J. Coleman, F.I.C., and Fellow of the Chemical Society, has lately offered, in a paper read before the Philosophical Society of Glasgow, a scientific explanation of the benefits that do unquestionably often follow the use of this and other malt liquors. Mr. Coleman, having suffered from a serious illness which caused inability to digest food and extreme exhaustion, tried the effect of Hoff's Malt Extract, in the usual dose of a wineglassful three times a day; and the result was "that food which had hitherto been found to pass through the alimentary canal unchanged, digested properly, and there appeared an increased power of evolving animal heat and storing up fat." Mr. Coleman then experimented with the Extract upon other persons, "particularly upon thin, cold, and aged people," and all of these attributed to the liquid sustaining powers not usually observed with alcoholic liquors. This induced Mr. Coleman to analyse the liquid, and to make an extended series of carefully conducted experiments, which he embodied in the paper above mentioned. The liquid in appearance resembles porter, and in composition also closely resembles other beers, containing about the average percentage of alcohol, but a higher percentage of "extract." Mr. Coleman, feeling that the sense of *bien-être* produced by malt liquors could not be accounted for by the amount of alcohol contained in them, or in any way be inferred from the chemical analysis, sought for an explanation in the action of diastase, which is believed to form a part of malt extract, on starchy foods. He found that all malt liquors exert a more or less powerful digestive or solvent action on bread and other starchy food, and that Hoff's liquid dissolved four times more of the starch than Burton ale did, and half as much again as London porter. Whether or not we believe in the experiments by which Drs. Edward Smith and Richardson believed they had proved that sugar has a higher warming and food value than an equal weight of alcohol, and admit that diastase converts starch into dextrine, or glucose, still it must be allowed that the action of the malt extracts upon starchy food is fully enough to give them a high nutritive value; and Hoff's liquid is a good and rich malt extract.

MALTINE.

We have received from the Maltine Manufacturing Company a sample of a preparation to which they have given the name of Maltine, and which is described as being a concentrated extract

of malted barley, wheat, and oats. It is prepared with great care by a process fully described by the manufacturers in a pamphlet which they will, we believe, willingly supply to any medical practitioner desirous of perusing it. The preparation possesses many qualities of great importance. It is non-alcoholic; it is agreeable to the taste; from its being so concentrated it is more portable than the liquid known as malt-extract; and it possesses the virtues of that preparation in a much higher degree, inasmuch as it combines the nutritious principles of the three cereals above named, and wheat and oats are especially rich in bone, fat, and muscle-producing elements. We have very good reason for believing that it has been very carefully analysed and examined by a competent authority, and proved to be very rich in diastase, in phosphates, and in albuminoid matters. It is very likely, therefore, to have considerable value as a digestive and nutritive agent in many wasting diseases, and cases of debility and imperfect assimilation. Maltine at any rate is well worthy of being put to the test practically by medical men; and it may be taken pure, or mixed with water, milk, or wine. The London agents of the manufacturers are Messrs. J. M. Richards and Co., of Great Russell-street-buildings, Great Russell-street.

OBITUARY.

GEORGE HULL, F.R.C.P. Edin.

Dr. Hull was a native of Ayr, Scotland, educated at Ayr Academy; studied in Edinburgh, and afterwards in London and Paris; served some years in Ireland, in the Forfarshire Regiment of Militia; settled at Montrose, where for ten years he held the appointment of Physician to the Infirmary, Lunatic Asylum, and Dispensary. In 1833 he removed to London. He published a pamphlet on Scarlatina and Diphtheria, strongly advocating the free administration of carbonate of ammonia—not only in these diseases, in which he had been particularly successful, but also in measles, bronchitis, and erysipelas. For some years, in consequence of his sight having become greatly impaired, he had almost retired from practice, except among a few old friends. During the latter part of his life he watched the development of that wonderful system of teaching the dumb to speak, of which his daughter is known as one of the most successful teachers. His son, Dr. George Hull, who was in active practice in South Africa, died a few months since from a fall from his horse.

Something like a Microscopist!—Prof. Joseph Jones, of New Orleans, was given in a recent murder case pieces of blood-stained wood, and pieces of clothing from the alleged murderer, and not only detected that the stains were due to the presence of human blood, but also that the blood in each case was probably from the same individual, because from one who was suffering from intermittent fever. Dr. Jones also testified as to the probability of his being able to distinguish the blood of a negro from that of a white man, but modestly acknowledged—"I cannot, however, speak positively with reference to the blood of the different races of mankind." We congratulate Dr. Jones on the importance of his discoveries, but confess it all seems hardly fair to the accused. It is getting too much like shooting woodcocks sitting. In spite of lawyers and judges, and of all other aids provided by the law, the murderer will soon stand no chance whatever. —*Philad. Med. Times*, August 31.

A Fatal "Lapsus Calami."—A physician of Sangerhausen, in Thuringia, having occasion to prescribe for sleeplessness in an hysterical patient, wrote the following prescription:—"℞. Chlorhydr. 15.0, tinct. opii 15, aquæ 60.0; M. A third part to be administered in the evening as an enema." The patient died, and a prosecution was instituted against the physician and the apothecary who dispensed his prescription. A *lapsus calami* had been committed on the part of the former, who omitted to put "gtt." after the "tinct. opii 15." The prescription was made up by a young unqualified pupil, who read the 15 to signify *grammes*, as the 15 of the chloral and the 60 of the water obviously did. A properly educated apothecary would have taken the prescription to the physician before dispensing it. The Court sentenced the physician to one month's imprisonment, the apothecary to two months, and his pupil to three months.—*Berlin Klin. Woch.*, September 30.

MEDICAL NEWS.

Royal College of Surgeons of England.—The following gentlemen having undergone the necessary examinations, were admitted Licentiates in Dental Surgery at a meeting of the Board of Examiners on the 29th ult., viz.:

Betts, Edward George, Holloway, student of the Middlesex Hospital.
Harding, Burton Llewellyn, Oldbury, of the Middlesex Hospital.
Hayman, Charles Augustine, Bristol, of the Bristol School.
Jones, Allan Frederick, Argyle-square, of the Middlesex Hospital.
Ridge, Walter Henry, Kennington-road, of St. Thomas's Hospital.
Whatford, Frederick Russell, Brighton, of the Middlesex Hospital.

All the candidates passed. The following were the questions submitted at the written examination, viz.:—Anatomy and Physiology: 1. What bones enter into the composition of the chest, and how are they articulated with each other? 2. Describe the course and mechanism of the circulation of the blood through the body generally, and through the lungs. Pathology and Surgery: 1. Explain how death may be caused by the inhalation of chloroform, and what steps you would take to avert a fatal result, if threatened. 2. What are the pathological changes which occur in the formation and healing of an acute abscess (*e.g.*, of the tonsil)? Dental Anatomy and Physiology: 1. Describe the nature of a tooth-germ, and the mode of its formation; and also the sources of origin of the germs of the different permanent teeth. 2. Explain the terms "monophyodont," "diphyodont," "homodont," and "heterodont," illustrating them by reference to comparative dentition. 3. Describe specimens 1, 2, and 3 under the microscope. Dental Surgery and Pathology: 1. What is salivary calculus? Give its chemical composition, state where it is usually deposited, and its effects. 2. What are the varieties of fracture to which the teeth are liable? State the consequences that may arise from them respectively, and the necessary treatment. 3. Give a full description of supernumerary teeth, and of the treatment to be pursued in respect of them.

Apothecaries' Hall, London.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, October 24:—

Anderson, Joseph William Townsend, 49, Belgrave-road, S.W.
Bridges, Ashley Colston, Worcester.
Brown, Percy, Lower Clapton, N.
Cameron, John, Bilston, Staffordshire.
Jackman, William Thomas, 11, Stoke Newington-road.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Batson, William Lascelles, St. Bartholomew's Hospital.
Glanville, Francis Ferratus, St. George's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to all new Appointments that take place.

Hemming, W. Douglas, M.R.C.S.—Surgeon to the Notting-hill Provident Dispensary and Maternity.

Jackson, R. A., L.R.C.P. Lond., M.R.C.S., L.S.A.L.—Surgeon to the Notting-hill Provident Dispensary and Maternity.

NAVAL, MILITARY, &c., APPOINTMENTS.

War Office.—Medical Department.—Surg. John Alexander Campbell, from half-pay, to be Surgeon; Surgeon William Sharpe, M.D., retires upon temporary half-pay. The undermentioned Surgeons to be Surgeons-Major:—William Alexander, M.D., William Morton Harman, M.B., Sandford Moore, M.B., George John Gibson, M.D., James Williamson, M.B., William Henry Steele, M.D., Napoleon Bisdee Major, Alfred Henry Ratigan, Henry Cornish, John Fitzmaurice, James Macartney, M.D., William Lougheed.

BIRTHS.

Cresswell.—On October 26, at Woodlands, East Moulsey, the wife of Richard Cresswell, M.R.C.S. Eng., of a son.

Finny.—On October 22, at 19, Lower Baggot-street, Dublin, the wife of J. Magee Finny, M.D., of a daughter.

Nicholls.—On October 1, at Dominica, West Indies, the wife of H. A. Alford Nicholls, M.D., of a son.

Stewart.—On October 22, at Mount Hope, Sneyd-park, Clifton, the wife of James Stewart, B.A., L.R.C.P. Edin., ex-R.N., of a daughter.

Weatherly.—On October 26, at Portishead, Somerset, the wife of Lionel A. Weatherly, M.D., of a daughter.

Wynne.—On October 12, at St. Olave's Priory, Herringfleet, Suffolk, the wife of Arnold Smith Wynne, M.D., Surgeon-Major, late Indian Army, of a daughter.

MARRIAGES.

ANDREWS—SALMON.—On October 21, at St. Sedwell's, Exeter, Richard J. Andrews, M.R.C.S. Eng., to Roberta, widow of J. Curwen-Salmon, Esq.

BANHAM—PRATT.—On October 24, at Scarborough, H. French Banham, M.A., M.B., of Sheffield, to Edith Maria, widow of the late John Stevens Pratt, Esq., and only daughter of the late John Bower Brown, Esq., J.P., of Woodthorpe Hall, near Sheffield.

CLARKE—ALEXANDER.—On October 23, Thomas Clarke, L.R.C.P. Edin., of Hallgate House, Pewsey, Wilts, to Anna Wardlaw, daughter of Thomas Alexander, Esq., of 8, Sardinia-terrace, Hillhead, Glasgow.

DALBIEZ-CHURCHILL.—On October 12, at Paris, Lieutenant Dalbiez, of the French Army, to Margaret Isabel Edith, only daughter of J. F. Churchill, M.D., of 16, Devonshire-street, Portland-place.

MANDERS—GOODE.—On October 22, at St. Luke's Church, Redcliffe-square, South Kensington, Horace Manders, F.R.C.S., of York Town, Surrey, eldest son of Major Manders, of The Green, Marlborough, to Louisa Elizabeth, only daughter of the late H. P. Goode, Esq., of Haverfordwest.

SHUTTLEWORTH—FULLER.—On October 16, at New Shoreham, the Rev. Henry Cary Shuttleworth, Minor Canon of St. Paul's, to Mary Elizabeth Symons, eldest daughter of Thomas Fuller, M.D., of New Shoreham.

WATTS—TURNBULL.—On October 23, at Shirley, Joseph Watts, M.R.C.S. Eng., Surgeon-Major A.M.D., to Alice, widow of the late John Turnbull, Punjaub Police, and third daughter of Major-General Nisbett, Bengal Army (retired).

WHITLOCK—PAYNE.—On October 24, at Birdbrook, Essex, J. Eden Northmore-Whitlock, L.R.C.P. Edin., of The Limes, Linton, Cambs., to Eva, daughter of Henry Payne, Esq., of The Moat, Birdbrook.

DEATHS.

KENNEDY, JOHN F., L.R.C.P. Edin., at 2, Eldon-square, Newcastle-on-Tyne, on October 24.

LINGEN, CHARLES, M.D., J.P., at Hereford, on October 28, aged 67.

SNAGG, HARRIET LUCY, wife of Richard Snagg, M.R.C.S.E., at Mount Bentinck, St. Vincent, W.I., on September 12.

THOMPSON, WILLIAM WITTMAN, M.R.C.S. Eng., at Holhampton House, Bognor, on October 27, aged 43.

TRACY, FANNY DORA RUSSELL, wife of Samuel John Tracy, L.R.C.P., M.R.C.S., of 69, Ladbroke-grove, W., aged 89.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

CHELTENHAM GENERAL HOSPITAL.—Resident Surgeon to the Branch Dispensary. Candidates must be on the "Medical Register" as qualified to practise medicine and surgery. Applications, with copies of testimonials, to the Resident Secretary at the Hospital.

LANCASTER UNION.—Medical Officer of the Southern District of the Union. Applications, with testimonials, to J. Grant, Clerk, from whom further information may be obtained.

METROPOLITAN FREE HOSPITAL, 81, COMMERCIAL-STREET, SPITALFIELDS.—Assistant House-Surgeon. Candidates must be qualified. Applications to be addressed to the Committee.

NORFOLK AND NORWICH HOSPITAL.—House-Surgeon. Candidates must be members of one of the Royal Colleges of Surgeons of the United Kingdom, and licentiates of one of the Royal Colleges of Physicians or of the Apothecaries' Company, and produce evidence of being registered according to the provisions of the Medical Act. Candidates must also be unmarried, and not more than thirty-five years of age. Applications, with testimonials, to the Secretary, on or before November 8.

ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY, WIGAN.—Junior House-Surgeon. Applications, stating age, etc., with recent testimonials, to William Taberner, Secretary, not later than November 13.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population in computed according to the census of 1871.

RESIGNATIONS.

Sevenoaks Union.—Mr. Croft Genge Symons has resigned the Fifth District; area 14,394; population 4154; salary £100 per annum.

APPOINTMENTS.

Ashton-under-Lyne.—James Duncan, M.B. and C.M. Aber., to the Ninth District.

Bridgwater Union.—John Bain Sincock, M.R.C.S. Eng. and L.S.A. Lond., to the Second District.

Wakefield Union.—Alexander George Duncan, M.B. and C.M. Aber. and L.R.C.P. Edin., to the Wakefield Union.

DETERMINED ANTI-VACCINATIONISTS.—At the Liverpool Magistrates' Court, on Saturday last, two anti-vaccinationists, named Benjamin Valentine Scott and Thomas Jackson, were each fined 20s. and costs for having neglected the vaccination of their children. It was stated that Mr. Scott, who is a herbalist, had been previously convicted no less than fourteen times, and had paid seventeen guineas in fines and costs. Mr. Jackson had also been previously convicted several times, and had paid fines and costs amounting to £3 16s. 6d. It is satisfactory to see that the Liverpool authorities are enforcing the Vaccination Acts with so much vigour. Now that vaccination can be performed with lymph direct from the calf, anti-vaccinationists have no reasonable grounds for their obstinacy.

THE ACTUAL CAUTERY IN DIFFUSED PHLEGMON.—Dr. Trudeau states that in Dr. Labbée's practice most excellent effects are obtained from the employment of the actual cautery in the treatment of diffused phlegmon. The treatment consists in applying numerous and deep cauterisations in the incisions which have been practised in the phlegmon. No case should be despaired of until this treatment has been applied, an abatement of all the severe symptoms usually occurring, the pain and fever very rapidly disappearing. Usually the cure is complete.—*Bull. de Thérap.*, October 15.

THE PARIS FACULTY OF MEDICINE.—The Minister of Public Instruction announces that, in his next budget, he has provided 60,000 fr. for an addition of 2000 fr. each to the salaries of the thirty professors of the Faculty, 15,000 fr. for the foundation of a chair for the Diseases of Children, and 15,000 fr. for a chair for Ophthalmology. With respect to these new chairs it is to be hoped it will not be for the professors who are to be appointed to fill them as it has been with M. Ball, the Professor of Mental Diseases, who now for two years has been unable to obtain a hospital, a ward in a hospital, or even a single bed in a ward, for the purpose of teaching the branch of medicine that has been confided to him.—*Union Méd.*, October 22.

LISTER'S DRESSING IN BURNS.—In his thesis on the subject, Dr. Boyt states that he has had occasion in Prof. Verneuil's service to observe the excellent effect of the carbolic treatment in extensive burns. From his own observation and from the cases reported by Prof. Busch of Bonn he comes to the following conclusions:—1. The inflammatory action which accompanies the elimination of the eschars is moderated. 2. Certain redoubtable complications, such as acute septicæmia, purulent infection, etc., are prevented. 3. Suppuration is diminished. 4. As observed by Prof. Busch, just those parts only are eliminated which have been destroyed by the heat, and the cicatrix is admirably smooth and extensible.—*Bull. de Thérap.*, October 15.

THE EXPOSITION UNIVERSELLE.—The following decorations and recompenses have been awarded:—*Grand Officier de la Légion d'Honneur*:—Prof. Pasteur; *Commandeur*—Prof. Fremy; *Officiers*—MM. Collin (surgical instrument maker), Dorvault (Directeur de la Pharmacie Centrale), Grandeau (Directeur de la Station Agronomique, Nancy), Hébert (Professeur de la Faculté des Sciences); Ladreit de la Charrière (Medicin-en-Chef des Sourds-Muets), Sappey and Trélat (Professeurs de la Faculté de Médecine); *Chevaliers*—MM. Germer Baillière (publisher), Rothschild (publisher), Limouison (pharmacien), Mortinet (printer), Mortillet (organisateur de l'Exposition Anthropologique), and Saldi (organisateur du Musée Ethnographique); *Grand Medals*—MM. Hachette and Co. (publishers) and Collin (surgical instrument maker); *Gold Medals*—MM. J. B. Baillière et fils (publishers), Motterez and Lahure (printers); *Diplomas of Honour*—Le Société Nationale de Sécours aux Blessés, M. Collin (surgical instrument maker), and Prof. Pasteur for his works on "Les Insectes Nuisibles."

ERGOTINE IN ACUTE OPHTHALMIA.—Dr. Planat, of Nice, has found ergotine act with efficacy and promptitude in proportion as oculo-palpebral phlegmasiæ are simply inflammatory. In blepharo-conjunctivitis the improvement is first observed in the conjunctiva; and in keratitis, although still very active, it is a degree less so than in the more superficial affections. It is also of great service in iritis, rapidly subduing the acute manifestations and preventing their extension to the external membranes of the eye. When these last are the seat of a chronic fluxion dependent on a scrofulous or dartrous diathesis, ergotine, without influencing the constitutional affection, acts none the less efficiently on the inflammatory element—a fact of importance, as by generally preserving the eye from plastic deposits, corneal ulcers, and consecutive staphylomas, it allows of the treatment for the diathesis being more promptly put into force. The formula which Dr. Planat recommends is from one to one and a half gramme of ergotine in twenty of glycerine or rose-water, of which from eight to ten drops are to be inserted in the eye every two hours. Where there is violent inflammation of the eyelids or distension of the conjunctiva, a rag wetted in this mixture should be left on the parts for some hours. In general, two or three days suffice for the subdual of the most intense blepharo-conjunctivitis. Dr. Planat has employed the ergotine in this way, with invariable success, for several years past.—*Jour. de Thérap.*, October 25.

Iodised Oils.—Dr. Blackwell, in a paper in the *Philadelphia Medical Times* (August 31), states that while engaged in an endeavour at iodising cod-liver oil, he found that iodine when allowed to remain for a long period in contact with *bitter* almond oil united with this in the proportion of one of iodine to three of oil. The solution so formed mixes freely with oils, fats, glycerine, alcohol, ethers, and fluid extracts of vegetable matter, and forms a most eligible concentrated preparation for application to parts where a thin fluid is liable to be swept away, as the tonsils, nose, vagina, and uterus. The formula of *iodised oil of bitter almonds* is pulv. iod. ʒj., ol. amyg. amar. ʒj. —mix, and shake occasionally during two months. For general external use this may be advantageously combined with glycerine in the proportion of one drachm to seven drachms of glycerine, leaving the skin supple and unstained, and being thus far superior to "iodine paint," which corrugates it and hinders absorption, or to the greasy, uncleanly ointment. Or, properly diluted, it may be given internally in doses of two drops, or one-twentieth of a grain of iodine. A diluted form of iodine may also be formed by mixing a drachm of this [*iodised glycerine* with a pint of water, a tablespoonful containing one-twentieth of a grain, which may be diluted at pleasure. But the most important combination is the *iodised cod-liver oil*, the form for which is iodised oil of bitter almonds sixteen grains, cod-liver oil one pint, mix and shake. A teaspoonful contains one-thirty-second part of a grain of iodine. The iodised almond oil may also be very efficiently combined with alterative fluid extracts and iodide of potassium.

Opening of the Royal College of Surgeons in Ireland—School of Surgery.—On Monday, October 28, the winter session of 1878-79 in the School of Surgery in Ireland was inaugurated with an address by Dr. William Thornley Stoker, one of the Professors of Anatomy in the School. The chair was occupied by the President of the College, Dr. Philip Crampton Smyly. The lecturer commenced by giving a hearty welcome to the new students and bidding a farewell to those who were leaving the College to enter upon what, he hoped, would be for them a successful and useful career. A student was a man given to books—a scholar—a bookish man; and he would have some of them ask themselves did they merit the name—were they, indeed, men who gave their time to books, and, what was equally important to men of their art, to the things books treated of? Were they only medical students, as the phrase is, or were they, in truth, students of medicine? If they were not the latter, let them beware. Those who had seen much of students knew that the great body of men with whom they came in contact were earnest, thoughtful, loving neophytes of the temple, devoted to their work, and lofty in their ends; but others, alas! are but idlers around the gates, who will presently be driven away: and to them, if there were any there, he uttered his warning. The profession was one ever changing, ever advancing, altered and improved not only by the devotion of its votaries, but by the march of sister sciences and by changes in the type of disease. See the change in the treatment of fevers, mainly due to Graves and Stokes! The comparative disuse of mercury in acute cases, the abolition of blood-letting, the introduction of anæsthetics, and the improvements yearly effected in them, the bloodless methods of surgery, the better means of securing arteries, the way in which lithotrity is superseding the operation of cutting for stone, and the results of ovariotomy—a procedure which had sprung into use within a few years, and with such results that Mr. Keith had just operated consecutively on forty-one cases without a death. Without hoping for a medical Utopia, they might reasonably expect in a little time to see a higher standard of preliminary examination required, a closer attendance exacted on the ordained means of instruction—those means themselves ordered more in accordance with their wants and with the improved knowledge of the day—by an extensive modification of the lecture system, and by an increase in clinical or practical modes of study. He trusted they might even see enforced sessional examinations, the abolishment of central licensing bodies, and perhaps even a repeal of that ridiculous and penal Vivisection Act—"that outcome of the exuberant and diseased fancies of hysterical women and mistaken men." In a subsequent part of his address, Dr. Stoker alluded to the Edict of Valentinian, addressed to Olybius, Prefect of Rome, A.D. 370, providing for the regulation of the students in that city. Returning to the subject of modern education, the lecturer said that anatomy, physiology, and chemistry claimed the best attention of the students. Their great end was the observation of disease at the bed-side, its diagnosis, and its treatment. Their great means to this end was the possession of a knowledge of a number of subjects, among which these three are pre-eminent. Dr. Stoker then proceeded to speak of the early history of medicine, and of the various steps through which the art had passed, and mentioned that even in the first half of the eighteenth century they found the most amusing absurdities still existing in medical practice. He took up a book of the time, the work of Sir David Hamilton, an eminent writer on fever, and physician to Queen Anne, and he found him speaking of the effects of the Juvantia or helpful remedies, including crabs' eyes, prepared pearls and the like, and a person suffering from fever ordered the following:—"Raspings of elk's hoof, one ounce; piony seeds and misletoe of the oak, each three drachms; raspings of man's skull, half an ounce; boil them gently in a due quantity of water to one pint and a half; to the strained liquor add compound syrup of piony, three ounces; mix and make an apozem whereof he may frequently take ten spoonfuls." Dr. Stoker having traced the difficulties with which the healing art has had to contend from the earliest times, in conclusion said that in times more recent, protected by the law and courted by the people, medicine has found innumerable homes.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

The Cæsarian Operation.—The celebrated Coleridge, in his "Table Talk," writing of this operation, says: "I think there are only two things wanting to justify a surgeon in performing it. First, that he should possess infallible knowledge of his art; and, secondly, that he should be infallibly certain that he is infallible."

A Provincial Teacher.—The only provincial school represented on the Court of Examiners of the Royal College of Surgeons is that of Cambridge, by Dr. G. M. Humphry. St. Bartholomew's sends two—viz., Mr. L. Holden, the Senior Vice-President, and Mr. W. S. Savory. The University College and Guy's Hospitals are each equally fortunate, the former being represented by Mr. J. E. Erichsen, the Junior Vice-President, and Mr. John Marshall; the latter sending Mr. Birkett, the late President of the College, and Mr. J. Cooper Forster. Mr. F. Le G. Clark represents St. Thomas's Hospital; Mr. T. B. Curling, the London Hospital; and Mr. Timothy Holmes, St. George's Hospital.

Coffee Taverns.—The rapid development and success of the coffee tavern movement is very satisfactory. The eleventh coffee tavern built by the London Coffee Tavern Association has lately been opened. It is situated in the Euston-road, near the Portland-road Railway-station. Houses have been secured in the Commercial-road East, and in High-street, Stoke Newington, which will shortly be opened.

Extra Medical Observation.—Yes, the late Sir Henry Holland speaks of innumerable opportunities for making observations not merely medical, which were afforded in the course of his professional life. As, for instance, he often gained insight into the causes which govern many political events, and was able to trace the origin of certain changes not obvious to the public eye. He makes the general remark that "many anomalous incidents of history have their explanation laid bare by the intercourse of physician and patient, proving how largely bodily temperament has its share with mental in the government of the world."

Mr. Williams.—It was the celebrated Abernethy who, often thinking aloud, exclaimed just before giving his "introductory"—"God help you all! what is to become of yon?"—evidently much moved by the appearance of so great a number of medical students seeking for information to be fitted for practice.

Dr. Campbell.—You will see a fine specimen of Egyptian embalming in the museum of the College of Surgeons. A curious fact with regard to the embalming of Edward I. proves that Nicolas of Tygnwycke, Peter the Surgeon, and Richard of Montpelier, did their duty well, for about sixty years ago the tomb of Edward was opened, and the body found entire; and Sir J. Ayscough, the antiquarian, who was present, was induced to taste the "pickle" or fluid in which the royal body was preserved; "and even then," says Mr. Squibb, "more than 500 years after the embalmment, it showed traces of the spices used by Richard of Montpelier."

An Old Story.—The Medical Officer recently reported to the Holborn Union that thirty-one boys, fifteen girls, and twenty-eight infants at the Mitcham Pauper Schools were suffering from ophthalmia, though many of the cases were not severe. A discussion ensued with respect to the boarding-out system, and a guardian remarked that at present these schools contained an excess of more than a hundred children over the proper number.

French Critiques on English Women.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Although Frenchmen in general frankly avow their admiration of English women, there are some points in which they criticise them with some severity. They commonly say there are three infallible signs by which an English woman may be recognised in society—first, the very large and projecting upper front teeth; the second, very large and flat feet; and the third, that if asked to play on the piano she always plays "Handel's Harmonious Blacksmith." With regard to the last of these points, I only wish it were true. The second I pass over for the present. Concerning the first I should like to make two or three remarks.

The prevalent French opinion may be gathered from a critique on the English pictures in the Paris Exhibition by a M. Duranty, published in the *Gazette des Beaux Arts*, and quoted in the *Architect* of October 5, 1878. "Pretty girls," says M. Duranty, "women, and children, fill the canvass which covers the walls of the English section; above all, young girls, in all the freshness, and with all the magic charm of youth and loveliness. But among these beauties I spy large white teeth which force open the upper lip, and I hear the sound of the great jaw which ceaselessly munches. This is as characteristic a trait of the women of the upper classes as it is of their ladies' maids. . . . As has often been remarked, English art is essentially English. . . . In the English galleries the national type is distinctly discernible in the great majority of works. For this reason, *The First Delivery of the Post*, by Mr. Sant, Painter-in-Ordinary to the Queen, is so interesting in spite of the tendency it proves of having been inspired by Mr. Millais as to the white materials in which the subjects are attired. The harelip displaying the teeth, which imparts a savage expression to the most refined feminine type, is there terrible and cruel. One finds this, likewise, in Mr. Richmond's portrait of Lady Cavendish; and this delicate, graceful, and yet correct portrait suggests the idea of a Polynesian queen who has had her lip bored by a shell. Singularly hard and sinister is the type of the young girls playing at whist, by Mr. Millais; the expression of the eye is hard, the wide mouth is tightly closed in every instance. Their dresses with their great folds of heavy material are more suited to married women. Animals provided by nature with heavy jaws are neither gentle nor affectionate, and all the force of will, the unalterable determination, and *sans quartier* of the race, are stamped on the countenances of these women. I hasten to remark that civilisation has converted into mere energy of character, and a vast power of digesting sandwiches and roast beef, the primitive instincts so strongly indicated by these heads. The emaciated type, with huge cavernous eyes, which Mr. Burne Jones and Mr. Richmond have given to the *Vivien* of the middle ages, and of the *Ariadne* of antiquity, is another English type, the type of poetic natures; but the jaw is always strongly defined, marking a huge predilection for underdone beef, and always implying a hard, trenchant nature existing, although perhaps modified."

It seems to me that Mons. Duranty confounds two things that are incompatible with one another. There are some women who have their upper jaw contracted from side to side, a very high arched palate, no room for their teeth, so that one of the bicuspids is often early sacrificed, upper incisor teeth projecting like those of a rabbit. Such projecting teeth, accompanied as they often are by a very small chin, indicate anything but firmness of character, or appetite for underdone beef. On the contrary, it is when the upper jaw is broad and flat-roofed, and all the upper teeth are shown in good order, not merely the central incisors, and the chin is flat and well developed, that a resolute character is indicated. Now, I should like to ask Professor Rolleston whether the Anglo-Saxon woman has more powerful jaws than her Celtic cousin. Anyhow, the weak *rabbit mouth* is not, and I hope never will be, characteristic of English women. I am, &c.,

London, October. John Bull, M.A.

Army Surgeons at Serajevo.—The *Vienna Medical Weekly Journal* has received and publishes the following communication from Serajevo:—"At the beginning of the present month (October), Feldzengmeister Phillippovich called together the army surgeons at Serajevo, and addressed them as follows:—'The commanders of troops have informed me that every soldier, as soon as he falls sick, is lost for the army. I regret, indeed, that we have no longer any sub-surgeons. They were, at least, soldiers who knew their duty, but now we have doctors of medicine, surgery, and all possible sciences, who do not know their business. I have understood how to command an army, and hope to manage also this branch. If I learn that one of you does not do his duty, I shall have him before a court-martial. In conclusion, I assure you that I shall report this also to his Majesty.'"

Opium-smoking.—Dr. Ayres, the Colonial Surgeon of Hong-Kong, in his report for last year, remarks on the effect of opium-smoking. In his experience the habit does no harm in moderation. He did not find that there had been any evil consequence in breaking off the habit at once. Of many cases which came under his notice, one was that of a man whose consumption had been two ounces a day for nineteen years. On the man entering the gaol the supply was at once stopped, and he received neither narcotic nor stimulant of any kind. For the first few days he suffered from want of sleep, but was soon in fair health, and expressed himself much pleased at having got rid of the habit. The case of this man bears a very striking contrast to the class of cases generally cited. There is a good deal of popular misconception and exaggeration on the subject. Dr. Ayres pertinently observes that at the Tua Wha Hospital the stranger may at any time see the most dreadful and ghastly-looking objects in the last stages of scrofula and consumption smoking opium, who had never previously been able to afford a pipe a day. Yet the European visitor leaves the establishment attributing to the abuse of opium effects which further inquiry would have satisfied him were due to the diseases from which the patients were in hospital. Dr. Ayres gives it as his opinion that no China resident believes in the terrible frequency of the dull, sodden-witted, debilitated opium-smoker met with in print. No doubt opium-smoking and opium-eating have been confused in the popular mind.

The Cagots.—Students of ethnology are aware that there have existed in the west and south of France and in the north of Spain certain distinct tribes, castes, or communities, called by various names, of which Cagot is the most frequent. These people, whose existence can be traced for five or six centuries, have been till quite lately treated as pariahs and outcasts by the rest of the population. They were accused of every sort of bodily uncleanness and mental depravity; they were considered liars and sorcerers; said to have the evil eye, and to inflict disease on children by looking at them. Their breath and perspiration were said to stink foully, their ears to be round and without a lobe, and their tongues to be dotted with little grains like the measles of the pig. When they went out they were obliged to have a piece of red cloth sewn on to their garments; their dwellings were outside the towns and villages; in church they were confined to one end, and separated by a railing from the rest of the faithful, and not allowed to touch the holy water. They were not allowed to practise any trade at will, except that they might be gravediggers, carpenters, makers of coffins, and weavers of hemp. They were not allowed to pass through villages with naked feet, nor to enter mills, bakehouses, or butchers' shops, to wash nor drink at the public fountains, nor to have any cattle except pigs and asses. After death they were buried apart. The term Cagot, properly speaking, is the name given to these pariahs on the north slope of the Pyrenees. The like clusters of people existed in Navarre, where they were called *Agotes;* in Guyenne they were known as *Gahets* or *Gafets;* in Languedoc they were called *Capots;* and in Brittany, *Caqueux* or *Cacous*. In some parts of the south and west of France similar communities were called *Christians*. The ingenuity of ethnologists has been much exercised in exploring the origin of these people, and of the designations by which they are known. One theory is that they are the remains of Goths who at various times invaded France or Spain, and that the word Cagot signifies the same as "Chien-Goth," or "dog of a Goth." A second supposition is that they are the remains of the Albigenses. A third theory is that they are the remains of the Moors who invaded Spain. All these derivations take for granted that the Cagots are of different blood and race from the ordinary people of the land. Thus, on these theories, it is supposed that their ethnological status is analogous to that of the Jews, or of the gipsies amongst ordinary Europeans. More exact research, however, has shown that the Jews and gipsies have a different language, customs, and features from the people of the land amongst whom they may be dwelling. Wherever they are found they resemble each other, and differ from the people of the land. On the contrary, the Cagots, wherever they are found, whether in Brittany, Languedoc, or Navarre, are entirely like the people of the land, and have neither features, manners, religion, nor customs peculiar to themselves. Their status is therefore not that of separate races. The most probable explanation is, that they are the remains of families who, so far back as the eleventh and twelfth centuries, were affected, or supposed to be affected, with the leprosy, or with some skin disease which was classed together with the true leprosy. It is supposed that these people and their families were driven from society, and compelled to live apart, on account of a bodily disorder which was always associated with moral uncleanness. It is certain, however, that in the present day the Cagots present no difference in language, features, nor health from the other inhabitants of the country; but there are village communities of Cagots still existing in the Pyrenees, although they are gradually losing all traces of the isolation and debasement of which they have been the victims for the last five or six centuries. For full information we must refer to a work by M. De Rochas, called "Les Parias de France et d'Espagne," and to an article in *Le Révue des Deux Mondes*, January 15, 1878, by M. Louis Lande. We may observe that the word Cagot is one on which Littré's famous dictionary fails to give information; he connects it somehow with the word Bigot, whereas the word Cagot and its synonyms appear to signify merely filthy and leprous.

A Bicyclist: £50 Damages.—A bicyclist has been amerced at the Clerkenwell County Court in £50 damages and costs (the highest amount recoverable in a county court for damages) for knocking down a journeyman brickmaker, rendering him unconscious for several hours, and causing him a double rupture, whereby he was prevented from doing any work for seven weeks. The medical evidence proved that the plaintiff's life might be shortened through the rupture. We have recently drawn attention to the dangerous speed with which some of these noiseless machines are driven through the public thoroughfares. We trust the damages awarded in this case will have a wholesome effect.

The University of Edinburgh.—Dr. J. A. Carlyle, of Dumfries, a Doctor of Medicine and of Laws of the University of Edinburgh, and brother of Thomas Carlyle, has, it is stated, placed £1600 in the hands of the Association for the better endowment of the University of Edinburgh and for the endowment of two bursaries in the Faculty of Medicine.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médicale—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralhlatt für die Medicinischen Wissenschaften—Cincinnati Lancet and Clinic—Gazette Hebdomadaire—El Siglo Médico—Indian Medical Gazette—Students' Journal and Hospital Gazette—Nordiskt Medicinskt Arkiv—Sunday at Home—Leisure Hour—National Anti-Compulsory Vaccination Reporter.

BOOKS AND PAMPHLETS RECEIVED—

Proceedings of the North-Western Association of Medical Officers of Health for the year ending February, 1878—Annual Medical Report of the Madras Government Lying-in Hospital, 1877—Frederick James Gant, F.R.C.S., The Science and Practice of Surgery, 2 vols.—Dr. Friedrich Esmarch, The Surgeon's Handbook on the Treatment of Wounded in War, translated by H. H. Clutton, B.A. Cantab., F.R.C.S. —L. Duncan Bulkley, A.M., M.D., On Diet and Hygiene in Diseases of the Skin; On the Use of the Solid Rubber Bandage in the Treatment of Eczema and Ulcers of the Leg—John Gray M'Kendrick, M.D., F.R.S.E., Address to the Medical Students at the Opening of the Winter Session, University of Glasgow, 1878—The Collected Works of Dr. P. M. Latham, edited for the New Sydenham Society by Robert Martin, M.D. Cantab.: vol. i.—Peter Gowan, M.D., C.M., B.Sc., Consumption, its Nature, Symptoms, Causes, Prevention, Curability, and Treatment—Francis Mason, F.R.C.S., On the Surgery of the Face—Dr. Hermann Eichhorst, Die trophischen Beziehungen der Nervi Vagi zum Herzmuskel.

COMMUNICATIONS have been received from—

Mr. J. Astley Bloxam, London; Mr. T. M. Stone, London; Mr. John Chatto, London; Dr. J. Matthews Duncan, London; Dr. James Ross, Manchester; Dr. Edward Sparks, Mentone; Mr. D. Colquhoun, London; Dr. J. Allen Sturge, London; Mr. B. R. Wheatley, London; Messrs. S. Low and Co, London; Messrs. H. R. Williams and Co., London; Dr. J. Wallace, Liverpool; The Registrar of Apothecaries' Hall, London; Dr. Dunglison, Philadelphia; Mr. Spencer Watson, London; Dr. Carey P. Coombs, Castle Cary; Dr. Herman, London; Mr. Henry Robinson, London; The Hon. Secretary of the Harveian Society, London; The Hon. Secretary of the Epidemiological Society of London; Dr. Alfred Hill, Birmingham; The Registrar-General, Edinburgh; The Hon. Secretary of the Obstetrical Society of London; Mr. Weldon, London; Mr. D. B. Baldino, Royston; Mr. George Brown, London; Mr. M. McHardy, London; Dr. W. S. Forbes, Philadelphia; Mr. J. T. W. Bacot, Seaton; Messrs. Griffiths and Co., Liverpool; Professor Corfield, London; Mr. Marsh, London.

APPOINTMENTS FOR THE WEEK.

November 2. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

4. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. General Meeting. Clinical Cases, &c. Dr. Sullivan, "On the Peculiar Malarial Fever of Cyprus."

5. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Pathological Society, 8½ p.m. Mr. John Gay—Gangrene of the Penis. Dr. Ralfe—Spontaneous Cure of an Aneurism. Dr. Lediard—Aneurism of Abdominal Aorta. Dr. P. Irvine—Dermoid Cyst in the Brain. Dr. Crisp—Brain, Spinal Cord, etc., of a Dog dead from Rabies. Dr. Hoggan, "On the Condition of the Lymphatics in Eastern Leprosy." And other Specimens.

6. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 1½ p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

Epidemiological Society, 8 p.m. Surg.-Gen. John Murray, M.D. (the President), will deliver an Inaugural Address on the Epidemic Diseases of 1875 and 1876.

Obstetrical Society, 8 p.m. Dr. Galabin, "Two Cases of Rupture of the Vagina during Labour." Dr. George Roper, "Some Clinical Researches on a certain class of Cases of Anteflexion of the Uterus, with certain correlated conditions."

7. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

Harveian Society, 8½ p.m. Dr. Squire, "On Surface Thermometry." Dr. Fothergill, "On the Premurmurric Stage of Aortic Valvulitis."

8. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

Clinical Society, 8½ p.m. The President, "Extensive Laceration of Brain treated by Drainage" (living specimen). Dr. Farquharson, "Case of Quinine Rash." Sir James Paget, "Case in which Watery Fluid drops from a Nostril." Mr. A. Baker, "Ogston's Operation for Genu Valgum; Death." Mr. Reeves, Mr. Barwell, and other members, will show Cases of Osteotomy. Dr. C. T. Williams, "Case of Bronchiectasis and Localised Empyema treated by Tapping."

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 26, 1878.

BIRTHS.

Births of Boys, 1304; Girls, 1196; Total, 2500.
Average of 10 corresponding years 1868-77, 2285·5.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	744	702	1446
Average of the ten years 1868-77	719·2	680·1	1399·3
Average corrected to increased population ...	...	...	1497
Deaths of people aged 80 and upwards ...	...	...	45

Note.—The births and deaths registered last week may be compared with the average numbers in the corresponding weeks of the ten years 1868-77 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	...	9	1	8	...	3	...	5
North ...	751729	...	3	15	2	9	...	10	...	3
Central ...	334369	...	...	4	...	3	...	3	...	4
East	639111	...	8	6	3	7	...	7	...	8
South	967692	4	7	12	6	6	...	7	...	10
Total	3254260	4	18	46	12	33	..	30	...	30

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·209 in.
Mean temperature	50·3°
Highest point of thermometer	65·4°
Lowest point of thermometer	39·5°
Mean dew-point temperature	45·7°
General direction of wind	S.W.
Whole amount of rain in the week	0·98 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, October 26, 1878, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1878.*	Persons to an Acre. (1878.)	Births Registered during the week ending Oct. 26.	Deaths Registered during the week ending Oct. 26.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3577304	47·5	2500	1446	65·4	39·5	50·3	10·17	0·98	2·49
Brighton	103923	44·1	50	40	63·8	42·4	51·0	10·56	1·96	4·98
Portsmouth ...	129461	28·9	9?	32	...	...	...	...	...	...
Norwich	84620	11·3	53	25	62·0	42·0	50·0	10·10	0·86	2·18
Plymouth	73599	52·8	45	28	61·0	44·0	51·8	11·01	1·85	4·70
Bristol	206419	46·4	115	64	60·1	41·8	49·6	9·78	2·43	6·17
Wolverhampton ...	74240	21·9	57	22	56·4	38·2	46·7	8·17	1·50	3·81
Birmingham ...	383117	45·6	321	188	...	...	...	...	...	...
Leicester	121473	38·0	91	38	59·0	29·0	47·1	8·39	1·29	3·28
Nottingham ...	165267	16·6	100	55	60·0	36·9	47·9	8·83	1·53	3·89
Liverpool	532681	102·2	393	281	58·1	40·0	47·5	8·61	0·45	1·14
Manchester ...	360514	84·0	240	168	...	...	...	...	...	...
Salford	170251	32·9	125	74	58·7	36·2	43·3	7·95	1·33	3·38
Oldham	107366	23·0	85	58	...	...	...	...	...	...
Bradford	185088	25·6	104	69	55·8	39·0	47·0	8·33	1·44	3·66
Leeds	304948	14·1	216	132	58·0	38·0	48·1	8·95	1·03	2·62
Sheffield	289537	14·7	184	117	57·0	40·0	47·1	8·29	1·74	4·42
Hull	143139	39·4	108	54	59·0	39·0	47·2	8·44	1·68	4·27
Sunderland ...	112459	40·6	63	50	56·0	33·0	48·1	8·95	0·13	0·33
Newcastle-on-Tyne	144570	26·9	107	67	...	...	...	...	...	...
Edinburgh	222371	53·1	138	79	56·0	34·0	44·6	7·01	0·81	2·06
Glasgow	566940	94·0	363	228	56·7	40·0	46·7	8·17	2·21	5·61
Dublin	314666	31·3	147	142	63·6	34·0	46·8	8·23	0·62	1·57
Total of 23 Towns in United Kingdom	8373953	38·0	5597	3458	65·4	34·0	48·0	8·89	1·32	3·35

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·21 in. The highest reading was 29·66 in. on Sunday morning, and the lowest 28·86 in. on Saturday morning.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1878 by the addition of seven years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. Nottingham, Salford, and Oldham, however, form exceptions to this rule, as the estimates for these three towns have been revised with the aid of local information as to the rate of increase of inhabited houses. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

LECTURES ON SYPHILIS OF THE LARYNX.

DELIVERED AT THE HOSPITAL FOR DISEASES OF THE THROAT AND CHEST, LONDON.

By W. MACNEILL WHISTLER, M.D., M.R.C.P.,
Physician to the Hospital; Honorary Physician to the National Training School for Music, etc.

LECTURE II.

RELAPSING ULCERATIVE LARYNGITIS OF THE EARLIER AND INTERMEDIATE PERIODS.

GENTLEMEN,—The affection of the larynx which I will next describe to you is one of more chronic inflammation, in which the signs are diffuse redness, thickening, and *ragged ulceration*, especially of the vocal cords. This occupies an intermediate line between the early and later lesions of syphilis in the larynx. It may occur close in the wake of the former, and be the immediate outcome of the catarrhs and mucous patches of the larynx I have described to you in my last lecture; or it may show itself three or four or more years after the primary sore.

In the first instance there would be still remaining, as accompanying manifestations, some more or less general eruption on the skin, with mucous patches of the mouth; while in the other there may be tubercular eruptions limited to the arms or legs, periosteal inflammations, or scars from ulcerating syphilides, with ulcers of the fauces and chronic glossitis. This condition of the larynx is developed in somewhat the following way. A patient will have a laryngeal catarrh in the first few months of the disease. Mucous patches of the cords appear and ulcerate. Under treatment they cicatrise imperfectly. Several relapses occur. The cords become more deeply reddened. They lose their flat appearance; they get rounded and roughened on their surface as though worm-eaten. The ulcers again breakdown; their edges swell, become thickened, and are bordered by vegetations. The ventricular bands and inter-arytænoid fold participate in this inflammation. They are thickened, their surfaces are roughened, and warty growths often spring up and form spur-like projections over the vocal cords.

This is an accurate description of the growth and development of this affection at an early stage. Again, the case will be this. A woman, married ten years before, subsequently has sores on the vulva, and rashes on the body. Her first child is born fifteen months after marriage, has rashes on its body, and dies at three months. The second one, born a year after, dwindles away and dies at three weeks. Fifteen months after this she has twins, and they die at six weeks. The mother now has a bad sore throat, between three and four years after the primary lesion. Subsequently this woman has two miscarriages. All this time she is ailing, but she has no return of eruptions, and her throat is only occasionally sore. Nothing more until over four years have passed. Then she has headaches, and her throat becomes bad again. She is treated for it and gets better, but never quite well, and then her breathing becomes embarrassed.

This is not an imaginary case. I have only been relating to you the history of a woman whom I showed to you last Wednesday evening, with thickened ulcerated cords like those I have just described to you, in the other case, as following upon the mucous patches of the cords. In that one this condition of the larynx dated eight months after infection. In this woman's case ten years had elapsed since infection when I first saw her. She presented herself here with hoarseness and dyspnœa four years ago (in July, 1874), and told me her story as I have told it to you. She had superficial ulceration of the tongue, and deep redness of the larynx, with redness and picked-out ulcers of the vocal cords, with thickening of the inter-arytænoid fold. She was treated at first by sedative inhalations alone; but, getting no better, she was put upon iodide of potassium. This did not relieve her, and by the end of October I took her into the hospital, as I thought she would require tracheotomy. There was inflammation and swelling of the ventricular bands and inter-arytænoid fold. The vocal cords were highly inflamed, deep red, and ulcerated. They were thickened, and their movements in abduction were impaired, so that the chink of the glottis was not more than half the usual size in inspiration. There was no œdema. Besides the dyspnœa she was almost aphonic. She had a bad cough and pain in the larynx. She recovered rapidly under mercury and iodide of potassium, and was discharged cured in a month. She attended subsequently for relapses. She had been away one year, and only returned on account of another relapse of a fortnight's standing when you saw her last week.

Here is another case of this form of syphilitic laryngitis which presented itself here four years after infection:—

L. H., aged thirty-three, unmarried, applied at my clinique on April 22, 1876, suffering from intense hoarseness, stridor on exertion, with paroxysms of dyspnœa, and slight cough with mucous expectoration. She had a chancre four years previously, followed by eruptions on the body and head, with headaches, loss of hair, and night-sweats. For these symptoms she was treated at the Lock Hospital and took mercury. Ever since this time she had been troubled with ulcers in the mouth and throat. She was the mother of two children—the eldest one, aged seven, was healthy; the youngest, aged one year, had a sore mouth a fortnight after its birth, and eruptions about the buttocks. Her condition on presenting herself at the clinique was as follows:—No eruptions, excepting a prurigo on the back and shoulders. On the tip of the left shoulder there were three depressed circular white cicatrices from an ulcerating syphilide she had had two years before. She had ulcers on the tongue and fauces. The mucous membrane of the larynx was dusky red, dry, and swollen, especially over the arytænoids and inter-arytænoid fold. The vocal cords were deep red, thickened, and ulcerated at the posterior part; their abduction was impaired. Under a mercurial treatment, together with inhalations of vapor benzoin, she soon got better. The swelling and redness of the laryngeal mucous membrane subsided, and the movements of the vocal cords were freer. By May 13 her breathing was comfortable, and she was free from pain, though still very hoarse. The treatment was kept up throughout the summer, with occasional intermissions of the mercury. The ulcers in the mouth and pharynx were healed after three months' treatment; the laryngeal inflammation was, however, very intractable. After nearly four months' treatment, during which the voice had got much better, the patient had a relapse, and by the middle of August she was again suffering with great hoarseness and some distress in breathing. The laryngoscope showed thickening and deep redness of the arytænoids and inter-arytænoid fold. Both vocal cords were thickened: the right one was red and ragged from loss of substance, and it had an irregular ulcer with sharply-cut edges on its anterior third; the left one was roughened, mottled red and white, but not ulcerated. A solution of sulphate of copper (fifteen grains to an ounce of water) was applied to the larynx, and these applications were renewed every third day. Inhalations of vapor pini sylvestris, morning and night, were substituted for the vapor benzoin; the treatment by blue-pill was continued. By the middle of September she was somewhat better, but her voice was still very rough. The right vocal cord was much hypertrophied, red, and ulcerated. The blue-pill was discontinued, and twelve grains of iodide of potassium combined with one drachm of liquor hydrargyri perchlorid. was ordered to be taken three times daily, with the vapour and local applications as before. From this date she made rapid progress. By October 7 the appearance of the larynx was in every way improved; the inflammation was reduced, and the ulceration of the right vocal cord was healed. There remained still some redness, thickening, and roughness of both. In one month more her voice was fairly good; the vocal cords were nearly white. The patient continued the treatment until the end of the month, when she was discharged cured, after nearly seven months' treatment. For five months the treatment was by mercury alone, during which time the patient made slow progress, and was subject to constant relapses. She was then subjected to a mixed treatment of biniodide of mercury and iodide of potassium for two months, by means of which she progressed rapidly to a cure.

Now, if you have followed me through these cases, you will see that they are all identical in their main features, and you will notice also that they differ from the class of cases I last lectured upon to you. The ulcers are deeper; they are ragged, with thickened edges; they are small,

irregular in shape, and often multiple; and the vocal cords upon which they are situated look as though pieces had been torn out of them. Still, they are comparatively superficial, and are not accompanied by perichondritis and necrosis of the cartilages, as are the burrowing ulcers of a later period. There is also more thickening of tissue, and this growth is not only diffused, leading to hypertrophy of the ventricular bands, vocal cords, and other parts of the larynx, but it also manifests itself in a more limited way in the production of warts and nodules, as you have seen. These latter do not differ in appearance from those arising from other causes, and there is nothing specially indicative of syphilis in their presence. They are found in laryngeal phthisis, although maybe not so frequently, as there the destructive process is more rapid. Some authorities consider the presence of warty growths in phthisical ulcerations of the larynx to point to a possible association of syphilis in such cases. I have, however, met with them often under such circumstances where there was neither a history of syphilis nor any manifestations of such a taint. Moreover, they are met with in ordinary chronic inflammations of the larynx.

Owing to these more serious changes in the larynx, the functions of this organ are more impaired, and, as might be expected, the symptoms from which the patients suffer are graver. The hoarseness is often extreme, and it is not unfrequently associated with some difficulty of breathing, together with troublesome cough and pain in the larynx. Every now and then acute attacks occur, accompanied by swelling of the tissues, producing *great difficulty of breathing*; but this is exceptional, and even the most threatening cases frequently escape tracheotomy. Besides the greater degree of chronicity of this affection, relapses are more common, and these relapses are for some time similar in every way to the preceding attacks. In this way you will get cases of this *relapsing ulcerative laryngitis* of the secondary and intermediate periods extending over several months, and sometimes over a year or two, with slow changes in the larynx. If the affection be arrested in time, the ulcers cicatrise, leaving a smooth edge to the cords, the thickening is absorbed, the congestion passes off, and the patient's voice is restored. On the other hand, should the disease be allowed to progress, large portions of the cords are lost, their movements are irremediably impaired, and permanent hoarseness is the result. Still further, they may be the forerunners of the more deeply destructive alterations of the larynx belonging to the tertiary period.

I will now put before you, in as few words as I can, the salient points of distinction between this form of laryngitis and those others with which it is most likely to be confounded.

The differential diagnosis between this affection and the earliest inflammations of the larynx in syphilis, though not of so much importance, is as follows:—The colour of the mucous membrane is not so deep in the catarrhs of the earlier period. In them there may be the redness of ordinary congestion, frequently diffuse, but varying in intensity. In these others the redness is *always dusky*. In the first class of cases there is often general puffiness, but little or no thickening. In the chronic recurrent laryngitis of this period there is always thickening, although this thickening is not so great as in the tertiary affections. The earlier congestions of the larynx, when associated with mucous patches, present papules, with superficial flat ulcerations, not uncommonly seated on the epiglottis, as well as in the interior of the larynx. When we examine these other cases, we find excavated ulcers with very scanty secretion, distinct and separate like the former, but not resting upon a papular base; and instead of papules, warty growths are frequently seen. The ulcers in these cases are more often limited to the vocal cords. Chronic glandular laryngitis, although it is associated with deep redness and thickening of the mucous membrane, may be distinguished by the enlarged, prominent papillæ on the surface; sometimes there are small follicular abscesses containing muco-pus or pus, and presenting themselves as yellowish-red or yellow eminences. These, at times, are converted into follicular ulcerations. These ulcers, however, are quite superficial, and never lead to the destructive changes that are found in syphilis. Moreover, this condition of the larynx is almost invariably associated with a similar affection of the pharynx. It will be, however, a far more important question for you to solve, whether the case be one of phthisis or syphilis. As a rule, you will have signs of lung disease in the former cases associated with the laryngitis, but they will not always come to your aid. In the tertiary affections, which are more apt to be confounded with phthisical laryngitis by those who have not much experience, you may have signs of softening and cavity of the lung due to syphilis.

I had a very interesting case of this kind under my care not long since in a woman aged fifty. She had deep burrowing ulceration of the larynx, associated with cough, copious expectoration tinged with blood, night-sweats, and rapid emaciation. She was in a wretched condition when she came here: she was feeble and haggard, and looked like a woman of sixty or more. The appearance of her larynx was characteristic of specific disease; and she had a deep ulcer of the forehead to confirm this diagnosis. At the upper portion of the right lung there was dulness, with coarse râles over a limited area, and blowing respiration. Under iodide of potassium and tonics she at once began to improve, and in two months' time the ulcers of the larynx had healed, the disease in the lung was arrested, she had gained flesh, and was discharged strong and well.

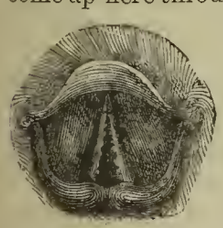
In that form of phthisical laryngitis which has to be distinguished from the syphilitic affection under consideration, the lesions are more superficial than those which simulate tertiary disease; and I have only referred to this case to impress upon you that signs of disease in the lung accompanying laryngitis do not *necessarily* point to tubercle.

In tubercular laryngitis the congestion in the earlier stages is more limited, so that, instead of the dusky redness of syphilis, you will find redness and swelling, and especially œdema, of the arytænoids, or redness of the vocal cords, while there will be anæmia amounting often to extreme pallor in other parts. The mucous membrane, when ulcerated, instead of being dry, is bathed with purulent mucus. In both affections there is thickening, but in phthisis there is a greater tendency to softening, and the ulceration is more general. It often commences in the ventricular bands. It is formed of many small ulcers running into one another and creeping over the surface. These ulcers secrete freely, and are paler in colour than the syphilitic ones. Their course is more rapid, and progressive destruction rather than chronicity serves also to separate them from the syphilitic ulcers of the larynx which we are talking about this evening. I have a case here of tubercular laryngitis, which I will show you. It is that of a man aged twenty-two, who has been ill for one year. He is pale and emaciated. He has a constant hacking cough. His voice is *whispering*, and (if I may so express myself) it has a *moist* sound, as though the cords were vibrating in the midst of mucus, and the air were passing through the same medium. This sound is very different from the rasping, rough voice of the syphilitic cases I will also show you. I do not wish to lay too much stress upon this difference of voice as a diagnostic sign, but I have noticed it too often to entirely ignore the fact that in many of these cases of phthisis the voice-sound is weaker than in the syphilitic ones we are treating of, although the amount of ulceration of the cords may be equal in both. This loss of vocal power is evidently due, in a measure, to the implication of the lung in the disease; while the other peculiar quality of the voice arises from the greater amount of secretion in the air-passages. In examining his mouth and throat you will find no ulcerations. There is a slight congestion of the posterior wall of the pharynx, but you will be struck by the excessively blanched condition of the mucous membrane of the palate and fauces. This same pallor extends to the larynx. There you will see great enlargement of both arytænoids from œdema. You will find, as I have told you it was not uncommon to find in such cases, a growth projecting from the anterior surface of the inter-arytænoid fold and interfering materially with the approximation of the vocal cords. On either side of it there is a spreading ulcer covered with thin purulent secretion. The ventricular bands are roughened and ulcerated. The ulceration is superficial and creeping. The cords are red, and their edges serrated. This patient is very weak, and has profuse night-sweats; his temperature is 102°. At the apex of the right lung he has harsh breathing with crepitation, and moist bubbling sounds at the apex of the left lung. There is marked dulness over both sides.

Now contrast this case with the next one that I show you. This man, aged twenty-six, who is a turner by trade, has

been under my observation and care for two years. He applied here for the first time on June 24, 1876, on account of extreme hoarseness, from which he had been suffering for three months. He had contracted syphilis twelve months previously. He had had loss of hair, eruptions over the body, and a bad sore throat. When he came here there was general diffuse dusky redness of the larynx. The vocal cords were almost as red as the ventricular bands. Their edges were jagged with ulceration. This was most especially marked on the left vocal cord, amounting to a considerable loss of substance. When the cords approached the median line in phonation, there was a wide gap left between them. He was put upon a mixed treatment of mercury and iodide of potassium, and after one month's treatment the ulcers of the cords were healing and his voice was much improved. The treatment was continued for another month, and he did well all through the summer. In September he caught cold, and had an acute attack in consequence. His voice was almost lost when he came to the hospital, and he complained of a good deal of pain in the larynx. There was so much swelling of the ventricular bands that they overlapped the vocal cords, and these were seen to be deep-red and ulcerated whenever they emerged from beneath the bands. The iodo-mercurial treatment was renewed. The improvement was very gradual. By the middle of the month there were two ragged ulcers on the ventricular bands. By the end of October all the ulcers were healed. The vocal cords were still very rough, red, and dry, and there were two nodules at the posterior part of the left cord. The inter-arytænoid fold was thickened, and its inner surface was roughened from the development of a warty growth. His voice was rough, but quite distinct, and he had no pain. He continued to improve. The redness of the larynx diminished. The vocal cords, though still somewhat congested, were much paler and smooth, and the vegetations of the inter-arytænoid fold were gone by the beginning of the year, when he ceased to attend. His voice was restored. He had a relapse about one year afterwards, and came here again on January 26 last, with laryngitis of a few weeks' duration. He was again hoarse, his throat was sore, and his larynx was tender. There was deep diffuse redness of the mucous membrane, with thickening of the ventricular bands and vocal cords, which were again superficially ulcerated on their edges. He was put once more upon a mercurial treatment. After three weeks the ulcers of the cords were healing. He continued to take mercury until the end of March (for two months); from then he took iron and quassia.

In May last, as there was a relapse of ulceration of the larynx, he commenced to take mercury and iodide of potassium again. All this time he has had various astringent applications to the larynx. Sulphate of copper, fifteen grains to the ounce of water, was that from which he derived most benefit for a time. Latterly, I have been applying a solution of nitrate of silver (one drachm of the salt to the ounce of water) once a week. When I began the use of this topical remedy in this case in May last, there was redness, thickening, and ulceration of the left vocal cord at its posterior part. The cords approximated very badly, and the man was extremely hoarse. In one week the cords were whiter and smoother, and he has gone on improving. When you examine him now, you will see some redness of the vocal cords, and a certain amount of thickening. They are also uneven still on their edges, but the ulcers are healed. This case has been a very tedious one—more so than you would find in a person under different circumstances; but, with this exception, I do not think I could bring before you a better case as an illustration of the course of this form of laryngitis. He has continued his vocation at Woolwich all the time, and has come up here through all weathers. Latterly, I have induced him to become an in-patient, and I hope to discharge him cured before many weeks. When he entered the hospital he was put upon mercurial frictions for ten days. Now he is taking iron and cod-liver oil, and he is using a solution of chloride of zinc in spray to his larynx. As regards his general health, he complains of nothing, and you see he has not the look of a sick man. The drawing which I have here is a very good representation of the ulcerated condition of his larynx before he entered the hospital.



(To be continued.)

THE CAUSES AND COURSE OF DISEASES OF THE HEART,(a)

WITH SPECIAL REFERENCE TO PREVENTION AND TREATMENT.

By J. MILNER FOTHERGILL, M.D., M.R.C.P.,

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Lecture III.

THE GOUTY HEART.—FATTY DEGENERATION.

(*Continued from page* 511.)

We may now profitably follow the histological changes which go on in the heart-walls when the arteries generally are become atheromatous and the coronary arteries are especially affected. At first, when the heart-walls commence to hypertrophy, the coronary vessels enlarge contemporaneously, and a sufficient quantity of arterial blood for perfect repair and tissue-nutrition is furnished to the thickened walls. But as time rolls on, the development of pathological connective tissue in the walls of the arteries, otherwise atheromatous change, interferes with and limits their distensibility, and they become elongated and tortuous. The coronary vessels, subjected to the full unbroken force of the aortic systole, feel the permanent rise in the arterial tension, and are over-distended, and so become advancedly atheromatous. Consequently, instead of becoming distended laterally on the aortic systole, they gradually lose their elasticity, and so become elongated instead. This elongation and loss of elasticity combined diminish the flow of blood through the coronary vessels in two ways: first, because of this loss of elasticity the coronary rebound as a means of further propulsion to the blood in the coronary circulation is diminished; and secondly, because the tortuous vessels directly oppose the free flow of the blood within them, and instead of the blood-current rushing steadily forward along a comparatively straight canal, its force is broken upon a number of curves and promontories, round which it must make its way. The consequence is, that in time, when the aorta has lost much of its elasticity by atheromatous change, the blood-flow into the coronary arteries is much impaired, and the muscular tissues of the heart suffer in consequence. Their nutrition is defective, and the muscular fibrillæ commence to undergo fatty necrosis. Instead of well-marked transverse crossings, the muscular fibres become cloudy; then fat granules are found within the sarcolemma. At first the change is seen, according to Rindfleisch, in the germinal matter, where nutritive changes are actively going on; then the fat granules are spread throughout the muscular fibrillæ; and at last the sarcolemma contains a row of beads of fat in lieu of a bundle of muscular fibres. For all purposes of functional activity that bundle is gone for ever. But this necrobiotic change is not spread evenly throughout the tissues of the heart. Some fibrillæ in the most advanced condition of fatty change will be found side by side with some sound fibrillæ; whilst all shades and combinations of fatty decay will be exhibited by neighbouring fibrillæ. How this inequality is brought about we do not yet know. We can readily understand that certain areas may be more decayed than others, as the vessel or vessels to that particular part may be more perfectly occluded than the vessels of other parts. So we can comprehend how the right ventricle may be more affected than the left, or *vice versâ* the left ventricle be more decayed than the right, from disease in one or other coronary vessel being more pronounced. An atheromatous plate may form over one orifice, and the ventricle and auricle to which it belongs will be affected accordingly. Undoubtedly there is a certain inosculation betwixt the branches of each coronary vessel; but it is insufficient to maintain the tissue integrity, or rather comparative integrity, of the side whose artery is occluded. Or one vessel may be more blocked by atheromatous patches than the other, and so degeneration of the parts supplied by it will be pronounced.

Such are the more particular changes produced, while the general structure of the heart is being cut down by the necrobiotic change. The tortuous white coronary arteries and the enlarged deep blue veins form a contrast to the dead-leaf paleness of the degenerate muscular structure; while the finger may be thrust through the wall of the left ventricle without difficulty, where the mural decay is far advanced.

(a) A course of Clinical Lectures delivered at the West London Hospital.

This is the termination of the hypertrophy which once gave the heart its power to strike a new equilibrium; and such are the ordinary associations of fatty degeneration of the heart. First there is hyperplasia: the tissues grow, are maintained, and then commence to decay and rot. Structural integrity gives way in time to histological decay by an intelligible and comprehensible process. The assumption that hypertrophied new growth in the heart more readily undergoes fatty degeneration than the primitive fibrillæ, is an hypothesis which to me has ever appeared unnecessary, and, more than that, ill-founded. Who can distinguish, I should like to know, betwixt the primitive muscular bundles and those fibrillæ which are part of the hyperplasia of the new growth? On the other hand, the formation of hypertrophy readily explains how in time this hyperplasia shall give way to molecular decay. Just as an apple will grow, ripen, and decay, so does the hypertrophied heart end in fatty degeneration in time. The process is an intelligible whole, each part of which is also comprehensible. Of course no one has ever watched all these consecutive changes, and had views of the heart and sections of its structure from time to time; the synthesis is built up from numerous observations in different cases, as all pathological theories must be.

We can now understand the terrible danger of attacks of angina pectoris when the heart-walls are undermined by extensive fatty degeneration. The opposition offered by the increased blood-pressure in the arteries to the ventricular contraction, is overcome by the heart that is structurally sound; but when its structure is extensively decayed, then it is apt to remain for ever in diastole. A little over-distension may be overcome by dilated fibres structurally sound; but when the fibrillæ are fattily degenerated extensively a little over-distension is fatal, because they cannot recover themselves. Thus we regard angina pectoris in very old persons, or persons with extensive fatty degeneration of their heart and atheroma of their vessels, as fraught with great danger; while angina in persons with sound hearts and healthy vessels is comparatively free from danger. It is no uncommon thing to be consulted by men for angina, whose fathers died of that malady, and yet who are not now in any danger; but who are likely enough also to die of angina when they reach the time of life at which their fathers died, and when the structures of their circulatory system are as degenerate as were those of their fathers at the time of the fatal seizure.

Fatty degeneration of the heart may, however, occur otherwise than in the manner just described, but this is infinitely more rarely. It is found with phosphorus-poisoning. It is common in acute febrile conditions, and is a source of danger to life after relapsing fever especially. It is no uncommon affair for convalescent fever patients to die when walking about the wards, from failure of their weakened hearts. Professor Ponfick has described a series of cases of acute fatty degeneration in comparatively young women where there was pronounced anæmia. One such case, when well marked, I saw in La Charité, Berlin, by the courtesy of the late Professor Traube. There were the well-recognised physical signs of a feeble heart with pronounced anæmia. But this form of fatty degeneration of the heart, though highly interesting from a pathological point of view, is not of much clinical interest to us, for it is not apparently amenable to treatment and its progress is steadily downwards.

But there are other considerations of this fatty change which have a clinical and practical interest as well as a pathological one, and they are as follows:—They are connected with advanced life, and the tendency to tissue degeneration which is developed as life progresses. The natural history of fatty degeneration of the heart following, and consequent upon, pre-existing hypertrophy with an atheromatous condition of the arteries, has just been given. But it may be questioned if this is the only origin of fatty degeneration. Sometimes such decay is found without the arterial and other changes co-existing with the form just described. In fact, the question is this—Is there a splitting up of the muscular textures of the heart which is a cause of fatty degeneration, not produced by an imperfect blood-supply, but arising in the tissues themselves? I am inclined to think there is. It is not a true senile change, though it is most commonly found in advanced life. As life advances, the tissues undergo modification. Sometimes there is a deposit of lime salts in the connective tissues; at other times fat is deposited in as well as about tissues. Professor Michael Foster, in his admirable work, a "Text-book of Physiology," writes: "Two changes, characteristic of old age, are the so-called calcareous and fatty degenerations. These are seen in a completely typical form in cartilage, as, for instance, in the ribs: here the protoplasm of the cartilage corpuscle becomes hardly more than an envelope of fat globules, and the supple matrix is rendered rigid, with amorphous deposits of calcic phosphates and carbonates, which are at the same time the signs of past, and the cause of future, nutritive decline. And what is obvious in the case of cartilage is more or less evident in other tissues. Everywhere we see a disposition on the part of protoplasm to fall back upon the easier task of forming fat rather than to carry on the more arduous duty of manufacturing new material like itself. Everywhere almost we see a tendency to the replacement of a structured matrix by a deposit of amorphous material." This is a very instructive paragraph to my mind. It tells us that as the organism ages, the protoplasm loses its pristine energy, and leans towards the formation of fat, or the deposition of lime salts. It does this at the same time that it finds it more difficult to produce the structured matrix round it. Rindfleisch points out how in fatty degeneration of the heart the fat globules are first seen in and around the germinal masses, and then, later on, in and throughout the muscular structure. It would seem that the deposition of fat in a granular form takes place first, and most rapidly, in the comparatively quickly growing protoplasm, and then later on appears in the more stable, slowly changing muscular fibrillæ themselves. Our knowledge of histological processes is not yet sufficiently complete to enable one to construct any distinct hypothesis as to how this fatty deposit is brought about. We know from other sources, and especially from the utility of cod-liver oil in phthisis, that a certain amount of fat is absolutely essential to the formation of perfect and healthy tissue. But how that fat is mingled with the albuminoid elements we do not yet know. We can, however, comprehend that, as the system ages, instead of normal tissue being built up, fat is laid down in an amorphous form, and that thus fatty degeneration is brought about. The practical question which arises out of this is—Are there conditions where, from some modification of the tissues themselves, a fatty degeneration of muscular fibre may be set up independent of changes in the bloodvessels? And if so, may it depend upon passing conditions which may be recovered from? My own impressions are in favour of an affirmative answer to both questions; and I believe that in a few more years we may be able to demonstrate the accuracy of these views, though proof at present is not attainable. We know that fatty degeneration is found normally in the uterus after delivery; it is found in the heart after a sustained high temperature; it is found in muscles when they have been functionally idle, as in the muscles of a broken limb. In fact, we know that a condition of fatty degeneration may be recovered from, where such recovery is practicable; that it is not an impossibility under some circumstances. We also know equally well that in fatty degeneration of the heart, where there exists general arterial degeneration with loss of elasticity, where the coronary arteries are tortuous, and their lumen is diminished by atheromatous growth in their tunica intima, such repair is out of the question. But we may speculate at least on a condition of fatty degeneration which arises in some textural and histological modifications closely allied to true senile changes, which may admit of recovery by the restoration of tissue integrity. We are aware of the fact that at the menopause there is in many women (and especially stout women) a decided tendency towards cardiac weakness, not rarely extending to fatty decay; and that in many of these persons the heart seems in time to recover its tone, and with it apparently its structural integrity. There is some subtle connexion betwixt this tendency to tissue decay and the formation of fat instead of normal tissue in women at the menopause, and the tendency to anæmia or chlorosis with the deposit of fat generally seen in girls at puberty. In this last case the blood corpuscles are split up, and the fat is deposited around the tissues, and in the adipose tissue proper; while at the menopause it is the tissues of the heart which are split up, and fat is formed within the tissues, within the sarcolemma itself. But what is the first change? Whether or not it depends upon the ferments of the body, we do not yet know. The subject is one of the deepest interest alike to practitioners and to pathologists. The

practical side of the question is that of how far fatty degeneration of the heart is or is not amenable to treatment? We can recognise its occurrence along with conditions which preclude all hope and expectation of recovery; but may we not hope that at times it may occur under circumstances which will at least admit of potential recovery? If we find the vessels soft, the eye bright and free from arcus senilis, and an absence generally of marked degenerative changes, may we not venture to suppose that the cardiac debility with loss of impulse and diminution of first sound may be due to conditions which admit of modification? It is absolutely impossible always to diagnose betwixt a heart which is feeble and one which is fattily degenerate. Even the late Dr. Stokes, great as his diagnostic power undoubtedly was, wrote—"It would be difficult or impossible to draw a line of distinction between the signs of a simply weakened heart and this condition combined with fatty degeneration." And all who have had much experience have met with cases in elderly persons where the heart's impulse was lost, the first sound much impaired, the pulse weak and slow; where there was oppression of breathing on exertion, tendency to syncope, and great sensitiveness to thermal influences; where, after a time, these grave indications became greatly modified, and a much better condition, both as regards signs and symptoms, obtained. In these cases the treatment has consisted of rest and the administration of iron along with digitalis. In fact, the question is an open one—Can we by rest and by the administration of iron modify those tissue changes which have the effect of depositing fat instead of normal tissue? Is it possible by regulating the dietary, keeping it free from fat, and giving iron to increase the amount of hæmoglobin, and with it the oxodising processes of the body, to get rid of the abnormal fat, and so permit of new and normal tissue being laid down in its stead? The late Warburton Begbie taught the view that this was feasible: it is not yet time for any of us to deny the possibility of this.

(*To be continued.*)

THE FRENCH "STUDENTS' NUMBER."—Many interested in medical education in France may be glad to know that the number of the *Progrès Médical* of November 2 is entirely devoted, under the title "Les Numéro des Etudiants, prix 50 centimes," to giving an account of the requirements of the educational bodies, and of the *personnel* of the French faculties and hospitals, etc.

SOLUBILITY OF CHLORAL IN FATTY BODIES.—M. Catillon, in a communication to the Société de Thérapeutique, observed that the ready solubility of chloral in considerable proportions in fatty substances is not generally known, and may often prove of great utility in practice. One part of the hydrate is soluble in two of oil. The formula which he recommends is chloral 6 and oil of sweet almonds 30 parts; or chloral 6, lard 27, wax 3 parts. On the same principle, we may make plasters, bougies, or suppositories according to the following formula: chloral 1, white wax 2, and butter of cacao 2½ parts.—*Gaz. Hebd.*, November 1.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN OCTOBER, 1878.—The following are the returns (by Dr. Meymott Tidy) of the Society of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, etc.	Nitrogen: As Nitrates, etc.	Ammonia.		Hardness. (Clarke's Scale.	
				Saline.	Organic.	Before Boiling.	After Boiling.
Thames Water Companies.	Grs.	Grs.	Grs.	Grs.	Grs.	Degs.	Degs.
Grand Junction ...	19·00	0·042	0·165	0·000	0·015	13·2	2·4
West Middlesex...	18·70	0·055.	0·075	0·000	0·012	13·2	3·3
Southwark and Vauxhall ...	20·00	0·037	0·144	0·000	0·015	14·8	4·6
Chelsea	18·50	0·052	0·155	0·000	0·008	14·3	3·3
Lambeth	20·30	0·023	0·126	0·000	0·020	13·2	3·7
Other Companies.							
Kent	25·40	0·003	0·600	0·000	0·003	18·5	5·5
New River ...	19·30	0·017	0·135	0·000	0·007	12·6	2·8
East London ...	19·70	0·038	0·150	0·000	0·005	13·2	3·7

Note.—The amount of oxygen required to oxidise the organic matters nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases.

ORIGINAL COMMUNICATIONS.

THE MALARIAL FEVER OF CYPRUS.(a)

By JOHN SULLIVAN, M.D., M.R.C.P. Lond.

AN experience of malarial disease, under its many forms and disguises, derived from a long residence in tropical climates, and more recently from observations made during my visits to Spain and to Italy, has enabled me to investigate and inquire into the origin and nature of the fever which has proved so detrimental to the health and efficiency of a large number of our soldiers in Cyprus. As the result of a visit of deep interest which I hastily made to that island, I have derived strong impressions, and arrived at definite conclusions. Cyprus must once have been populous, rich, healthy, and highly cultivated; otherwise it is impossible that the Phœnicians, Greeks, Romans, and at a later date the Venetians, could have left behind them so many traces of architectural grandeur, taste, and civilisation. After centuries of neglect and misrule, the soil of Cyprus lies barren, rotten, and waste, its trees cut down, and its rivers dried up. Were this garden of ours, England, suffered to lie waste for centuries, what pestiferous vapours might we not expect the soil to produce! Even in our temperate climate, in order to maintain the standard of health, how many are the calls made on science by sanitary commissions and boards of health! Such is the condition of an island which—from reasons of State policy, no doubt well founded—it has been deemed expedient to occupy in haste, in the most sickly season of the year, in a year exceptionally unhealthy, and when the fruit crop has been unusually abundant. An intelligent Cypriot told me that whenever the fruit season was very plentiful in Cyprus, fever was always rife, as great damp and heavy dews then prevailed.

Had due precautions been taken, had preparations suited to the climate been made for the reception of our troops, or could the occupation of the island have been deferred a month or two longer, great discomfort would have been avoided, and a large number of our troops would not have suffered from a fever peculiar to the country, which fever I will now attempt to describe.

The origin and nature of that miasma, or malaria, which gives rise to fever-ague is identical in all the regions on the earth's surface; but its effects on the human body, or the type it assumes, will vary with climate, condition, and conformation of the soil. Marsh fever is the declared reaction of the living organism against the cause of infection. The poison of malaria in a malarial soil accumulates in the human system when exposed to its influence, and after an incubation of more or less duration, certain morbid phenomena present an indication of the explosive effort made by nature for the elimination of this poison. A paroxysmal fever is evolved; and when this has passed away, then follows intermittence, or a complete suspension from fever. Now, intermittence is the constant and special character of the fever from exposure to marsh malaria, and whenever the characteristic three stages—the cold, the hot, and the sweating—do not declare themselves frankly and in due succession, this must be in consequence of some cause, due to climate and locality, influencing and impeding the natural development of a frank intermittent, and frequently from some peculiarity of constitution or some organic complication in the patient. This fever, known as and improperly termed a marsh or paludinous fever, may arise from conditions of soil in which no marshes are to be found, but in which all the conditions which render marshes unhealthy exist, as in the island of Cyprus, with a soil rich, damp, uncultivated, and impregnated in many parts with mineral salts; a land which, lying waste for centuries, has become a focus of an intensified malaria productive of a fever of a special type or mode of development.

In that form of malarial fever known as "Roman fever" the first or cold stage is of long duration, and the type is typhoid; whereas, in the malarial fever of Cyprus, the cold stage may pass unnoticed, or may be absent, while the hot stage is the most violent and prolonged, always lasting at least forty hours, followed by the sweating stage.

In the Roman fever the nerve-centres and the spleen are

(a) Read before the Medical Society of London on Monday, November 4.

principally affected. In the Cyprus fever the chylopoietic viscera are primarily involved, and the type is not typhoid. Nevertheless, the malarial element, or the cause of the two distinct types of the Roman and of the Cyprian fevers, is the same, but modified by climate and locality; and as the hot stage, or the special mode which nature, under certain conditions, adopts for the elimination of the poison, is violent and prolonged in the Cyprus fever, so is the degree of prostration succeeding to a violent strain on the system so profound, that many of our troops, after a lapse of two months, although removed to a more elevated and apparently a more healthy locality, had not convalesced until the cold season had set in, or, in other words, until the conditions which had given rise to a type of fever marked by an intensely prolonged hot stage had altered, and become capable of restoring the fever to its original intermittent type. And this we find to be actually taking place in Cyprus, where, I am informed, numerous cases of simple fever and ague are now to be seen.

The malarial fever has become altered in type, not in its essence, because the conditions of climate and locality have become altered.

Heat, moisture, and organic *débris* are essential towards the generation of malaria. In proportion to the degree and intensity of heat, so is the measure of the intensity and destructiveness of the malarial poison. When a heat, as in Cyprus, of 115° Fahr. in the shade, acting upon and producing fermentation in a rich, waste, porous, and damp soil (moisture being always found in Cyprus a few inches beneath the surface of the earth), a soil loaded with the products of vegetable decay, or upon a stony or rocky soil which admits through its interstices, crevices, or hollows, very poisonous malarial emanations,—when this heat is diminished or becomes moderated to 75° or 80°, then the Cyprus remittent fever, the product of an intensified and highly concentrated malaria, is transformed into a less concentrated product, into a simple intermittent, which under improved sanitary conditions may disappear altogether.

It is probable that, although the cold stage may not be pronounced in this fever, still some undefined feeling of "malaise" or depression may be felt by the patient, as I have been able to detect on more than one occasion. Five hundred of our soldiers were suffering at one time from this fever, or from the consequent prostration, the character and symptoms of which are nearly similar in all, Cypriotes and Europeans. Intense pain in the head, back, loins, calves of the legs, tenderness over the epigastrium, nausea or vomiting, a hot stage of forty-eight hours' duration, followed by sweating and great prostration.

In a sudden attack of this fever, the cold stage of congestion or of arterial contraction, in which the spleen is affected (as in simple fever and ague), is disguised and scarcely perceptible; while the hot stage of reaction or arterial dilatation is intense and prolonged, and the poison determines to the stomach and liver, not to the spleen.

This fever must not be confounded with sunstroke. A man over-exerts himself under a burning sun, feels giddy, staggers, and becomes insensible. The skin is hot and dry, the face flushed. He labours from dyspnœa. He may be seized with convulsions and die. I have been informed of one poor fellow, a sergeant, who had lost his way, and who, after having walked six miles exposed to an intense sun, died with the above symptoms soon after he had reached the camp.

The information I received from the nuns in the Convent of Larnaca on the nature and treatment of this fever, derived from a long experience amongst the rich as well as the poor, is very valuable. It is a fever, in their opinion, derived from earthy emanations. The patient is suddenly seized with intense pain in the head, back, loins, and calves of the legs. The face is turgid, jaundiced, the eyes are red and suffused, the gums and palate often spongy; the patient sometimes vomits, and the breath is fetid. The hot stage is violent and lasts forty-eight hours, followed by great prostration. Intermission is not complete; the fever may relapse on the seventh or fifteenth day, or not at all.

As the poison directs its energy to the stomach and liver, these nuns apply counter-irritants to the parts most affected. They give quinine during intermittence, even though incomplete, not in solution, but in form of pills, and they often prefer a favourite bitter infusion of their own. In case of any cerebral, pulmonic, or gastric difficulty, they apply two or three leeches to the part which suffers most from malarial congestion. Now, although marsh fever, in which the antiphlogistic treatment is contraindicated, may simulate a true inflammatory fever, still I can understand why, in this Cyprus fever, which suddenly lays hold of and attacks the gastro-duodenal apparatus, two or three leeches may now and then be applied to the epigastrium, especially in the case of a previously healthy patient who had not been the subject of marsh cachexia.

A Greek merchant told me, in Larnaca, that his wife occasionally suffered from a sudden attack of this fever, but he soon managed to cure her. He applied three leeches over the epigastrium to allay pain, and then gave her quinine.

Amongst the seven cases of this fever which I accidentally attended professionally in Larnaca, I will cite one or two as illustrations. The second son of one of our most eminent Lords Justices was suddenly and violently seized at 8 p.m. with intense pain in the head, down the back, loins, and calves of the legs; he wandered and became delirious; there was nausea, and pain in the epigastrium and right hypochondrium on pressure. Two hours afterwards the symptoms became more urgent. As I considered that the time had not yet arrived for the administration of quinine, and in order to cut short the hot and induce the sweating stage, I ordered a strong mustard pediluvium, mustard poultices to the stomach and calves of the legs, and an enema of tepid soap-and-water, and I gave frequently bicarbonate of potash in effervescence. So soon as the bowels were moved and slight diaphoresis appeared, I gave ten grains of quinine with five of calomel. I repeated five grains of quinine (but without the calomel) every three hours until thirty grains had been taken. On the following day this gentleman felt entirely relieved from fever. I recommended him to return to England as soon as possible, and he is now in London in the enjoyment of excellent health.

About the same time I visited a young man who had come out to Larnaca to establish a mercantile house: he had suffered from this fever fourteen days before I saw him. I noticed two dark stains—the one on the neck, the other on the chest—indications of a decomposed blood, as may often be observed in the course of yellow fever, I could do nothing for him; he died two hours afterwards—having vomited previously a dark-greenish bloody fluid—without pain and in his complete senses.

Those who have been exposed for a considerable time to the influence of a concentrated malaria incur great risk and danger when they remove from the source of infection with blood contaminated, and its constituents decomposed. In confirmation of this well-ascertained fact I may cite, although with feelings of the most sincere regret, the case of Surgeon-Major Menzies, who, after having performed his arduous duties in the camp during a period of more than two months, left Cyprus, on leave, to go to Malta. He spent a few hours with me in the same hotel in Larnaca, the night previous to his sailing. Although he looked fatigued he appeared to enjoy good health. Nevertheless, I well remember he directed my attention to two large stains of purpura on his left leg. He died before he reached Malta, and although I am not acquainted with the particulars attending his death, I am inclined to believe that it was the result of some internal hæmorrhage, determined by the destruction of the vitality of the blood, due to long exposure to an intensified blood-poison.

I have known many instances of death succeed to removal from the cause of infection; and the more intense the cause, the greater the danger. The master of a vessel trading between Liverpool and Panama once told me that in one of his voyages home he lost three of his crew from the malarial fever of Panama, although they appeared in good health at the commencement of the voyage home.

I cannot agree with some surgeons with whom I conversed in Cyprus, that this fever, so new to them, is a relapsing fever. It cannot be imagined that our troops, when in Malta, had been exposed to the causes which produce relapsing fever, or that the natives of Cyprus could have communicated any infection. The Cypriotes and the Greeks suffer in an equal degree from the same type of fever, and certainly they do not suffer from destitution or overcrowding. Their wants are moderate and easily supplied.

Neither can I believe, from what I have seen of this fever, that it has any connexion with scurvy. Spongy gums are to be seen occasionally in the natives, as well as amongst a

few of our soldiers. Had a scorbutic taint existed in our men, who have been always well supplied with fresh vegetables, I am convinced that exposure to a concentrated malaria would have given rise to a pernicious and putrid form of marsh fever.

Soon after I arrived in Cyprus, when the suspicion arose that a scorbutic taint was associated with this fever, lime-juice, and the acids which when combined with alkalies are the antiscorbutic remedies *par excellence*, were plentifully supplied to the men. And still the fever continued to rage, still the scorbutic symptoms continued to prevail, until the cool season had set in. I have seen spongy gums in patients with this fever who had lived upon a diet of the most antiscorbutic quality. Had these cases been associated with scurvy, lime-juice would have cured them. I regard these spots of purpura, ecchymosis, spongy gums, etc., which appear occasionally in the course of this fever, as the evidence of blood-poisoning and decomposition from an exposure to an intensely morbific cause of malarial origin. Should this fever (identical in many respects with the bilious remittent on the Coast of Africa and in the West Indies) assume the asthenic type, it might be mistaken for enteric fever. In this there are rose-coloured dots, there is tenderness of the abdomen and in the right iliac fossa on pressure: these are absent in malarial fever. There is gastric and duodenal irritability in the Cyprus fever, which is absent in the enteric. If hæmorrhages occur in the course of, or as a sequela in, this malarial fever (when not complicated with dysentery), they proceed from the mouth, kidneys, etc.; while in enteric fever the blood issues from the bowel during the separation of glandular sloughs.

Nevertheless, the germs of enteric and malarial fevers, although deriving their origin from a distinct source—the one from animal, the other from vegetable decay—may approximate, coalesce, and exist together in the same body, the one disease influencing and occasionally getting the better of the other. In the acute stage of a disease in which the two distinct elements are conjoined, the typhoid overpower and obscure the malarial symptoms; and here the treatment must be a mixed one: but in convalescence, malarial intermittence prevails, and comes out triumphant; and then quinine, of little value in the former stage, is most efficaciously administered in the latter.

The dark grumous matter occasionally vomited up in the course of this Cyprus fever must not be confounded with the black vomit in yellow fever. In yellow fever the cause is not malarial. The fever is continued, not paroxysmal. Albumen in the urine, characteristic in yellow fever, is the exception and of rare occurrence in marsh fever. Quinine, so valuable in the latter, is of no value in the former.

The mortality has been small, considering the large number of our soldiers who have been attacked in Cyprus with this fever. Had it been of an inflammatory, not of a malarial type, the mortality would have been far greater, but it has not exceeded 4 or 5 per cent.

Fever of a malarial origin is always of a nervous, not a true inflammatory type. The treatment of the former cannot apply to the latter, although a malarial may be complicated with a true inflammatory disease. In such cases a mixed treatment is required. As the result of my inquiries and observations into the origin and nature of this Cyprus fever, I consider it to be essentially a malarial fever, which, by reason of the intensity of the morbid cause, acted upon by an extremely high temperature, after a short incubation evolves in the human body the type of a bilious remittent, with a violent and prolonged hot stage affecting the chylopoietic viscera, not the spleen, which is the organ most concerned in a prolonged and well-defined cold stage of intermittent. It is not a relapsing fever nor an enteric fever, neither is it connected with scurvy, although scurvy may, under certain conditions, be associated with malaria. Any outward signs of a scorbutic taint must be attributed to malarial blood-poisoning, not to a deficiency of certain salts, the acids of which form carbonates in the blood, the absence of which acids constitutes that condition of blood known as scurvy. Now, when these acids are supplied to the food the scurvy is cured; but the scorbutic symptoms in Cyprus never disappeared, although these acids had been supplied until the temperature had greatly lowered, and until the malarial origin of these suspicious-looking symptoms had become greatly modified by atmospheric changes. And finally, that as an intermittent may pass into a remittent, so might a remittent pass into an intermittent, in which the spleen, not the liver, is concerned. And this transition is now actually taking place in the island of Cyprus, where the type of marsh fever has become transformed, and consequently the general health greatly improved, owing to improved atmospheric conditions.

I have had frequent interviews with the able and energetic chief of the medical staff in Cyprus, Sir Anthony Home, on the subject of this fever. I am happy to say that he entirely approves of the conclusions at which I have arrived as coinciding with the result of his experience in many parts of the world. To me it is a source of great gratification, after all the dangers and fatigues I have undergone in Cyprus, to find that my experience corresponds with that of so eminent an authority.

I will conclude by expressing the belief that, looking impartially on the great sanitary improvements daily carried on in Larnaca and in other towns of the island, the cause of this fever may soon be greatly modified, if not removed. And I entertain the firm hope that the example of a wise, impartial, and firm administration in Cyprus may extend its influence through the length and breadth of Asia Minor; and that lands now waste and unhealthy may become what they were in days of yore—"Lands flowing with milk and honey."

NOTES ON POTT'S FRACTURE.

By S. D. CLIPPINGDALE, M.B.,
Late House-Surgeon at the London Hospital.

The cases which form the subject of these notes occurred at the London Hospital in 1875 and 1876, and comprise all fractures of the lower end of the fibula, with or without fracture of the internal malleolus, and with or without dislocation of the foot. I am indebted to the Surgeons of the Hospital for permission to make use of their cases, and to the Surgical Registrar for the facility with which I was enabled to consult the notes.

		Number of cases.			
		Right side.	Left side.	Not stated.	Totals.
1875	Males ...	38	26	10	103
	Females .	12	15	2	
1876	Males ..	46	35	19	133
	Females .	7	14	12	
					236

Seat of Fracture.

There was some difficulty in ascertaining the relative frequency of the different seats of fracture, owing to the variety of terms used, but the following table contains a rough estimate:—

Seat of Fracture.	No. of cases.	Males.	Female.
Through malleolus	6	55	1
Just above malleolus	75	55	20
In lower fifth above malleolus ...	107	79	28
In lower third above lower fifth	48	35	13

Cause.

Of the 236 fractures, 190 were the result of indirect violence, 38 of direct violence, and in 8 the cause was not stated. Among the male patients, direct violence produced about 20 per cent., and 6·5 per cent. among the female patients; while indirect violence produced about 80 per cent. in the male, and 93·5 per cent. in the female patients.

Direct violence was produced (1) by a weight falling in 21 cases, and by a kick in 9 cases against the outside of the leg, the patient at the time standing; (2) in two cases, the patient standing, by a weight falling upon the inner side of the leg just above the ankle; (3) in 9 cases the leg was jammed between two resisting bodies, as between a cart-wheel and the road; and (4) in 5 cases the fracture was caused by the leg being caught between iron railings at the seat of fracture, the body bending over.

Indirect violence was produced in a great variety of ways. The most frequent were as follows:—Falls while walking on level ground, the foot giving under, produced 60; slipping off the kerbstone or off a doorstep, the foot twisting under, 37; falling a height varying from three to thirty feet, and alighting on the feet, 21; slipping down a flight of stairs, 17; falling while running on level ground, 4; the foot getting

firmly fixed in a groove and the body bending over, 2; alighting from a train in motion, 1.

Complications.

In no case was the fracture of the fibula compound. In one case death occurred from delirium tremens.

Comminution: In 5 cases the fracture of the fibula was comminuted. In each case the fracture was produced by indirect violence. The ages of the patients were respectively 37, 42, 49, 50, and 54; the internal malleolus was also broken in the patients aged 42, 50, and 54.

Fracture of internal malleolus was present in 34 cases. It occurred in 14 per cent. of the cases produced by indirect violence, and in 20 per cent. of those produced by direct violence. It was more frequent in females than in males, its proportion in the former being 1 in 4·4, in the latter 1 in 8·7. Its frequency also increased with the age of the patient, as is shown in the following table:—

Age –	under 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.
Percentage of cases	4·67	6·24	10·93	12·28	42.85

The fracture of the inner malleolus was comminuted in 2 patients, both females; their ages were 52 and 54; in each indirect violence produced the injuries. In 1 case, the result of direct violence applied to the internal malleolus, the fracture was compound.

Displacement of the foot: Four varieties of displacement were noticed, namely:—I. Eversion; II. Inversion; III. Backwards; and IV. Backwards combined with eversion. With regard to one of these—eversion,—it may be surmised that it was present more frequently than the notes show. It may also be assumed that in some cases in which the injury is briefly described as "Pott's fracture," or "a typical Pott's fracture," eversion to some degree was also present. Including these cases, eversion was present in 35, inversion in 3, backward displacement in 7, and the backward displacement with eversion in 5.

I.—*Eversion* followed indirect violence in 29 cases, direct violence in 4, in 1 the cause was doubtful, and in one it was not stated. In one case, due to direct violence, the fracture and displacement were caused by a quantity of earth falling against the inner side of patient's foot, the patient standing at the time.

II.—*Cases with Inversion.*

Registered number.	Sex.	Age.	Cause.	Seat of fibular fracture.
49 (1875)...	Male	36	Fell from top of a step-ladder two or three feet high, alighting on outer side of foot.	Between half an inch and an inch above malleolus.
95 (1875)...	Male	14	Slipped upon piece of orange-peel while walking, and fell with foot under.	One inch above malleolus.
1,647 (1876)...	Male	17	Fell from a tree 30 feet high.	In the lower third.

III.—*Cases with Backward Displacement.*

Registered number.	Sex.	Age.	Side.	Cause.	Seat of fibular fracture.	State of internal malleolus.	Treatment.	Days in hospital.
470 (1875) ...	Male	49	R.	Slipped off the kerb	Just above malleolus	Fractured ...	... ...	31
860 (1875) ...	Male	27	...	While wrestling fell, another man falling across his leg	Two inches from lower end	Not fractured...	... ...	25
244 (1875) ...	Female	31	R.	Fell from a form, foot twisting under	"Pott's"	Not fractured...	Back and side splints, and suspended in cradle	43
662 (1876) ...	Male	33	R.	Slipped while going upstairs, foot twisting under	An inch and a half above malleolus	Not fractured...	Back and side splints, and suspended in cradle	37
1,179 (1876) ...	Male	58	L.	Slipped while going downstairs	In the lower third	Not fractured...	Outside splint	25
531 (1876) ...	Female	48	R.	Slipped off a step, and fell with foot under	An inch above lower end	Fractured ...	Back and side splints, and suspended in cradle	34

IV.—*Cases of Backward Displacement with Eversion.*

Registered number.	Sex.	Age.	Side.	Cause.	Seat of fibular fracture.	State of internal malleolus.	Treatment.	Days in hospital.
845 (1875)	Male	20	R.	Fell while walking, foot bending under	Three or four inches above lower end	Not fractured...	Outside splint with foot-piece	27
1,937 (1875)	Male	25	L.	Fell during a fight	In lower third	Not broken, but projected prominently under the skin; internal lateral ligament diagnosed as ruptured	In the first place, the leg was fastened to an outside splint with foot-piece, and the knee-joint flexed. After a few days, the heel being much drawn up through spasm of the posterior muscles, the leg was placed between back and side splints, and suspended in a cradle. The heel, however, still being drawn up, the surgeon divided the tendo Achillis. This was done seven days after the accident. Displacement was remedied quite easily after the tenotomy, and the foot maintained in good position. Tendon was well united, and the patient could walk about with crutches when he left the hospital.	79
3 (1875)	Female	54	...	Fell while walking on frosty ground	Two inches above malleolus	Fractured through its base, and apparently comminuted	The fracture and displacement were reduced with aid of chloroform, and limb put up between side and back splints and suspended in cradle. Two days after admission the displacement, having returned, was again reduced under chloroform, and limb fastened upon outside splint with foot-piece, and flexed at knee-joint. This plan succeeded. Thirty-one days after admission, splint was removed, union being firm, and foot in good position.	41
351 (1875)	Female	34	L.	Fell while coming downstairs, foot twisting under	In lower third	Fractured and comminuted	The leg fixed on an outside splint, the foot being extended.	37
106 (1876)	Male	34	L.	Fell while coming downstairs, foot twisting under	In lower fourth	Not fractured...	Back and side splints used, and leg suspended in cradle, the leg being firmly strapped down to back-splint, and a pad placed under the heel to raise it. Splints removed twenty-five days after accident; union firm; foot in good position.	32
945 (1875)	Female	43	L.	Fell downstairs, the leg twisting under (accident occurred seven days before admission)	Near malleolus	Sound, but internal lateral ligament completely ruptured	Limb first put up on side splint with foot-piece. Five days later, in consequence of difficulty in reduction and retention, the surgeon divided the tendo Achillis, and the limb was put upon outside splint with foot-piece. Seventeen days after there was still a certain amount of displacement, and the limb was put between three splints and suspended. Sixteen days later, leg examined: foot in good position, and patient with considerable power of extension.	81

Treatment.

The plan of treatment adopted varied in the practice of different surgeons, and at times was modified to suit special cases. Five principal methods were used—viz., 1. Fastening the limb to an outside splint with foot-piece; this was the method most frequently employed. 2. Using a back splint and two side splints. 3. An inside splint alone. 4. A side splint for a week or less, at the longest ten days, followed by a gum-and-chalk bandage. 5. Using the gum-and-chalk bandage from the first.

The following table shows the duration of residence in the hospital of patients under the various methods of treatment.

Plan of treatment.	No. of cases so treated.	Number of days in hospital.									
		5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	45 to 50	Above 50
		No. of cases.	No. of cases.	No. of cases.	No. of cases.	No. of cases.	No. of cases.	No. of cases.	No. of cases.	No. of cases.	No. of cases.
Outside splint	67	...	1	8	11	22	10	6	3	3	3
Back and side splints	25	...	...	1	2	3	4	4	5	2	4
Inside splint	23	...	1	2	4	6	2	3	2	1	2
Side splint for week or ten days, followed by gum-and-chalk bandage	7	1	4	1	1	...	...	...	...	...	...
Gum-and-chalk bandage from the first	6	1	2	...	2	1	...	...	...	...	...

The following table gives some account of cases in which the patient, after receiving the injury, and before coming to the hospital, had undergone a certain amoun of exercise:—

Registered number.	Sex.	Age	Exercise after accident.	State of parts on admission.	Days in hospital.
767 (1875) ...	Male	27	Walked about for a day before admission	Much swelling; a fracture through external malleolus	21
925 (1875) ...	Male	64	Walked four days, three or four miles each day, before coming to hospital	Swelling very great; tip of internal malleolus broken off; fracture of external malleolus	7
2,159 (1875) ...	Male	19	Walked home after accident, and to hospital on following day	Fracture of external malleolus	32
576 (1876) ...	Male	41	Walked to hospital, a distance of three miles ...	Fracture of fibula about one inch above malleolus	23
809 (1876) ...	Male	25	Walked half a mile to the hospital	Fibula fractured in its lower fourth	24
24 (1876) ...	Female	47	Walked to hospital, a distance of half a mile ...	Fibula fractured at junction of upper three-fourths with lowest fourth	41
1,073 (1876) ...	Female	34	Walked about the house a day before coming to the hospital	Much swelling; fibula fractured about one inch above malleolus	19

Remarks.

The following points may be summarised from the above cases:—

I. The most frequent seat of the fibular fracture was in the lowest fifth of the bone above the malleolus.

II. Indirect violence produced four-fifths of the fractures in the male patients, and more than nine-tenths in the female patients.

III. The most common manner in which direct violence was applied was by a blow upon the outer side of the leg, the patient at the time standing; and indirect violence was most frequently produced by a slip while walking upon level ground.

IV. The frequency of fracture of the inner malleolus increased directly with the age of the patient.

V. In two cases in which there was backward displacement, division of the tendo Achillis was necessary to remove the deformity.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

CHARING-CROSS HOSPITAL.

CLINICAL TEACHING—REMARKS ON HERNIA AND DISEASES SIMULATING IT.

By Mr. HENRY HANCOCK.

On October 23, Mr. Hancock gave the second of three lectures on his experience of those diseases which simulate hernia.

He began by again referring to the subject of constipation. This condition may give rise at times to all the symptoms of sciatica; and from anatomical consideration it is not difficult to understand how sciatica is actually produced by the pressure of the hard and distended rectum on the sacral plexus of nerves where it leaves the pelvis. He remembered one case in particular. A gentleman came to him, and when he first saw him he was nearly doubled up with pain; he said he had sciatica, and had been troubled with it for some years. Mr. Hancock did, what he always advised should be done when a patient complains of pains in his legs or abdomen or loins, he carefully percussed the abdomen, beginning at the right iliac fossa, and following the course of the colon to its termination on the left side. The man's tongue was foul, his breath offensive, his face yellow; the abdomen was "solid" on percussion all round. The diagnosis was a loaded cæcum and colon—hence irritation of the sciatic nerve in the pelvis—hence the sciatica. The poor fellow had been galvanised and bled, he had been blistered and had needles stuck in his bottom, but all with no permanent good result. Mr. Hancock ordered him six pills, each containing croton oil, blue pill, henbane, and colocynth, two to be taken each night. The patient came to him after this treatment, cured. The pain after a short time returned, and was again cured—this time permanently—by the same treatment. These pills will not always cure such a case, because of some remaining tenderness or irritability of the sciatic, but quinine in doses of from three to five grains two or three times a day will usually complete the cure. If the quinine produce deafness, stop it.

The next set of cases which simulate hernia is exceedingly rare. In the whole course of his experience he has only met with two; and he believes he was the first to operate for the relief of the condition. These two cases were the following:—

He was called to see a lady apparently in the last stage of strangulated hernia. She had been confined about six weeks before, and now she had had the typical hernial sickness, the vomiting first of frothy mucous, next of bile and of stercoraceous matter; and now hiccoughing had set in, she was covered with a cold clammy sweat, and the pulse was weak and almost imperceptible. On inquiring into the history he found that prior to her confinement her bowels had been irregular; and he would state as an important practical point that one sign of constipation is constant irritability of the bowels and apparent diarrhœa. It was so in this case. The result of his examination was that he had an impression that there had been some lodgment of matter somewhere in the course of the alimentary canal. There was pain in the right iliac fossa, of a dull, heavy, dragging nature. On careful manipulation—and he would advise every surgeon always to trust his hands rather than any instrument, to educate his fingers so that they might take the place of his eyes where eyes would not go—he fancied he could make out, independent of the indurated bowel, a streak of doughy, quaggy, deep-seated material, a doubtful fluctuation as it were, just above Poupart's ligament on the right side. He of course compared it carefully with the other side. His maxim always was to kill the patient, not to let him die unaided. Here death was certain if the patient was left

alone, and he proposed to cut down into the abdomen and see what was the matter. He made a transverse incision above Poupart's ligament right down to the peritoneum. Now, this structure has always been a bugbear to surgeons, and a great deal of rubbish has been talked about it. The fact is, that under certain circumstances you may as safely cut it as you may cut a finger. When the peritoneum is quite healthy, if you wound it the patient will most likely die; but when there is great irritation of the part from a tumour or a hernia, the peritoneum may not only be safely cut, but there will be relief of urgent symptoms by cutting into it. In this case he cut through the peritoneum, and let out a quantity of most abominably offensive matter. The discharge was peculiar. It was not pus; it looked like dirty water in which greens had been boiled, with flaky masses of broken-up fibrin. He ordered warm-water dressing, and had patient turned on her right side for drainage, and left her not expecting to see her alive again. In the evening, however, when he saw her, her skin was dry and warm, the hiccough had stopped, and her pulse had increased in volume. He gave her tincture of opium according to his usual plan, and saw her next morning. Then the nurse showed him three little pellets of fæculent matter, which had been discharged from the wound, moulded into the shape of the vermiform appendix. His diagnosis was that there had been an escape of fæcal matter into that body, and an abscess there; sloughing, and escape of the contents into the pelvis. In four or six weeks the wound had quite healed, and patient walked about as well as ever. She died four years afterwards of heart disease, and Mr. Hancock had then an opportunity of examining the peritoneum. He found there was not a trace of it having been cut, and so proved what he has long surmised, that, after being wounded, the peritoneum is capable of uniting and becoming a perfect membrane.

His next case was that of a gentleman who went to Margate to see his son at school. There he enjoyed himself, went tripping about by the sea-shore, and came home with a tremendous appetite for breakfast. He then ate a large quantity of pork-pie very hurriedly, not masticating it properly. In the evening he had pain, vomiting, etc., and returned to town, where Mr. Hancock saw him, and recognised the same train of symptoms as in the previous case. He operated; the same kind of fluid came out, and the same immediate relief followed. But this was a more instructive case than the last. The patient went on well for two or three days; at the end of that time Mr. Hancock found him in great pain, with a drawn, anxious countenance, and vomiting. What was the reason? He had given opium (as after all abdominal operations), but the general practitioner who had called him in had thought that his patient was doing so well that he only wanted his bowels open to be quite recovered, and, with his old-fashioned purging ideas, had given him calomel and colocynth pill. This killed him. Never give aperients in similar cases, but give opium as long as the pupil does not contract.

As he had already said, these were the only two cases of the kind he had ever seen, but it had struck him that the gentlemen before him might enlarge the sphere of the operation. In cases of enteritis, where you have first swelling of the belly and pain, perhaps referred to the umbilicus, followed by cessation of the pain and collapse, you will find in the peritoneal cavity, on post-mortem examination, perhaps about a pint, or less, of a very acrid effusion—partly pure serum, partly flaky fibrin. He believed that in such cases if a man had the pluck to cut right into the belly and turn the patient over on the side incised, the secretion would be evacuated, and the patient relieved, with a fair chance of recovery, instead of, as now, inevitably dying. In other cases of evacuation of deep-seated matter, as in effusions into joints, patients recovered; and, as he had shown that it was quite safe to cut the peritoneum, there seemed no reason why this operation should not be performed.

Another set of symptoms which resemble those of strangulated hernia is that which belongs to those diseases which cause obstruction to the passage of fæces. These he would classify into cases where bands were thrown out over the gut,—not bothering about intussusception, which is fully described in books, and those cases of stricture from irritability, cancer, etc.

First, concerning the internal bands which are found occasionally stretching from one piece of gut to another, or in some way pressing upon the intestine, he remarked that the symptoms were not violent. There was vomiting and desire to defæcate, without the ability to do so.

One case he remembered was that of a gardener who had been moving a heavy weight, and had then felt something slip in his inside. There was no swelling anywhere when examined, no induration as previously described, but the patient complained of a dragging weight in the right iliac fossa, and there could be detected a doughy thickening of the gut and a slight depression, which Mr. Hancock fancied was a constricting band. He recommended operation. The man asked two or three hours to consider, but ultimately refused to be operated on. He died, and at the post-mortem at the place of depression a band was found passing over the gut.

Cases of death will sometimes occur with symptoms like obstruction where no obstruction exists. Mr. Hancock remembered one which occurred when he was house-surgeon to Sir Anthony White. A man was admitted, said to have stricture of the rectum; he had vomiting and other urgent symptoms. A bougie was passed up the rectum by Sir Anthony White as far as the sigmoid flexure of the colon. No blood followed, but in the afternoon the patient shivered, his belly swelled, he vomited, became collapsed, and died about midnight. Here it was thought there was perforation by the bougie, but a post-mortem examination showed not the slightest abrasion. There had simply been sympathetic irritation of the intestine, and an enormous collection of flatus, causing collapse and death.

In another case he was asked to be present at an operation for strangulated hernia, but the surgeon was at fault. No obstruction could be found, although all the symptoms of such a state had been present. There was no action of the bowels; the man lived for three weeks, and at the post-mortem examination it was found he had died of lead-poisoning. The symptoms had been due to lead colic, and the surgeon had so made a grave error by not inquiring into the patient's previous history.

In another case nature was at fault. Mr. Hancock was called in to make a post-mortem examination to save the character of a colleague in the country. The subject was a young lady of about twenty-one years of age. She had had in life symptoms of strangulated hernia or constipation. The gentleman in attendance had introduced per rectum a long tube, and had given an enema. She was not relieved, but died soon after. Some of her friends declared she had been killed by perforation of the gut, caused by the introduction of the tube. On examination there was found to be not the slightest damage to the mucous membrane of the intestine, but the descending colon was placed in a hole in the mesentery, and from constant friction the mesentery was here thickened and almost cartilaginous, and the colon was so thickened and contracted that a common dressing-probe would not pass through it at the seat of contraction.

MIDDLESEX HOSPITAL.

CASE OF URINARY FISTULÆ—DISUSE OF PART OF URETHRA DURING TWENTY-SIX YEARS—STRICTURE.

(Under the care of Mr. MORRIS.)

Peter R., a gardener, aged fifty-eight years, was admitted on September 30, 1878, suffering from retention of urine. He stated that he had been unable to pass water save in drops, and with great pain, since September 24. On examination patient was found to have two urinary fistulæ about the junction of the scrotum with the penis. His bladder was much distended, and he was unable to pass urine. Catheters could not be passed into the bladder by meatus or through the fistulæ; the attempt was very painful.

History.—Patient had a gonorrhœa about forty years ago, which was followed by stricture. Fourteen years later he had some injury to the perineum, followed by extravasation of urine. For this incisions were made at the seat of the present fistulæ, which have existed since. Patient has suffered from retention of urine more or less during the past two years, and also from frequent and painful micturition. The urine has lately been cloudy, and has clung to the vessel into which it was passed. It has been passed during the

last twenty-six years only through the fistulous openings, through which also, in connexion, semen has always passed. He has always been worse after exposure to cold or wet. He states also that he has suffered from incontinence of urine, apparently from an over-full bladder. On September 24 he caught fresh cold, and has since passed his urine in drops.

Treatment.—On admission, patient had opium administered, and was put in a warm bath.

October 2.—To-day Mr. Morris succeeded in passing two filiform bougies of catgut, one of which reached the bladder; the other went about three inches down the urethra. These were left in. Mr. Morris then tapped the bladder per rectum, when there was a copious flow of high-coloured urine. The tube was left in and plugged.

3rd.—A sponge at the anus is wet with urine, and a discharge of mucus from the rectum. From the urethra there is a flow of purulent ammoniacal urine; no flow of urine from the tube. Patient states that he feels "sinking"; tongue moist; appetite poor; pulse fair, but soft. There is little local pain; patient perspires somewhat. A mixture containing gallic acid and quinine, five grains to the dose, has been ordered. Temperature, 2.30 p.m., 99°. In the afternoon a No. 1 gum-elastic catheter was passed into the bladder and left there.

4th.—Patient has slept well, and is better; about two ounces of pus and some fetid gas escaped from the rectal tube when the plug was removed. Some muco-pus wells up by the side of the catheter, through which but little urine passes. This afternoon a No. 3 gum-elastic catheter has been passed into the bladder and tied in. The canula has been removed from the rectum.

5th.—Urine passes freely along catheter; bowels are open freely; patient seems better, and complains of no general or local pain. A No. 4 catheter has been introduced into bladder.

8th.—Nearly all the urine now passes by the urethra; a No. 5 catheter is in the bladder. Mr. Morris intends trying to close the fistulæ and cause the urine to pass by its natural channel.

23rd.—The edges of the fistulæ have been brought together, and now the urine passes freely along the urethra, a few drops only passing by the scrotal openings.

31st.—Patient has now passed a week without any urine coming from the scrotal region. The fistulæ there seem quite closed. A No. 8 catheter is being passed daily. Patient has a free flow of urine, but somewhat weak expulsive power.

EPITHELIOMA OF TONGUE—REMOVAL OF AFFECTED PART.

(Under the care of Mr. MORRIS.)

James R., aged forty-two years, married, was admitted on October 18.

History.—There is no cancer or phthisis in patient's family; one of his children suffers from rickets. He had been a soldier for twelve years—from 1854 to 1866; served nine years in India, and left there in 1866. He has been a smoker since he was twenty-two years old; he has generally smoked a pipe, and occasionally while in India suffered from sore tongue. Three months ago he noticed a small sore on the right edge of the tongue near its apex: he thought it was produced by the use of the pipe, or by friction against some bad teeth (he has a bicuspid with a sharp edge close to the sore); a fortnight afterwards he consulted Mr. Morris at the Bloomsbury Dispensary, and was treated anti-syphilitically. Shortly after the sore was observed, a lump formed in the tongue at the same spot; this ulcerated on the surface and gradually spread.

On admission, patient is in good health and condition; there is an ulcer along the anterior portion of the left side of the tongue, reaching nearly to the tip; the raw surface is raised, reddish, and has a somewhat facetted appearance (from impression of the teeth?), it is oval in shape and in its long diameter measures about an inch. This corresponds to a hardness in the substance of the tongue itself, not extending deeply, but forming the base of the ulcer. There is an enlarged gland on the same side under the lower jow.

Treatment.—October 23: Patient being under the influence of chloroform, Mr. Morris removed the enlarged gland, and having passed two needles through the tongue beyond the growth, the affected part was removed with a scalpel; the artery was twisted, and the wound below the jaw brought together by sutures. Some oozing from the tongue followed, which was checked by the application of ice; the patient was able to swallow liquid food well almost immediately after the operation, and no trouble of any kind was experienced.

November 1.—The wound below the jaw has quite healed; the tongue is healthy. There is very slight interference with speech, and patient is now able to take bread-and-milk without any difficulty.

CANCER OF MAMMA—AMPUTATION.

(Under the care of Mr. MORRIS.)

K. A., aged fifty-six years, married; admitted October 12.

History.—Patient has no family history of cancer. She has never had any illness beyond occasional winter cough. Five months ago she noticed that she had some pain under her left arm, which also attacked her breast. Three months ago she noticed that that breast was larger than the other, and was painful. About two weeks ago she noticed a lump in the left axilla, and consulted a gentleman in Birmingham, who diagnosed a soft cancer.

On admission, patient is a pale, but not emaciated woman. In the left breast there is a hard tuberous mass as large as an orange. There are no adhesions; no dimpling of the skin. There is a chain of enlarged lymphatics, and there are two enlarged glands in the axilla.

Treatment.—October 16: To-day Mr. Morris excised the left breast, prolonging his incision towards the axilla, and removing the enlarged glands. There was profuse hæmorrhage. Carbolic dressings were used.

16th.—Dry lint and carbolic gauze are being used as dressings, and a drainage-tube is placed in axilla.

November 1.—The wound has almost entirely healed, and the temperature has scarcely ever been above normal. The chief point of interest has been in the simple nature of the dressing, which has throughout consisted only of dry lint. Patient's condition is now fairly good.

Chloral in Retention of Urine.—A young woman in the eighth month of pregnancy believed herself to have been in the pains of labour for twenty-four hours, during which time she had passed no urine. The bladder was enormously distended, projecting above the pubis and towards the vagina, so that it was impossible to reach the os by the finger. There was also considerable tumefaction of the external genitals, with severe suffering. All attempts at catheterism having failed in consequence of the tumefaction and deviation of the urethra, some morphia was given, and paracentesis was proposed. This not being acceded to, Dr. Tidd prescribed chloral, which had already been employed by some surgeons in severe cases of urinary retention. Of this, ten grammes were combined with sixty grammes of water; a teaspoonful at first every half-hour, and then at longer intervals. Deep sleep ensued, and during this the patient passed unconsciously an enormous quantity of urine, the flow commencing five minutes after the second dose had been taken. Seven days after, she was delivered of a healthy infant without any reproduction of the retention.—*Rév. Méd.*, October 28, and *Archives Méd. Belges.*

Primary Examinations.—The following were the questions in Anatomy and Physiology submitted to the candidates at the written primary examination for the membership of the College of Surgeons last week. The names of the successful candidates are published this day in the *Medical Times and Gazette*:—1. Describe the minute anatomy of a Peyer's patch; and contrast the structure of the small and large intestine. 2. What is the average amount of fluid required by the body daily? Mention the chief circumstances by which the demand for it may be modified; the several channels by which fluid is eliminated, and the conditions which may lead to variation in the amount discharged by each channel. 3. Describe the occipito-atlantal joint, and all the ligaments which unite the skull to the vertebral column. 4. Describe the dissection required to expose the transversalis abdominis and the fasciæ connected with it. 5. Give the dissection required to expose the radial artery from the styloid process to its termination. 6. Describe the fornix and its relations. Candidates were required to answer at least four, including one of the first two, out of the six questions. There were thirty-nine candidates.

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Medical Times and Gazette.

SATURDAY, NOVEMBER 9, 1878.

NEW FACTS ABOUT KIDNEY DISEASES.

Under the above heading we propose to range several recent additions to our knowledge of renal pathology, although there is not a close relation between the whole of them. As a clinical fact of much importance, especially from a prognostic point of view, we may first allude to the affection styled by Dr. Moxon (*Guy's Hospital Reports*, third series, vol. xxiii., page 233) chronic intermittent albuminuria of adolescents. It occurs in young men generally between the ages of fifteen or sixteen and twenty-two years, and is characterised by the appearance of albumen in the urine at one time and not at another, but generally in the urine passed after breakfast. The first urine passed in the morning, as well as the afternoon urine, may be completely free, though in some cases albumen is only found in the evening. Dr. Moxon has met with more than twenty such cases of intermittent albuminuria all answering to the above description, and (most important of all) he has seen several of them completely recover. Examination of the various systems of the body gives negative results, but the patients are generally brought to the doctor by their friends on account of their languor and general indisposition to exertion, and to joining in the common amusements of society. Dr. Moxon appends a note from Sir William Gull in reference to one of his cases, in which he mentions that he has himself so often found albumen in the otherwise normal urine of youths from sixteen to twenty-two, that he regards the affection as common, and attributes it to "atony of vessels and nerves." Dr. Moxon, however, thinks it possible, from the large quantity of oxalate of lime which is usually present in these cases, "that morbid matters in the urine itself may induce an active irritation of the kidneys," and also that disturbances of the sexual system at this period of life "might be allowed as likely to reflect disturbances on to the urinary system." We may mention here that we have ourselves lately met with two cases in some respects resembling Dr. Moxon's. In one, a lad between fourteen and fifteen, albumen reaching even to one-third was found at various times during a prolonged period of examination, and chiefly in the forenoon, but all trace of it disappeared for several months before the patient's death from phthisis. In the second case, which is still under observation, the albumen, which had been present for nearly five years, has now been absent for some time. The patient's age is twenty-five, and he also suffers from chronic phthisis. Similar cases to Dr. Moxon's appear to have been met with by Leube (*Virchow's Archiv*, Band lxxii. Heft 2) in his examination of the urine of 119 presumably healthy Bavarian soldiers. In five of the soldiers, or 4·2 per cent., albumen was found in the morning urine, while in 19, or 16 per cent., the mid-day urine was albuminous. In fourteen soldiers, or 11·8 per cent., the mid-day urine alone was albuminous, while in five, or 4·2 per cent., both morning and mid-day urines contained albumen. The quantity was sometimes very small. Analysis of two well-marked cases showed amounts varying from ·068 to ·037 per cent. No casts or blood corpuscles were ever found, nor was there anything abnormal in the specific gravity. The cause of the albuminous mid-day urine could clearly be traced in the majority of cases to the exertion of marching, the albumen being absent on the days previous to a prolonged drill, and disappearing again a few hours after the latter. Hence only the five cases where both morning and mid-day urines were albuminous can probably be referred to Dr. Moxon's category of albuminuria of adolescence.

An extremely interesting paper on the albuminous substances which occur in the urine in albuminuria has been contributed to *St. Bartholomew's Hospital Reports* for 1877 by Dr. Lauder Brunton and Mr. D'Arcy Power. In it they deal with the subject of differences in the coagulating point of albumen (or album*in*, as it should be more correctly written, to distinguish egg-albumen from the serum-albumin of the blood) in the urine of Bright's disease, and also with the question whether there are other forms of albumin met with in it besides ordinary serum-albumin. We shall only give results here, and leave our readers to refer to the original paper for details. In answer to the question, Does the coagulating point of the albumin in albuminuria vary much? they found that it ranged from 144° to 180° Fahr. in five cases of different forms of "Bright's disease," and they showed that this difference partly depends, as was previously known, on the acidity and the amount of neutral salts in the urine which lower the coagulating point, and partly on the amount of urea present which raises it. The effect of the urea is so great that when it reaches 25 per cent. of the mixed solutions of serum-albumin and urea, coagulation is entirely prevented. On the other hand, the coagulating point is lowered by uric acid. Dilution of albuminous urine with water to a specific gravity of 1005 lowers the coagulating point, but does not render it constant. The differences in the coagulating point appear also to be partly due to the existence in the urine not only of serum-albumin, but also of the products of pancreatic digestion, which coagulate at higher temperatures the further the process of digestion has advanced, though their coagulating point is much lower than that of serum-albumin—about 160° Fahr. The effect of food on the coagulating point was experimented on in several cases, and was found generally to lower it, though not invariably. The coagulating-point is not sufficiently constant in different diseases attended with albuminuria to infallibly indicate the nature of each disease; but the authors remark that "the great differences between the urine of a case of waxy kidney, in which the coagulating-point was about 162° Fahr., and one of chronic Bright's disease, where it was 132° Fahr., cannot be regarded as unimportant." The effect of food in causing albumin to

appear in the urine only after eating, led in two cases to an examination of the urine for the ferments and products of gastric and intestinal digestion. Pepsin, which is normally present, according to Brücke and Cohnheim, was not found; but traces of trypsin, or pancreatic ferment, and of ptyalin, or diastatic ferment, were detected. Paraglobulin also occurred in small quantities, and in one case a little glycogen was probably present, in company with peptones or some bodies closely allied to them. Dr. Brunton remarks on the importance of the discovery of pancreatin, or trypsin, in the urine, and says:—"Its loss in unusual quantity may possibly prove injurious to digestion, and be one cause why the albuminous products of imperfect digestion appear in the urine. Further observations are wanted, but this would seem to point to the existence of a vicious circle in this as in other diseases, the albuminuria leading to the excretion of pancreatic ferment, and the loss of the latter leading to imperfect digestion, with excretion and loss of its soluble products." Later observation may show that some cases of albuminuria are almost or entirely due to disordered assimilation; and, if so, the discovery must have an important bearing on treatment.

The facts above enumerated, as well as the remarkable cases of amyloid disease of the kidney *without* albuminuria, described by Dr. Litten (*Berliner Klin. Woch.*, Nos. 22 and 23, 1878), and those of Fürbringer (*Virchow's Archiv.*, Band. lxxi.), where the albuminuria of amyloid disease was simulated without amyloid changes being really present—both of which have recently been referred to by Dr. Grainger Stewart in his British Association address,—may convince our readers how much there is still to be worked out about albuminuria.

THE HABITUAL DRUNKARDS BILL.

One of the greatest surprises of the last Parliamentary session was the unopposed second reading of the Habitual Drunkards Bill, introduced by Dr. Cameron, M.P. for Glasgow. This unexpected result was brought about by the equally unexpected withdrawal of certain objectionable clauses of a compulsory character, which the promoters of the measure had always seemed to regard as essential features of the Bill. And though, even in its now curtailed and modified form, the Bill did not advance beyond the second reading, the measure will certainly be brought before Parliament again next session, with every prospect of becoming law, so that some previous consideration of its main provisions will not prove inopportune.

The chief object of the Bill is to provide for the licensing and management of "Retreats" or temporary asylums "for the reception, control, care, and curative treatment of habitual drunkards." It was originally proposed to provide for the establishment or support of these Retreats out of public funds, but all such proposals have now been abandoned. As understood in the Bill, "habitual drunkard" means "a person who, by reason of habitual intemperate drinking of intoxicating liquor, is dangerous to himself or herself, or to others, or incapable of managing himself or herself, and his or her affairs." Before entering on the examination of the clauses, it will be advisable to advert very briefly to the "previous history" of the measure.

In 1872 a Committee of the House of Commons considered the question of habitual drunkenness, and upon their report the late Dr. Donald Dalrymple, then M.P. for Bath, who had moved for the Committee, framed a Bill dealing with this subject. After the death of that gentleman, Parliamentary action was for a time in abeyance, though the extra-Parliamentary agitation for statutory powers and assistance in the efforts to reclaim habitual drunkards was kept in vigorous life by those who had sympathised with the proposals of Dr. Dalrymple's measure. Their wishes at length received expression in the original form of the Bill now before us, which was first introduced in the session of 1877, but at too late a period to have the chance of a second reading. In framing their Bill they had the advantage of the experience acquired in America and Australia of the practical working of similar enactments—an experience, however, which, in the opinion of at least a few competent witnesses, was very far from establishing the efficacy and excellence of the "Retreat" system. If this system now receive the recognition and approval of our Legislature, it is to be hoped that the greatest precautions will be taken in regard to the licensing, management, and inspection of Retreats, in order to secure their freedom from the grave defects which Dr. Bucknill has repeatedly pointed out in the management of many of the inebriate asylums of America.

The most important clauses in any measure of the kind before us are those that regulate the admission of habitual drunkards to these places of confinement. We have always protested against the proposals made in former Bills to grant to the friends of the drunkard some power or influence in securing his incarceration in a Retreat, regarding any such provision as totally at variance with the respect for the liberty of the subject characteristic of enlightened legislation, and as continually liable to gross abuse by unscrupulous "friends" of the unfortunate victim. The original form of the present Bill repeated these objectionable compulsory powers of confinement, but as they have now been withdrawn, the drunkard is saved from his friends. It is left entirely to his own choice to seek this mode of reformation from his besetting sin, by signing away his personal liberty for a limited period, during which he will have to conform to the restraints of his temporary asylum. The period of detention must not exceed twelve months, and is fixed by the inmate himself in his original application for admission. It is further provided that every application shall require the attestation of a justice of the peace, after he has satisfied himself that the applicant really is an "habitual drunkard" as defined in the Act, and thoroughly understands what his application will commit him to.

There is also some provision in the Bill for the discharge of suitable cases before the expiration of their already restricted period of detention. This may be effected either at the instance of a justice of the peace, should he find it advisable, upon the request of the proprietor of a Retreat, or by order of the Home Secretary on the recommendation of one of the inspectors who are to report on the inmates of all Retreats at least twice a year. Further, a judge of the High Court of Justice may, on application, authorise any person to visit and examine an inmate of a Retreat, and may, on receiving the report of the examination, order the inmate's discharge. These securities against improper or unnecessarily protracted detention may appear sufficiently ample, and in practice might prove to be so; but we should like to see a special clause inserted, providing that, subject to reasonable restrictions, the expression of a desire by an inmate for an official examination of his case with a view to his discharge should receive the earliest possible attention. Many circumstances might arise in the condition of the patient, of his family, or business affairs, to render such a provision occasionally very serviceable.

By far the most objectionable clause in the amended Bill is the following (Clause 23):—"If an habitual drunkard, while detained in a Retreat, wilfully neglects or wilfully refuses to conform to the rules thereof, he shall be deemed guilty of an offence against this Act, and shall be liable upon summary conviction to a penalty not exceeding £5, or at the discretion of the court to be imprisoned for

any period not exceeding seven days," etc. We object to this clause on every ground. It is inconsistent with the general non-coercive spirit now characterising the Bill, and even with the definition of an "habitual drunkard," who is declared to be one who is "incapable of managing himself or herself." But apart altogether from its illogical position in the Bill, we object to the subject-matter of the clause. The rules of Retreats must surely be accommodated to meet the well-known tendencies and powerful cravings of their proposed inmates, and if that cannot be managed without the proprietors having the assistance of the magistrate always available, so much the worse for the prospects of the whole Retreat system. The very reason for a drunkard's entering a Retreat at all is that he cannot restrain himself from breaking certain of the unwritten laws of society: is it then reasonable or just to convert his admitted weakness into a punishable offence? The proposition is, however, so completely out of keeping with the spirit now pervading the Bill that we are fain to believe it has been reprinted by mistake since the withdrawal of the compulsory clauses.

We have thus far discussed the greater part of the Bill in relation to a most important point—the position of the habitual drunkard himself. Our consideration of the remaining clauses must be brief. Every house, or collection of houses, intended for a Retreat must first receive a licence, the licensing bodies being the ordinary magistrates for counties or boroughs in sessions assembled; and the applications for licences, which are available for not more than thirteen months, must supply detailed information regarding the rooms and recreation-grounds, and any other particulars desired by the licensing magistrates. The retreats and their inmates are to be subjected, at least twice a year, to the visitations and reports of inspectors appointed by Government. The rules for the inspection and management of each Retreat must receive the sanction of the Home Secretary, who may from time to time alter or cancel them, as he may deem advisable. The great necessity for the supervision of all such institutions as Retreats and Asylums by responsible Government officials must be obvious to everyone. So important will this be for securing the confidence of the public in the present case that we think the control of the State had better begin at the beginning by supplying the licence. That document would be far more satisfactory coming from the responsible central authority, having at command the services of a competent inspector, than if granted by the local authority, which cannot, in many instances, be very well qualified to form a judgment in the matter of licensing a Retreat for such a purpose. And as it is understood that the chief obstacle to the advancement of the Bill beyond the second reading was the objection in the minds of many members to the further multiplication of asylums of a private nature, the proposal to place the Retreats completely under public and responsible control will evidently facilitate the progress of the measure when re-introduced.

As usual, we call in the medical attendant before the close. In the Bill itself there is no distinct provision for the regular medical supervision of Retreats, though medical attendants are once or twice indirectly referred to. This omission is most noticeable in connexion with a clause providing that an inmate of a Retreat may, for the benefit of his health, be transferred, for part of the prescribed time of his detention, to the care of some suitable and trustworthy person outside the Retreat; but the application for such a transfer is directed to come from the licensee of the Retreat. This application would originate much more appropriately with a disinterested medical attendant than with the interested proprietor; and some express security for such disinterested medical supervision is eminently desirable in the interests of the persons detained under the Act. Should the defect remain unprovided for in the clauses of the Bill, it is to be hoped that the rules of no Retreat will be sanctioned without the deficient security being supplied.

With a few further improvements in the directions we have suggested the Bill is likely, we hope and believe, to effect some real good, though not to the extent and degree expected by its promoters. From the very nature of its provisions, the measure can never benefit any but the well-to-do classes, where examples of habitual drunkenness are, happily, much less common than among the great masses of our town populations. The great stronghold of this debasing vice among our poorer citizens is quite untouched by the measure; and, even within the limited sphere of its application, instead of seeking to grapple with the origin and causation of drunkenness, it merely seeks to mitigate the mischief in its developed forms. But in the presence of a recognised evil so degrading and deplorable, we shall be thankful for any sensible measure, however limited in scope, that is calculated to secure some real amelioration.

"DEATH IN THE PERAMBULATOR."

More than a year ago (*Medical Times and Gazette*, vol. ii. 1877, page 336) we published, under the above heading, an article on the danger of employing "American cloth" as a lining to the collapsable heads of perambulators. In Berlin, and elsewhere in Germany, many healthy children had suffered from symptoms of lead-poisoning, and for a time medical men and parents had been puzzled to discover the source of the poison. At last attention was directed to the American cloth, as the reports of the cases, which came from a number of widely separated places, all agreed in showing a distinct connexion between the frequency of the cases and the intensity of the sun's rays. The German Health Office had several samples of the cloth analysed, and in all an extraordinary amount of lead was found. "In one specimen, bought in a Berlin shop, as much as 42·7 per cent. of metallic lead was found, or 4·27 grammes in ten grammes of the cloth." And it was found that exposure of the cloth to direct sunlight for six hours rendered its coating friable, and made it scale off. We pointed out the very serious danger to which children are thus exposed; and warned the public against the employment of American cloth not only for perambulators, but also as a covering for arm-chairs and other seats exposed to warmth and friction; and we observed that, at any rate, the knowledge that "American cloth" may be a source of lead-poisoning might help medical men to detect a hitherto unsuspected cause of chronic disease. We again refer to the matter now because it has just been proved that the warning we then gave *is* needed by the British public. Dr. Emerson Reynolds, writing from "the Laboratory, Trinity College, Dublin," to our contemporary, the *Medical Press and Circular*, says:—"A piece of glazed material was sent to me a few days ago for analysis by a gentleman, who informed me that he had taken it from the lining of his child's perambulator. On chemical analysis I obtained an amount of *lead* corresponding to 54·5 grains of the carbonate, or 'white lead,' from a portion of the material which measured only six inches by six." Dr. Reynolds justly observes that this is by far too large a proportion of so insidious a poison to be placed within easy reach of a child, whose little fingers are only too ready to pick at anything, and to convey to its mouth the particles that may be detached. We must add that the particles may be inhaled in the shape of dust, as well as picked up and carried to the mouth; and we join our contemporary in the hope that the lay press will help us in giving publicity to this apparently

widely prevalent source of danger. We are quite ready to give all due praise to Professor Emerson Reynolds for his "timely discovery," but what we have said shows that the discovery was made, and the public were apprised of it in our columns, a year ago.

THE WEEK.

TOPICS OF THE DAY.

It is to be feared that fresh complaints will be brought against the Metropolitan Board of Works for displacing the working portion of the community without adequate accommodation having been first provided in other localities. In some of the East-end parishes, meetings, the particulars of which we have already recorded, have addressed protests to the Board on the subject; but we have now to record that last week the materials of no fewer than 140 dwellings in seventeen different streets at the East-end of London were disposed of by auction by direction of the Board. The reason of the sale was that a large number of houses and courts are about to be cleared away for the purpose of constructing a new main thoroughfare in the City, between the City-road end of Worship-street and Sun-street, into Bishopsgate-street. The demolition of these tenements will immediately follow; and in some of the streets the houses will be completely swept away. At the next sale the materials of an equal number of houses will be offered to competition. It is computed that by clearing away these dwellings a population of from 1500 to 2000 persons at the East-end of the town will be displaced.

At a recent meeting, the Lower Thames Valley Main Sewerage Board decided to adopt Mr. W. Haywood's scheme for dealing with the drainage of the united district. The sewage will be collected at Esher, and thence pumped to land for irrigation on the Mole and the Ember—600 acres for irrigation costing £60,000, and 100 acres prepared for purification costing £27,000. A select committee was authorised to take the necessary steps to obtain Parliamentary powers for carrying out the scheme.

The inhabitants of the parish of Paddington have suddenly become impressed with the necessity for securing a public park in their neighbourhood, and last week a crowded meeting was held at the Vestry Hall to ventilate the subject. Sir Thomas Chambers, M.P., presided, and speeches were delivered by Mr. Cowper-Temple, M.P., Mr. Forsyth, M.P., Mr. W. Gordon, M.P., and several others. The site selected is a piece of ground situated between Portsdown-road, Shirland-road, Kilburn-park-road, and Sutherland-gardens, which at the present moment is advertised to be let for building purposes, and which would be conveniently accessible for a population of about 100,000 persons, chiefly of the working-classes, in the adjacent neighbourhood. Resolutions were ultimately passed declaring the necessity for open spaces, and memorialising the Metropolitan Board of Works for assistance in securing the spot referred to. At the subsequent meeting of the Metropolitan Board, on the motion of Mr. Roche, it was decided to receive a deputation from the parish of Paddington with reference to this subject.

The proceedings of the Social Science Congress at Cheltenham came to a conclusion on the 30th ult., when the parting address was delivered by Mr. G. Hastings, President of the Council, who in the course of it enumerated the distinguished members of the Association who have died during the past year. The list included Earl Russell, Sir F. Goldsmid, Mr. Russell Gurney, and Mr. Vandermin. The Congress has been very numerously attended throughout, and some of the papers read have been of more than passing interest. The Congress closed without appointing any place of meeting for next year.

The stirring question of electric lighting *versus* gas is not likely to be settled without a fair trial being afforded to the new agent. At a meeting of the Liverpool Town Council, held last week, a motion was adopted by a majority of thirty-eight to six, to the following effect:—"That notice be given for an application to Parliament next session for powers to authorise the Council to execute the requisite works for lighting the public streets, etc., by means of the electric light, and with power to supply such light to any person or persons, or companies, who may require the same." It was also agreed that the sum of £2000 should be granted towards the cost of promoting a Bill in Parliament.

The certificates of efficiency, over 400 in number, obtained by the members of the classes instituted by the Volunteer Sick Bearers' Association, were distributed at Westminster Hall on the evening of the 1st inst. by Surgeon-General Munro, C.B., of the Army Medical Department. All the chief metropolitan corps were represented. It will be remembered that the object of the Association is to remedy the present defect in the volunteer force, by which, if called upon to take the field, it would be without any provision for the sick and wounded. The members who obtained distinction upon this occasion have satisfactorily passed through a course of training in elementary anatomy, bandaging, application of tourniquets, the first dressing of wounded, stretcher drill, loading and unloading of ambulance waggons, and various methods of carrying sick and wounded.

At a meeting of the managers of the Metropolitan Asylums District, held on Saturday last at the offices of the Metropolitan Board of Works, Dr. Brewer presiding, the Clerk to the Board read the fortnightly returns from the various small-pox and fever hospitals under the control of the managers:—Small-pox—Hampstead, admitted 7, died 1, discharged 8, remaining under treatment 14; Fulham, admitted 5, discharged 1, remaining 11; Deptford, admitted 38, died 1, discharged 23, remaining 87; total in the hospitals, 112; total at the previous return, 96; showing an increase on the present return of 16 patients. Fever hospitals—Stockwell, admitted 41, died 7, discharged 10, remaining under treatment 101; Homerton, admitted 47, died 8, discharged 40, remaining 165; total remaining 265, against 243 on October 15, showing an increase of 23 patients. Mr. Bostock moved, Mr. Ellis seconded, and it was resolved—"That application be made to the Local Government Board for their consent to the closing of the Fulham Hospital against the reception of small-pox patients from May 31 next."

At the recent annual general meeting of the friends and supporters of the Salford and Pendleton Royal Hospital and Dispensary at Manchester, the Treasurer, Mr. Shelmerdine, read the balance-sheet, which showed the total expenditure for the past year to have been £3630. Of the income £971 was received from subscriptions, and £536 from interest paid by the Salford Corporation. Mr. Shelmerdine further stated that during the year under notice the subscriptions from the working people were less than they were during the previous year, but the amount received from the Hospital Sunday Fund was considerably larger, for which they were very grateful. He regretted that the Committee could not keep the expenditure down to the point at which it stood a few years ago, for salaries were higher, and the housekeeping expenses were larger, whilst medicines and appliances were also dearer. They had been compelled to expend a larger sum of money this year than they had done last year, and consequently had had to entrench upon the reserve fund.

Two rather singular coroner's inquiries have recently been reported, in each of which the jury appear to have arrived at a verdict without demanding a particularly searching

investigation. The first of these took place at Bolton, on the body of a female domestic servant, aged eighteen. The deceased had been in the employment of Captain Hesketh for about two months, during which time she had occasionally complained of pains in her head. Feeling worse on the 24th ult., she purchased some hiera picra from a chemist, which she took. About two days after she became very ill, and a surgeon was called to see her; he found deceased suffering from symptoms of a bilious attack; he prescribed for her, and on calling next morning was informed that she was dead. The surgeon said he could not form any opinion as to the cause of death, but he was perfectly satisfied she had died from natural causes. Sometimes very dangerous mixtures were given to girls, but it was not so in this case; the hiera picra was perfectly harmless, and was generally recommended by chemists and druggists. The case might have been one of sudden death, and in his opinion the deceased was a likely subject for apoplexy. He did not think there was any necessity to have a post-mortem examination. The Coroner thought the jury would be quite justified in returning a verdict of "natural causes," which they did. It did not appear that the chemist who sold the compound was called, or that the preparation was examined, and it certainly would seem that in this case a post-mortem examination was imperatively demanded. Can it be wondered at, that coroners and their juries put a light value on medical evidence, when professional men thus indicate their own opinion of its merits? The second inquiry was held at Winchester, on the body of an infant, the son of a private soldier in the Rifle Brigade, and the jury assembled at the military hospital at the barracks. In this case the mother had purchased some carminative from a chemist, and administered it to the child, a fine healthy infant; and shortly after the child died. Surgeon-Major McNamara, of the Rifle Depôt, deposed that he made a post-mortem examination of the body, and found that the stomach was extremely distended with gas, which, pressing on the heart, interfered so much with its action that it stopped. He did not know the composition of the carminative, but believed that it contained opium. The administration of a little castor oil and peppermint would probably have saved the life of the child. The jury returned a verdict that the deceased came to its death from natural causes. Here, again, the chemist who sold the carminative was not called to explain the nature of the compound retailed by him, and no analysis appears to have been made of the contents of the stomach. Coroners' inquiries are sometimes complained of as being meddlesome and unnecessary; in the foregoing cases they can scarcely be said to have been sufficiently searching.

The action brought by the Corporation of London, as trustees for St. Bartholomew's Hospital, against inhabitants and owners of land in the parish of Christ Church, Newgate-street, to recover tithes at the rate of 2s. 9d. in the pound, under a statute made in the reign of Henry VIII., came on for hearing again on Monday last in the Chancery Division. The Master of the Rolls, in giving his decision, said it was clear the defendants were liable for the rate, which he accordingly ordered them to pay.

The Faculty of Physicians and Surgeons of Edinburgh, at their meeting on the 4th inst., authorised the treasurer to pay the sum of 150 guineas to the fund now being raised to assist the ruined shareholders of the City of Glasgow Bank.

SANITARY REPORTS ON THE WHITECHAPEL DISTRICT.

The reports of Mr. John Liddle, the Medical Officer of Health for the Whitechapel district, for the quarters ended March 30 and June 29 last, call for no particular comment. But in the latter Mr. Liddle calls attention to the pressing necessity which exists for the immediate establishment of hospitals for the reception of persons of the non-pauper class suffering from contagious diseases. The pauper class, he points out, is amply provided for in the existing hospitals under the supervision of the Metropolitan Sick Asylums Board, but that class of patients who are able to pay for such accommodation as only a hospital can give are unable to obtain admission therein, except under such disadvantageous circumstances as persons in tolerably good position are unwilling to be placed in. Persons can now only avail themselves of the advantages of the Asylums Board Hospitals by making themselves paupers, and such a degradation should not be imposed on anyone simply because he has the misfortune to be attacked with a contagious or infectious disease. In the absence of other accommodation, Mr. Liddle suggests that Parliament might pass an Act to enable local authorities to contract with the Asylums Board for the admission of patients into the hospitals under their management, at such a rate of payment as would entirely do away with the suggestion of pauperism. He is further of opinion that the proposal to create combined districts and district hospitals for this purpose, with newly constituted authorities, would not be attended with success; and he instances a case in his own district, where, under pressing circumstances, a temporary hospital for the reception of non-pauper small-pox cases was fitted up, without meeting, from an administrative point of view, with a great amount of success.

A YOUNG FRATRICIDE.

A case of poisoning by carbolic acid, under very peculiar circumstances, recently occurred at Springbourne, near Bournemouth, the victim being an infant only six weeks old. It appears that an elder brother of the child had been suffering from ringworm, for which the mother of the family had received from a neighbouring chemist a liniment for local application. The main ingredient of the liniment was a strong solution of carbolic acid, and the mother was informed, both verbally and by label on the bottle, that the liquid was poisonous. The bottle was kept on a shelf in the room in which the family lived. During the temporary absence of the mother, another child, only nineteen months old, had contrived, by mounting on a chair, to reach the bottle on the shelf, to remove the cork, and to pour some of the contents into the mouth of his infant brother as he lay in a basket by the side of the fireplace. The elder child had sometimes been known to take down from the same shelf bottles containing scented oil and to apply some of it over his hair. The infant sufferer's mouth and throat were corroded, and he died in about eighteen hours with all the symptoms of irritant poisoning.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

A general meeting of this Society was held on Friday, October 25, at 5 p.m., in the library of the Royal Medical Chirurgical Society. The President, Sir George Burrows, Bart., took the chair punctually at five o'clock. The attendance of members was unusually large, proving the directors had acted judiciously in changing the hour of meeting from 8.30 p.m. to 6 p.m. From the statement read of the affairs of the Society for the half-year ending June 30, it was shown that a sum of £1729 11s. 7d. had been received, available for the payment of grants and expenses, that the grants had been £1238 to sixty widows, £55 to twelve orphans, and £25 10s. to four orphans from the Copeland Fund. The expenses of the half-year had been £93 4s. 9d. The meeting was informed that the directors had decided to grant, as a Christmas present to the widows and orphans now in receipt

of relief, £5 to each widow, £2 to each orphan, and £4 to each orphan on the Copeland Fund: the total amount given would be £324. The funded property had been increased by the purchase of £510 6s. 10d. Metropolitan Consolidated Stock, a legacy of £500 from Mrs. Mary Davis Parker and a composition fee making together the amount invested. Nine new members had been elected; six had died or withdrawn from the Society. One widow in receipt of grants since 1849 had died, and one widow and thirty orphans had become ineligible for further grants. There had been no fresh applications for assistance since January, when two orphans were added to the list. Mr. Charles Hawkins proposed a vote of thanks to the President, Sir George Burrows, for his kindness in taking the chair that afternoon, and for the great interest he took in, and the valuable assistance he gave to, the well-being of the Society. Mr. Felce having seconded the proposal, the vote of thanks was carried unanimously.

THE ANTI-CONTAGIOUS DISEASES ACTS FANATICS.

The advocates for the unrestrained propagation of venereal diseases have been holding high holiday in Dublin, and apparently thoroughly enjoying their periodical revel in filth. Were it not for the mischief they do by their placards, etc., we would willingly let them have their fill of it; and perhaps, to give zest to their gathering, some winner in the great Paris lottery might send them a select assortment of French novels to constitute the foundation of a circulating library to be used on such occasions. It is very hard to say, when a number of persons meet together in Ireland, how that meeting will end. Sometimes the most promising occasions are let slip, whilst under untoward circumstances the fun will rise to the dignity of a free fight. At first sight a meeting of the Anti-Contagious Diseases band does not look promising for fun, nevertheless a good deal seems to have been elicited. In the first place, Dr. William Thomson, of the Richmond Hospital, was bold enough to come forward and propose an amendment to the usual motion made on such occasions. In a powerful, eloquent, and impressive speech he argued the case for the Contagious Diseases Acts, and his speech was repeatedly applauded. He might have known that argument with such people was utterly useless; nevertheless, he may have hoped to influence some of those who heard him, many of whom evidently sided with him. But our fanatics have many strings to their bow. The chairman suddenly declared that, as the amendment was not seconded—which, as far as we know, was totally incorrect,—it fell to the ground, and he would propose the original resolution. This he proceeded to do, and, amidst hideous uproar, pronounced it carried unanimously. The tale is not quite so dramatic as that told by the Western poet of a public meeting held by the gold diggers, at which a bold dissentient—

> "Moved an amendment, when
> A chunk of old red sandstone took him in the abdomen:
> He smole a kind of sickly smile as he squirmed upon the floor;
> And the rest of the proceedings interested him no more."

But not even the ungracious spectacle of a woman—even though she be a Josephine Butler—addressing a company of men on such a subject could bring back peace and harmony. They would not hear her, and the meeting was broken up.

THE SOCIETY OF MEDICAL OFFICERS OF HEALTH.

The annual Report of the Society of Medical Officers of Health for the year 1877-78, recently published, shows that it now numbers 158 members—namely, thirty-six metropolitan, sixty-seven extra-metropolitan, sixteen associates, eighteen honorary members, and twenty-one retired medical officers of health. The report, as usual, records the transactions of the past year, and contains copies of the President's inaugural address at the commencement of the session, and the papers read by different members during the past year. Amongst the contributions promised for the forthcoming session are the following:—"On Port Sanitary Work," by Harry Leach, Esq.; "On the Present System of Registration of Deaths, with Suggestions for its Improvement," by G. P. D. Thomas, Esq.; "Autumnal Diarrhœa," by Dr. G. Buchanan; "On the Climate, Geology, and Distribution of Diseases of London," by Alfred Haviland, Esq.; and "On Quarantine in Infectious Diseases," by Dr. Shirley F. Murphy. The Report is very carefully compiled, and the Honorary Secretaries, Drs. Vinen and Corfield, well merited the vote of thanks which was accorded them at the opening meeting of the present session for their labours in preparing it for publication.

AN HONOUR TO MR. SPENCER WELLS.

Mr. Spencer Wells was elected an Honorary Member of the Dresden Society of National and Medical Science at the sixtieth anniversary meeting, last month, as a recognition of his eminent scientific services. The only other honorary members in this country are Mr. Bowman, Mr. Darwin, and Dr. Frankland.

A NON-POISONOUS WHITE PAINT.

The discovery of a perfectly satisfactory substitute for white-lead as a paint is so important from a sanitary point of view, that we are glad to make room for the publication of the following abstract of a paper, read at the Social Science Congress, Cheltenham, by H. C. Bartlett, Ph.D., F.C.S., "On Poisonous and Non-Poisonous Paints and Wall-Papers:—

Until the autumn of last year, I was unable to form any accurate idea of the frequency of cases of severe illness occasioned by poisonous paints and wall-papers. But, when I was requested to furnish some particulars of the more striking cases I have investigated, which are now to be laid before Government, I was astonished to find that during the last eleven years I have traced back no less than one hundred and twenty-three cases of illness attributable either to the diffusion of carbonate of lead (common white paint) or to arsenical or antimonial colouring matters in paint or on wall-papers. Scientific authorities of the highest standing have given unimpeachable evidence of the wide spread and often unsuspected existence of these poisons, and of the terrible effects they often produce without the true cause being discovered in the majority of instances. The only substitute offered for white-lead, until lately, has been zinc oxide. Many technical objections have been taken to its use. Among the rest, its want of body, and poverty of covering, have rendered the oxide of zinc white expensive in requiring several more coats to be laid on than are necessary with white-lead paint. Working with a view to produce a substitute which shall be harmless in its preparation, application, and throughout its use, several chemists of repute have pushed forward their experiments with other salts of zinc. It was left, however, to Mr. Thomas Griffiths, of the Silicate Paint Company, Liverpool, to bring out a satisfactory commercial article, which, while it obviates all the objections urged against oxide of zinc paint by the painters and decorators, complies with the sanitary condition of being perfectly free from poisonous effects upon the workmen who prepare it, the painters who apply it, and upon the people who reside where it is used. I have reason to believe that other persons have thought of pure sulphide of zinc as being probably the best suited to form the dense white basis of our domestic oil paints. But the natural sulphide of zinc (blend) is commonly rather translucent, and varies in colour from a dingy white to a stone-colour, shading off to a reddish-brown, sometimes appearing opaque with yellow, green, or black tinges—not very encouraging to the paint manufacturer. The excellence of the chemically-pure white sulphide, or rather, more accurately speaking, the oxy-sulphide, however, induced a lengthened series of experiments to be tried to carry out artificially the chemical process of making zinc sulphide of the purest white, and, as I shall explain, with almost unexpected success. In my report upon the effect of lead paint upon the

Italian ironclads, I was able to demonstrate that a sufficient amount of galvanic action takes place between the salts of lead and the iron to prevent such paint affording a good protection against the corrosion of sea-water. In the same way, out-door iron work, as we all know, throws off ordinary paints in flakes or scales by the rusting of the iron underneath. This is not the case with the new zinc paint, which withstands chlorides of all kinds, including sea-water. It is not affected by sulphurous acid, sulphuretted hydrogen, or ammoniacal gases, and may be submitted to a great heat without blistering off the iron, as lead paints invariably do at temperatures more than 300° lower than that to which I have subjected the new zinc paint. The preservation of iron can thus be better secured than by any other material with which I am acquainted, particularly as oxygen does not penetrate a proper coating of zinc sulphide, and rust cannot form. In suggesting that white-lead paints should be banished from the category of those permissible for use in the interior of our dwellings, I have thought I should accomplish that most desirable result better by describing the new zinc paint, than by any endeavour to represent the nature of the evils attendant upon the use of the paints now in vogue. I have only to add that the new paint is at least as economical as lead, is as dense, and covers even a larger surface; and, besides being of a more perfect snow-white than any lead pigment, it will remain for years unchanged in colour. No fear need now be entertained of severe illness from a newly painted house.

FROM ABROAD.

PROF. BIGELOW'S OPERATING CHAIR AND POST-MORTEM TABLE. A BOSTON correspondent of the *Philadelphia Med. Times* (August 31) furnishes an account of two ingenious inventions by Dr. Bigelow, known beyond the precincts of Boston far less than they deserve to be.

Bigelow's Operating Chair.—Not long after the introduction of ether (first administered by Dr. Warren at the Massachusetts General Hospital in 1846), it was found desirable to have there a solid and steady chair, which, on the occurrence of syncope, would admit of the patient being rapidly lowered into a horizontal position, or even with his head lower than his feet. The result was "Dr. Bigelow's chair," which is heavily and powerfully built, easily moved, and handsome in appearance. The original, made for the hospital, has been in almost daily use for five-and-twenty years, and is as good as new. It consists of a back, seat, and leg-rest, which move on each other, are connected by heavy hinges, and supported by a firm frame of mahogany—the two front legs only being provided with casters, so that while immovable during an operation, it yet can be easily moved. The back and leg-rest can be placed at any angle with the seat. The patient having been etherised, is placed in the chair, and a broad woven strap attached to one end of the chair is brought across his lap and fastened on the opposite side by catching one of the holes in the strap over a round-headed brass bolt. A second strap is passed across the legs near the knees, and the leg-rest is lifted and kept in place by a racket arrangement. The arms are confined either by thrusting them under the upper strap, or, if the patient be violent, by putting on leathern bracelets and buckling them to the body-strap. Thus secured, the patient is absolutely fettered. If his legs work loose and he begin to kick, you lift the leg-rest a few notches, and then, no matter how much he may struggle, he cannot move. Operations, therefore, can be done with much less than the usual assistance. At the top of the back of the chair is a head-rest, which is moved up and down by a crank, so that the patient's head can be placed in any desired position. If the surgeon desire to give the patient's trunk another angle, he has only to give a few quick turns to a crank placed on the right hand of the seat, and the back, seat, and leg-rest are moved in unison; for the crank cants up the anterior portion of the seat, and this lifts the leg-rest and lowers the back. By a contrary movement of the crank the reverse occurs, and the patient is brought more upright. Suppose he faints, you have only to pull up a long bolt placed at the back, and the lower end of which, as the back moves up or down, travels over a toothed quadrant below and on the left of the seat, and the back falls at once to the horizontal; the bolt on being released and forced by a spring, snaps its lower end between the teeth of the quadrant, holding the back firmly. Suppose you wish to make the head still lower, you give the seat-crank a turn or two, and it is done. Everything moves perfectly. A child could manage the simple and ingenious machinery; and the chair is such a convenience, that it would certainly be in general use, but for the fact that, notwithstanding its age, it has never been described in print before. There are but three duplicates of this chair in existence—one is at the Boston City Hospital; a second is owned by Dr. Carleton, of Connecticut, and was constructed from drawings made by Mrs. Carleton, who accidentally saw the original; and the third was recently presented to the New York Hospital by Dr. Sands, who ordered a *fac-simile* after seeing the chair at Boston. *A propos* is an interesting anecdote. When the indefatigable Don Pedro was in Boston he visited the Massachusetts General Hospital, and was much struck with this ingenious chair. Months afterwards he was dining with the Empress of Germany, who takes a lively interest in all hospital improvements, and he described to her the "Bigelow operating chair." Before long, Dr. Bigelow received a communication from some member of the Empress's household, asking on her behalf for drawings and a description of his chair. He sent photographs, which showed the chair in various positions; so that in all probability we may conclude that there is a fourth duplicate in existence. In 1854 the chair cost $250: it now costs about double that sum.

In explanation of what seems an extraordinary fact, that a contrivance so manifestly useful has not yet penetrated, after so many years of its successful employment, even to the various surgical centres of its native country, the correspondent from whom we quote the description states that the practitioners of Boston are characterised by the possession of a remarkable amount of what he calls "conservatism," publishing little or nothing in comparison with their brethren of New York, Philadelphia, and elsewhere; and that notwithstanding great wealth of material and great ability exist in Boston, these are employed, at present, almost exclusively in excellent clinical and pathological teaching. Everyone acquainted with American medical literature will admit that there is much correctness in this representation, and will join the writer in protesting against this "habit of secretiveness" or "talent for silence," and may wish this rare "medical sin" duly repented of.

Dr. Bigelow's *Post-mortem Table* is a not less convenient and ingenious invention than his chair, and one of more general utility. The table already in use, although a very good one, was found to be defective, inasmuch as by no means that were tried could foul smells be overcome or driven away. Dr. Bigelow bestowed a great deal of thought upon the subject, and determined in some way or other to set in action a series of draughts. As when a body is opened, the smells and gases proceed principally from the cavities of the trunk, he saw that the draught must not only act directly upon this region of the body, but must act *downwards*. The outcome is a table of solid iron, concave in shape, or rather converging and becoming gradually depressed towards the centre. It rests upon what can be fairly called a hopper—an open box precisely like a miller's hopper, also of iron, and supported by a cylinder which revolves near the floor in the head of a larger cylinder, into which the former telescopes far enough to rest upon a shoulder which supports it, and with it forms a joint table and hopper, all one piece. The former is covered by a movable apron of zinc or oxidised copper, which fits it closely. In the centre is an opening which corresponds to the exact position occupied by the trunk of the subject, measuring twenty-one by twenty-eight inches, and covered by a snugly fitting steel grating, also concave in shape. The interior of the hopper and cylinder, which runs down into the cellar below, is lined with porcelain. Directly beneath the centre of the table, in the cellar below, is the trapped opening of a large drain, which receives all fluids and such small "gurry" as can escape through the meshes of the grating, the hopper and cylinder being even more capacious than the opening in the table. But what about odours and gases? The answer involves the description of the most ingenious feature of the whole. Some feet down the cylinder, and about half-way to the bottom, is a large opening which leads into a lateral trunk or shaft placed immediately below the floor of the post-mortem room. This shaft runs horizontally, and terminates twelve or fifteen feet away in a special chimney. To see this portion of the arrangement you have to go down into the cellar. Ascending again, you enter a small room adjoining the autopsy apartment, and here observe a window let into the chimney into which the shaft enters, for the chimney passes up directly

through this room. Opening this window you find a series of ten gas-burners. You light them, and wait a few minutes for the warming of the air in the chimney, and then, holding a lighted match over the opening in the necroscopy table, you are amazed at seeing with what force the flame is drawn *down* the hopper. And so it is with all gases and odours during the examination of a body, the air of the room remaining perfectly sweet and pure. This is Dr. Bigelow's simple and effectual contrivance. A similar arrangement on a smaller scale is applied in an upright glass case with sliding sash, which incloses the sink and is always kept shut. The pathologist is making an examination and wishes to cleanse and examine, or temporarily lay aside, a certain organ: he opens the case, in which the gas-burners are lighted, and which communicates with another flue. There are hot and cold water in this sink, and the organ is washed or left there, all odours being carried away.

"It need not be mentioned that the table has every convenience in the way of contrivances for supplying an abundance of water, the chief being a small hose. The floor is asphalte; the washboards stone, marble, or glass—I forget which. At any rate, the whole apartment is frequently deluged with water, which quickly runs off through scuppers and gratings, all of which of course communicate with the main drain. There is a glass case near the table, in which all instruments are kept, and a large ice-chest for preservation of specimens. There is a comfortable room devoted to the preparation of specimens and the microscopic work of the pathologist; and many other conveniences which should make the whole place dear to the heart of a specialist. In conclusion, this autopsy-room is an entire building, a neat brick structure, built for the Professor of Pathology, Dr. R. H. Fitz, and his classes. The room is of moderate size, finished in chesnut; the seats are arranged in the form of an amphitheatre; light is supplied in great abundance; and since Dr. Bigelow's ingenuity has disposed of all smells, the students are as comfortable here as they are in any other room."

REVIEWS.

Habitual Drunkenness and Insane Drunkards. By John Charles Bucknill, M.D., F.R.S., F.R.C.P., late Lord Chancellor's Visitor of Lunatics. Macmillan and Co.

In this small volume we have the collected speeches and writings of Dr. Bucknill on the subject of Habitual Drunkenness. The author's name has become so prominently associated with the opposition to the Habitual Drunkards Bill that we think he has done well in collecting in an easily available form what he has spoken and written on this question during the last three years. Since 1875, when he visited and inspected the inebriate asylums of the United States, Dr. Bucknill has been the declared opponent of all legislative proposals for the establishment of similar institutions in this country. And it is perhaps the greatest praise he could desire for the speeches and articles reprinted in the volume before us, that they have probably had no small share in compelling the promoters of the Habitual Drunkards Bill to modify that measure from its very objectionable original form to the much more modest and curtailed form in which it passed the second reading.

The volume, as we have said, is merely a reprint, containing no new matter except a somewhat lengthy preface in which Dr. Bucknill gives a history of the controversy, so far as he himself is concerned, with a re-statement of his criticisms. For this reason, and from the fact that the articles reprinted have recently received a large share of public attention, we think it unnecessary to give here a detailed notice of his statements and opinions. This is the less necessary, too, as we have elsewhere expressed our views in regard to the Habitual Drunkards Bill in its most recent form.

While we admit at once that Dr. Bucknill's courageous and reiterated criticism has been of the highest service, we think he has not been always free from the opposite extreme to that red-hot and inconsiderate partisanship of the proposed legislation for drunkards, which he so strongly condemns in some of his opponents. He has done excellent service in pointing out the grave abuses to which the Retreat system might be liable; but there are at least two of the chief grounds of his objection to any such proposed legislation which have called forth adverse criticisms from a very competent authority. These are—(1) the very unsatisfactory condition in which he found the inebriate asylums of America; and (2) the theoretical consideration that ordinary habitual drunkenness is to be regarded as in no sense a disease, but as altogether a vice. In criticising these objections, and speaking of the practical treatment of neurotic drunkards, Dr. Clouston remarks:—"The fact is, your 'vice' is always present along with my 'disease.' I yield that point; but I object to your ousting my disease-theory from the case altogether! I do not see that the practice of American inebriate institutions should make us ignore the facts of nature. It is but natural that the first attempt to deal with this most intractable vice-disease should be uncertain in its result." And although, in his reply to this criticism, Dr. Bucknill recognises the existence of a class of "diseased drunkards" whose treatment might very suitably be conducted in separate asylums, it is evident that he is much less inclined than other eminent alienist physicians to place any considerable number of drunkards under this category.

For the reasons stated, we think it needless to enter more minutely into the discussion of Dr. Bucknill's opinions. No one who is interested in the very important question of drunkenness and its treatment can afford to ignore the vigorous onslaughts he has made on the earlier forms of the Habitual Drunkards Bill; and now that these criticisms are published in a collected form, there can be no excuse for ignorance of his side of the question. He has undoubtedly done a great public service by his exposure of the grave defects likely to attach to the Retreat system, and of the very limited nature of the benefits that can accrue from it, even when most carefully regulated. From our remarks on the Habitual Drunkards Bill, it will be found that we agree with him in very many of his strictures, though we can hardly go so far as he seems to do in doubting the possibility of any good resulting from the proposed legislation in its now curtailed and modified form.

Litholapaxy, or Rapid Lithotrity with Evacuation. By Henry J. Bigelow, M.D., Professor of Surgery in Harvard University, Surgeon to the Massachusetts General Hospital. Boston: A. Williams and Co. New York: W. Wood and Co. 1878.

Conservatism is always strongly marked in operative surgery. Principles learnt as a student commonly remain the guide in future practice. Few have the time or opportunity in after life for a thorough investigation of the facts upon which these principles are founded; fewer still the originality of mind necessary for the conception and elucidation of new methods of procedure. Fortunately, however, in Dr. Bigelow we find not only originality of mind, but this originality is combined with the necessary energy and firmness of will to give it practical effect. Dr. Bigelow is not, indeed, the first to suggest rapid crushing, but, as Sydney Smith has remarked—"The real inventor of an art is not he who first says the thing, but he who says it so long, so loudly, and so well, that he compels mankind to listen."

Without the least undervaluing gentleness and dexterity, Dr. Bigelow believes the bladder to be much more tolerant of instrumental interference than is generally supposed; at any rate, he holds that it is more tolerant of a smooth lithotrite than of the sharp, angular fragments of a broken stone; or, in his own words, "It is difficult to avoid the conviction that, in an average case, danger to the mucous membrane is as likely to result from irritation by angular fragments added to the injury inflicted by an operation, as from the use of instruments protracted beyond the usual time for the entire removal of a stone, if this result can be accomplished."

Acting upon these views, Dr. Bigelow, by the alternate use of the lithotrite and an exhaust-bottle for the removal of *débris*, removes the whole stone at a single sitting; the operation extending, if necessary, to an hour or more. The apparatus he uses is of a very simple and effective character. After the first crushing a straight catheter with a large orifice at its extremity is introduced into the bladder, the other end of the catheter being connected by indiarubber tubing with an ingeniously constructed exhaust-bottle.

Water is alternately injected and withdrawn from the bladder so long as any fragments can be collected; the lithotrite is then, if necessary, again introduced, and the operation of crushing repeated until the whole stone is removed.

It would be hazardous to draw any conclusions as to the mortality following the procedure, upon such insufficient data as the sixteen or seventeen cases recorded, but should on further experience the rate of mortality prove no higher than one in fourteen, it will show the operation to be not more hazardous than lithotrity as at present practised; and Dr. Bigelow remarks that several of his patients "would have been, by accepted rules, subjected to lithotomy, and consequently to a risk equal to one death in three cases." Death, however, is not the only evil that may follow lithotrity, a recurrence of stone or chronic cystitis being common complications.

If Dr. Bigelow's method will diminish these risks without increasing the rate of mortality, we shall welcome the operation of litholapaxy as an advance in surgery of the highest value. But the operation must be much more fully tested, and the cases of it recorded more fully and minutely, before any sound opinion of its value can be formed. A case well illustrating its advantages is recorded, very fully, in the *Boston Medical and Surgical Journal* for October 17. The patient, a corpulent, plethoric man, aged fifty-four, with a large prostate and marked tendency to constitutional disturbance if the bladder was examined, was for some time under observation, stone having been found in the bladder. At last he presented himself with an impacted calculus, signs of kidney complication, and a physique much impaired by suffering. Dr. J. Collins Warren operated on him by Dr. Bigelow's method, the operation lasting two hours. Almost no constitutional disturbance followed, and convalescence was uninterrupted and rapid.

Annual Reports of the Supervising Surgeon-General of the Marine Hospital Service of the United States for the Fiscal Years 1876 *and* 1877. By John M. Woodworth, M.D. November 20, 1877.

The Marine Hospital Service of the United States has now been established seventy-nine years, and the report for the last year shows that 15,175 seamen were relieved at a great reduction in expenditure. Of this number 10,975 were treated as hospital patients, and 4200 as office or outdoor patients. Formerly all seamen who applied for relief were sent to hospital without regard to the nature of their diseases or injuries, whereas now at ports where medical officers of the Service are stationed, trivial cases not requiring rest or nursing in hospital are relieved by furnishing such remedies as may be required. This, the Report adds, is the adoption of a common-sense principle followed in every community, and as a result the number of office or outdoor patients has gradually increased, whilst the number of hospital cases has measurably diminished, with a corresponding increase in their gravity. It is believed that this policy has popularised the Service with a large number of seamen, while a few, who were in the habit of making the hospitals convenient boarding places during the closure of navigation, are, of course, disappointed. There are at present thirty-one surgeons and assistant-surgeons of the Service serving at twenty-six ports; while at seventy-four other ports arrangements are made for the care of service patients with private or municipal hospitals. The promotions of assistant-surgeons of the corps, on the ground of merit and fitness, to vacancies which have recently occurred in the grade of surgeon, and first appointments to the grade of assistant-surgeon only, and that of none but those who have passed a successful examination as to professional qualifications, has greatly encouraged the medical officers of the Service to diligence, and has met with the hearty approval of the medical profession of the country. Legislative provision is also about to be made for the examination of medical officers of the Service similar to the method adopted for securing medical officers for the Army and Navy. Since the promulgation of the Regulations of 1873, the applications for appointments into the medical corps of the Marine Hospital Service received by the Supervising Surgeon-General have numbered 117, and eighty-eight of the applicants have been invited to present themselves before the medical examining boards, of which twelve have from time to time been convened. The remaining applicants either withdrew their applications upon being informed that an examination was required, or failed to signify their desire to present themselves for examination, while a number are still upon the list of candidates to be invited when a board may again be convened. Of the candidates invited, forty-three reported for examination, and twenty-seven passed successfully.

The whole of the details given in the Report show that the Marine Hospital Service is well and carefully administered by its present chief, and the medical and surgical statistics appended to the volume are profuse and elaborate. The appendix contains, amongst other papers, some reports on outbreaks of yellow fever, which are of more than passing interest in the face of the dire outbreak of this disease now raging in the Southern States of America.

The Journal of Psychological Medicine and Mental Pathology. Edited by Lyttleton S. Forbes Winslow, M.B., D.C.L., Lecturer on Mental Diseases, Charing-cross Hospital. Vol. IV., Part 2. London: Baillière, Tindal, and Cox, King William-street, Strand.

This journal is published half-yearly, and confines itself entirely to the treatment of the subjects from which it takes its name. In the present number the opening article on "Mad Poets" is an interesting paper, sketching the history of Vittoria Alfieri, Dr. Beattie, Robert Bloomfield, Thomas Chatterton, Samuel Taylor Coleridge, William Cowper, and others. Amongst the other papers are contributions by J. G. Davey, M.D., on "Suicide in its Social Relations"; by W. R. Huggard, B.A., M.D., on "Felo-de-se"; and on "Lunacy in England and Scotland." The next number of the *Journal* is to be published in April, 1879.

FOREIGN AND COLONIAL CORRESPONDENCE.

AMERICA.

Philadelphia.

The Yellow Fever Epidemic—Proposals for Prevention and Cure.

Yellow fever has continued to be the one mournful theme of discussion and reflection in and out of the profession. Some good for the future, it is to be hoped, will come from the investigations now going on as to the causes of the disease and its prevention. A singular theory has prevailed that after sixty days the force of a yellow fever epidemic is spent. Refugees, therefore, at the expiration of that time began to return to the afflicted cities, only, alas! to add fuel to the flame, and to signalise in their own persons the fallaciousness of the theory. If there ever was a foundation for such a view, it must have been in the fact that in about that time previous epidemics may have begun to languish in intensity from lack of impressible material. Frost seems to be the forlorn hope for these suffering southern towns and villages. One good result may follow this epidemic, should the present urgent need continue to be realised, and not be lost sight of after the scourge is past, for the establishment of a national Bureau or Board of Health. Certainly some central organisation, invested with full powers, and so constructed as to demand universal respect, should be created to take in hand such widespread pestilences as that which has so sadly traversed a fair portion of this country during 1878. The Marine Hospital Service is at present the one authoritative bureau for this purpose; but its powers are limited, and cannot probably be extended beyond the streams and ports which are embraced within its exercise of function. It seems odd, too, that while individual towns on Southern rivers have been quarantined, there was nothing to prevent vessels with infected cargoes carrying along the whole length of those rivers the seeds of disease. Why should not the inland ports and rivers be placed under as strict quarantine surveillance as the seaports and sources of ocean communication? Removed from politics, and placed absolutely in the hands of conscientious sanitarians, what may not be expected of a National Health Bureau in the way of prevention in the future! In the meanwhile the commission appointed by the Surgeon-General of the Marine Hospital Service is entering on its duties, and the New York County Medical Society has set an example which should be followed all over the country by similar organisations, in passing resolutions in favour of the appointment of a more extensive national commission of the best men of the country, who shall exhaustively examine the whole field, and report the results of their investigation of the causes and modes of prevention of the

disease. Should such a commission be placed directly under the control of the National Government, much good would be obtained from its deliberation. It is suggested that this commission would be incomplete if restricted to the medical profession alone; and I am disposed to doubt the expediency of excluding from it those who by engineering or other skill may be able to aid in solving the problem of this fever, which is characterised by the *Louisville Medical News* as "a geographical and topographical disease *par excellence*." That journal strongly urges that lawyers should also be added to the commission, because they are practised in the cross-examination of witnesses, and in possession of safe rules in regard to evidence. The truth is only to be elicited, it thinks, by the most rigid cross-examination, and if only the gentle methods ordinarily used by doctors are to be employed in obtaining testimony, the history of the epidemic may be a matter of doubt, however plausible may be its shape.

I noticed a statement a few days since that there had not been a single case of yellow fever at the Boys' House of Refuge at New Orleans. This building is said to be situated just outside of the city, in a place that absolutely reeks with malaria (an odd place, by the way, for a public institution), in fact, in one of the most notoriously unhealthy situations in the country. If this statement be true, it is certainly an argument in favour of rigid quarantine, for none except the officers of the institution are allowed entrance into it. As I stated in my last letter, this may be one of the "facts," so-called, of the epidemic on which implicit reliance cannot be placed until substantiated by more undoubted authority. From the various published accounts of the fever, the sickness among children must have been very great, although the death-rate has not been proportionately large. One medical gentleman estimates the number of cases among Southern children up to the present time at 20,000. As frost is looked upon as the one great conqueror of yellow fever, and is so acknowledged universally, the statements now being circulated in regard to the potency of fire in checking epidemics of the disease are interesting. It is said that there was, many years ago, in the South a clan of robbers, known as the "Wages Clan." The last of this band, while under sentence of death in 1858, made a confession, which was afterwards published in book form, giving the details of the operations of himself and his rascally *confrères*. In this he stated that, during the prevalence of yellow fever in Mobile, in 1839, this clan took advantage of the situation, and for the sake of plunder set fire to numerous buildings in that city. For two or three weeks the tremulous tones of the fire-bells rang out on the pestilential air. The result, however, was to check the spread of the fever; and now it is gravely proposed to attempt to destroy the poisonous spores or animalcules in the vitiated atmosphere of those plague-stricken cities by a similar sad and destructive agency. It is also proposed that as the disease does not originate in the United States, but is imported from the tropics, and as State quarantine laws are ineffectual, a national quarantine law should be passed, which should be enforced by men-of-war of the United States Government being ordered to cruise on the southern coast from May to October, to arrest every vessel that attempts to enter a Southern port during this period and quarantine it, and to require it to produce a clear bill of health from a naval surgeon, countersigned by the commander of the squadron. Such a Bill passed the Lower House of Congress in 1876, but never reached the Senate. In any event it seems likely now that frost, or the hand of God displayed in some other merciful form, will alone interpose between death and this stricken people.

Dr. Dieulafoy.—Dr. Dieulafoy, the inventor of the aspirator, and well known for various researches in practical medicine, has just been nominated Chevalier de la Légion d'Honneur.

The Returning Surgeons of the Russian Army.—It has been determined on the part of the profession at St. Petersburg to entertain at a grand public banquet the medical officers returning from the war; and to this end an influential committee has been appointed, including several of the chiefs of the Army Medical Department, hospital medical officers, and professors.—*Petersburg. Med. Woch.*, October 19.

PROVINCIAL CORRESPONDENCE.

MANCHESTER.

November 6.

Meeting of the Lancashire and Cheshire Branch of the British Medical Association at Stockport—Professor Arthur Gamgee on the Generation of Urea; New Mode of Estimating Urea in Urine; Treatment of Severe Sprains; Success of the Intermediate Meeting.

A most successful meeting of the Lancashire and Cheshire Branch of the British Medical Association took place at Stockport on Wednesday, October 30, under the presidency of Dr. Leslie Jones, of Blackpool. The attendance was unexpectedly numerous, owing mainly, no doubt, to the announcement that Dr. Arthur Gamgee, Brackenbury Professor of Physiology at the Owens College, would read a paper on the Generation of Urea in the Liver. The board-room of the Stockport Infirmary, kindly placed at the disposal of the Branch by the Hospital authorities, was crowded with eager and attentive listeners during the whole of Dr. Gamgee's address, which occupied more than an hour in delivery. The speaker commenced by giving a *résumé* of the different experiments that have been recently instituted, chiefly in France and Germany, by Claude Bernard, Meissner, Gréhant, and others, with a view to determine in what organ or organs the formation of urea takes place. Dr. Gamgee greatly interested his audience by demonstrating incidentally a new and ready method of very accurately estimating the quantity of urea in urine, by means of a solution of sodium hypobromite. This solution, which is of a yellow colour, and can be easily prepared by simply pouring bromine into a solution of caustic soda, has the property common to solutions of the alkaline hypobromites, of decomposing urea into carbonic acid and nitrogen. The carbonic acid is absorbed by the alkaline solution, so that the gas which is given off, upon mixing with it a urea-containing liquid such as urine, consists wholly of nitrogen. By measuring therefore in a suitable apparatus, such as the one exhibited, the quantity of gas (nitrogen) evolved on mixing a solution of the hypobromite with a known quantity of urine, the percentage of urea can be estimated with the utmost nicety. After this digression from purely physiological topics, the paper concluded with an account of some entirely new experiments conducted under the writer's supervision in the physiological laboratory at the Owens College, which had been attended with consistent and highly satisfactory results, pointing, if not conclusively, at any rate very strongly, to the liver as the true seat of urea-formation.

In a few appropriate remarks, Dr. Henry Simpson, at the conclusion of the paper, moved a vote of thanks to Dr. Gamgee, which was seconded by Dr. Rogers, of Rainhill, and carried by acclamation.

The remaining communications were of a clinical and practical character, the most interesting perhaps being one by Mr. Dacre Fox, on the treatment of sprains. Mr. Fox is surgeon to a large railway company, and has had considerable experience of this form of injury. In the more severe cases he finds that after a few days of fomentation the best treatment is regulated pressure by means of carefully adjusted pads and large plasters of a special shape, varying according to the particular joint involved. By this plan he feels sure that it is possible to control the effusion into the sheaths of the tendons and adjacent structures, to lessen the pain, and to shorten the duration of treatment.

During the meeting a large number of the newer instruments, both medical and surgical, were exhibited by Messrs. Hawksley, Mayer and Meltzer, and Krohne and Sesemann, of London; and Messrs. Wood and Son, and Holderness and Co., of Manchester. There were also rooms set apart for the exhibition of microscopic specimens and new drugs. The members of the branch are greatly indebted to the profession of Stockport, and especially to Dr. J. D. Bird, who bore the chief burden of management and supervision, for the admirable manner in which the details of the meeting were arranged.

This is the second of a series of meetings projected some months ago by the honorary secretary of the branch, Dr. Leech. He thought that the yearly meeting might very usefully be supplemented by the establishment of inter-

mediate meetings in the various important towns of Lancashire and Cheshire; and it has been his aim to render these meetings important and attractive by insuring at each of them at least one communication of permanent scientific value. At the first, which was held at Oldham, Dr. W. H. Broadbent, of London, gave an address on the Mechanism of Thought and Speech; while Dr. Gamgee's address at Stockport, being the first account of his experiments laid before the profession, was certainly a not less important contribution to science. Dr. Leech may therefore congratulate himself on the entire success so far of his new undertaking. His tenure of office has, moreover, been signalised by an unprecedented accession of new members, the members having increased from 447 in 1876 (the year of his appointment) to 709 at Midsummer of the present year—a fact which is alone sufficient to testify to the energy with which he has devoted himself to his laborious work.

IRELAND.

Dublin, November 5.

The Opening of the Session 1878-79.—Royal College of Surgeons; St. Vincent's Hospital; House of Industry Hospitals; Mater Misericordiæ Hospital; Meath Hospital and County Dublin Infirmary.

Each year as it draws to a close brings round the time-honoured "Introductories" in our hospitals and schools. But, apart from the fact that they are time-honoured, it is not easy to assign a *raison d'être* for these addresses in Dublin, delivered as they are a calendar month after clinical work has commenced in the hospitals, and the dissecting-rooms have been re-opened in the various schools. The tendency of this strange arrangement can be only in one direction—namely, to beget a spirit of carelessness and idleness in students who come to town nominally to begin work on October 1, but who are induced to neglect the golden opportunities of that month in waiting for the "introductory" of November 1. There is a growing feeling that this injurious system of commencing the winter session, as it were, at two different periods should be abolished; or that a compromise should be made whereby the "introductories" should be given in the middle of October, as in reality an inauguration of the hospital clinique and the winter courses of lectures in the several schools. However, a good many people in Dublin think that to begin the session with unassuming, steady work is more judicious than to have the traditional flourish of trumpets give place to an apathetic reaction; and so it has come to pass that inaugural addresses are now delivered at scarcely one-half of our hospitals, and in only two of our medical schools.

The School of Surgery, Royal College of Surgeons, was, as usual, the first to formally re-open. Of the address delivered in that institution on Monday, October 28, by Dr. Thornley Stoker, one of the Professors of Anatomy, an account has already appeared in your columns. To it I would only add that, after the lecture, the President was on the point of congratulating the students, who were present in great numbers, on their orderly behaviour, when a *feu-de-joie* of fireworks of various kinds caused the President and the assembled visitors to beat a hasty retreat. When will medical students learn that they are no longer schoolboys?

At St. Vincent's Hospital, Stephen's-green, the opening address was given by Mr. W. H. O'Leary, M.P. for Drogheda, one of the Surgeons to the Hospital. There was a large audience. Mr. O'Leary's address displayed great erudition. In it he sketched the influence of modern discoveries in biology and the other sciences in moulding medicine into an exact science. He concluded with an earnest exhortation to the students as to the manner in which they should pursue their studies, and as to their professional conduct in after-life.

On Thursday morning, October 31, inaugural addresses were delivered at the House of Industry Hospitals, by Dr. A. H. Corley, one of the Surgeons to the Richmond Surgical Hospital; and at the Mater Misericordiæ Hospital, by Dr. Christopher Gunn, one of the Physicians to that institution. Dr. Corley alluded to the impending medical legislation, and especially applied himself to the two questions—the probable results of the compulsory Conjoint Scheme; and, secondly, the advisability of admitting ladies to be their (the students') companions in their studies. The Conjoint Scheme would, in all probability, produce a number of men with an average knowledge of their business; but a standard of examination should be adopted, which, while preventing a grossly ignorant man from passing, should yet allow a sufficient number for the requirements of the population to get qualified. Hence the test must be a minimum one. In order to prevent the disadvantages arising from a system which would only produce men who had merely obtained certificates of possessing a certain medium amount of knowledge, Dr. Corley would suggest the institution of two grades on the Medical Register. No. 1, the possessor of which might be called "General Medical Practitioner," and who would only be required to have passed the conjoint or minimum examination; No. 2, which would entitle the owner to be called Physician or Surgeon, and who should have passed a higher examination before one of the licensing bodies—the latter only to be eligible for Poor-law, Hospital, Army and Navy, or other public appointments, as their patients would not be free agents at liberty to select what medical men they desired, and should therefore not be exposed to the danger of consulting inefficient men. With regard to the question of female practitioners, he did not think that should give them much uneasiness. He had no objection whatever to the principle involved in the attempt of women to strike out new paths for the educated members of their sex. He nevertheless looked upon his own profession as eminently unsuitable for them, but, at the same time, he would regard it as the narrowest form of trade-unionism to prevent those ladies who had made up their minds to become doctors from becoming qualified. He would even go farther—he would remove every legal or technical obstacle from their way. He did not think that a profession which frequently required the exhibition of coolness, courage, muscular vigour, and strength of mind, was at all suited to the generality of women. He even believed that the department of midwifery was the least of all suited to women, as an obstetric case might turn out to be one requiring all the qualities already alluded to, which are not among those possessed by ladies, though they may be brave and strong women. This much he knew, that he never met a single woman who expressed a preference for a female doctor, and he believed that many, in the hour of danger, would wish for a masculine hand and intellect to be available.

Medical legislation also formed the burthen of Dr. Gunn's address. Alluding to the provision in the Lord President's Bill of last session for the prosecution of improperly qualified practitioners, Dr. Gunn aptly remarked that the imperfect prosecution clause in the Act of 1858 was to be replaced by a provision which seemed satisfactory, and would doubtless have been thought so, till some extra clever quack discovered a means of evading it. The contest between law-makers and law-breakers is like that between armour and artillery. We hear one day of a broadside that no artillery can pierce; the next, that a weapon has been invented to pierce it. Then an inch of steel is added; and then another gun is cast; and so on without end. Laws are made, clever lawyers find out space for a coach-and-four; amending Acts are passed, but to admit a gentleman driving tandem. He made some remarks in support of the direct representation of the profession in the General Medical Council, bringing forward the taxation and representation argument; and concluded with some eloquent words on the greatness of the work to be done, and of exhortation to the students to take their share in the struggle diligently and earnestly, and "to strive manfully, and with a clear conscience, to prove themselves worthy of their time and their country."

The session at the Meath Hospital and County Dublin Infirmary was formally opened on Monday, November 4, with an address by Mr. G. H. Porter, Surgeon to the Queen in Ireland, and Senior Surgeon to the Hospital. Mr. Porter paid a warm tribute to the memory of his late colleague, Dr. William Stokes—one of the greatest physicians Ireland ever had to boast of, a man of European fame, and one who had shed an unfading lustre on his country, and on the Meath Hospital. Mr. Porter urged on the students the absolute necessity of a sound and liberal general education, of an acquaintance with modern languages, and of a proficiency in drawing. He also gave, in well-considered words, sound and good advice to them about their work in the dissecting-room, the lecture-room, and the wards, taking occasion to

press upon them the importance of their cultivating a regard for the feelings of all patients under their care or observation; and in conclusion he addressed some words of advice and sympathy to those of his audience who were about to enter upon the busy and anxious scene of practice.

The inaugural address at the Catholic University School of Medicine, which was to have been delivered on Wednesday, October 30, by Dr. Hayes, was postponed in consequence of the death of his Eminence Cardinal Cullen, Chancellor of the Catholic University.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, OCTOBER 25.

GEORGE W. CALLENDER, F.R.S., President, in the Chair.

MARTIN'S ELASTIC BANDAGES.

THE PRESIDENT brought before the Society two cases illustrating the good effects of Martin's strong elastic bandage—the one a case of varicose ulcer, which healed in a few days, and remains well, the patient himself managing the application of the rubber; the second a chronic effusion into the knee-joint, with a rheumatic history. The limb could not be raised from the bed when the rubber was first applied, but a few days later the man was able to walk down into the hospital square, and the effusion into and thickening of the tissues of the joint had subsided. So far as his present experience went, Mr. Callender thought that these bandages would prove of great use in hospital practice.

SUPRA-PUBIC INCISION INTO THE BLADDER FOR THE RELIEF OF STRICTURE OF THE URETHRA.

The PRESIDENT then read the notes of four cases bearing upon the revival of an operation mentioned by John Hunter—cases of intractable stricture of the urethra, in which, the bladder having been punctured above the pubes for retention, a catheter was passed through this opening into the bladder to the stricture, acting as a director towards which the stricture was divided in the perineum. The first two were cases in which the bladder was punctured above the pubes for retention. At a later period the stricture was divided in the perineum, the position of the urethra in the further side of the obstruction being guided to by a catheter introduced by the supra-pubic opening. Both patients made good recovery. The third case illustrated the difficulty of opening the urinary bladder when contracted and empty. After its puncture, the patient, who did well so far as the mere operation was concerned, slowly sank from renal disease, and died from uræmic poisoning. In the fourth case, under the care of Dr. Macdougall, of Carlisle, the preliminary puncture of the bladder above the pubis was followed by great relief, but the final operation upon the urethra was never practised, the patient's life being suddenly cut short by profuse hæmorrhage from an artery exposed at the base of an ulcer of the pyloric end of the stomach. These cases, the President said, showed the possible advantage of the operation, which might be practised in certain rare cases. They also showed the difficulties it might be associated with, especially in attempting to open a contracted bladder, and the complications which, in such severe cases, might co-exist.

Mr. H. G. HOWSE read a paper on a case of supra-pubic incision into the bladder for the relief of traumatic stricture of the urethra caused by compound fracture of the pelvis. Alfred B., aged twenty-two, was admitted into Guy's Hospital on September 18, 1877. Seventeen months before admission he had sustained a very severe compound fracture of the right side of the pelvis, from a large piece of stone falling upon it. His left ankle-joint was dislocated at the same time, and the urethra ruptured, probably by the fractured ischium, for the wound through the skin was at the junction of the perineum and right thigh. He was taken at once to a provincial hospital, where the dislocation was reduced, and the limb put in splints. Catheters were at first passed, but they were not continued; and consequently it was found impossible to introduce any. His constitutional state, which at first was extremely bad, gradually improved, and at the end of seven months he was discharged from hospital for change of air. At this time he was passing the bulk of his water, with great straining, from the wound, and from two abscess-sinuses in the groin; a little dripped from the penis. Repeated attempts at catheterism had entirely failed. After two months' stay at home he was re-admitted to the same hospital. The attempts at catheterism were now repeated, both from the penis and from the sinuses; and on one occasion a catheter was introduced from the wound into the bladder. A week later, perinæal section was performed with this catheter as a guide, and a No. 9 gum-elastic catheter was introduced into the bladder from the median line of the perineum. This was continued in for many weeks; but at last, in the necessary changes, it was found impossible to introduce instruments of equal size, so that by degrees smaller and smaller sizes were used, until finally none at all could be introduced. After six months' stay in hospital he went home in much the same state. Attempts were then made at home, during two months, to pass instruments, and once he took chloroform; but this failing, he was sent up to Guy's. During the first few weeks after admission various operative procedures were adopted, with the view of finding the end of the vertical portion of the urethra, or providing the patient with an easy mode of exit for the urine. These may be summed up thus—1. The sinuses were carefully slit up and explored to see if they could be traced into the urethra. 2. A "Cock's" operation was performed, in order to open a way into the bladder through the prostatic portion of the urethra. This resulted in showing that the urethra was not in its normal position, probably from the contraction of the dense mass of cicatricial tissue, which occupied the lower aperture of the pelvis. The operation therefore failed. 3. Cystotomy was performed from the peri neum through the prostate. This operation gave so much relief to the patient, as furnishing him with an easy mode of exit for the urine, that it was determined to try and connect the new prostatic passage with the penile portion of the urethra. This was accomplished towards the end of December, and by the beginning of April the new passage in its entire length appeared to be pretty well established. A sharp attack of cystitis, produced by the patient taking exercise with a somewhat stiff gum-elastic catheter in him, here interrupted his convalescence for some time; and after this had disappeared it was found that when he attempted to pass water without the catheter, it would *begin* to flow through the new passage, and then would suddenly stop altogether, just as if a calculus had fallen against and plugged the new aperture. The reason of this appeared to be that the *cul-de-sac* of the old prostatic urethra ran down by the side of, and close to the new passage; and that when micturition took place the urine entered and filled the old *cul-de-sac*, as a bag; and this, in its distended state, pressed on and obliterated the new passages. Hence, to complete the cure it would be necessary in some way to utilise the old *cul-de-sac* of the prostatic urethra. With this object the following operation was resolved on:—On June 25 the bladder was washed out with thymol solution, and then hyper-distended with some of the same fluid. A supra-pubic incision was then made, and the surface of the bladder exposed. One or two double sutures were then passed into its muscular coat, on either side of the intended puncture. On the puncture being made, the thymol solution welled out freely, and was recognised by its smell. A large curved sound was then passed into the viscus through the puncture, down to the back of the bladder, and thence into the prostatic urethra, where it was arrested by the *cul-de-sac*. This sound was then given into the assistant's hands to hold steady, and the patient put into the lithotomy position. The point of the sound could then be felt from the rectum, in spite of the dense cicatricial tissues by which it was surrounded, and it was seen to deviate very considerably to the right side, hence accounting for the failure in finding it by "Cock's operation." Incisions from the perineum readily reached it, and a director was passed into the bladder on this side. On this director, subsequently, a No. 12 catheter was passed into the bladder. The large sound was then removed from the hypogastric incision, and the wound in the bladder closed by carrying the sutures across the incision, threading them in as for a cleft-palate operation. The external skin-wound was left open to granulate up. No constitutional disturbance followed this operation, which was performed under the carbolic spray in all its details, though recognisedly it was only possible to keep the anterior wound *entirely* antiseptic. No escape of urine ever took place from the hypogastric incision. A month after the operation a catheter was passed the whole length of the urethra into the bladder, and the external perineal wound left to close as far as it would. Early in September the

perineal wound was so far closed that the catheter was left out at intervals, and the patient showed that he could pass urine down the whole length of the urethra in a good stream without any of the previous obstruction. At the present time the patient remains in good health, generally passing the catheter for himself, by preference, about twice in the twenty-four hours, to avoid any possible future contraction in the new portion of perineal urethra. It is urged that this supra-pubic operation, though admittedly inferior to "Cock's operation" (for opening the urethra at the apex of the prostate), as far as risk to the patient, facility of performance, and general success in results are concerned, may yet be of the greatest value where the "Cock" fails in success—as, indeed, is shown by this case. Such failure can only be due, when properly performed, to some displacement of the urethra from its normal position. In the present case this arose from the contraction of a vast amount of cicatricial tissue produced by a very bad compound fracture of the pelvis, but it may be also due to the pressure of tumours, or to suppurations about the neck of the bladder, as in some cases of old and repeated extravasations of urine. In the present ease the operation was rendered entirely antiseptic by the washing out and injection of the bladder with thymol solution first, prior to the performance of the operation. It is pointed out that even in cases where the bladder is contracted down behind the pubis, and filled with stinking ammoniacal urine, this may probably be done with success by the use of the aspiratory trocar and canula after the skin incisions have been made, but before the bladder is incised. In this way, by alternately pumping in and sucking out fluid, the bladder may be thoroughly washed out, and finally hyper-distended with antiseptic fluid, whereby the subsequent steps of the operation are much facilitated. The method of passing the sutures prior to opening the bladder enabled the viscus to be well held up against the external wound in spite of its collapse after opening. And subsequently they enabled the wound in the bladder to be rapidly and completely closed, whereby all risk of subsequent infiltration of urine was avoided.

Mr. Furneaux Jordan alluded to the danger of wounding the peritoneum in such an operation—a danger avoided by his plan of opening the urethra behind the stricture from the rectum, and passing an instrument forwards to the meatus through this opening. No fistula would result, for it was sloughing, not incision, that was followed by fistulæ.

Mr. Teevan considered that supra-pubic puncture was in itself a serious operation, and one not lightly to be undertaken, as numerous deaths had been recorded after it. It was well known that there could never be any stricture in the prostate, and this important fact had been well utilised by Mr. Furneaux Jordan, whose operation of retrograde catheterism effected from the rectal aspect of the membranous urethra was a vast improvement over that of Hunter's, which was made by supra-pubic puncture. He considered that all impassable strictures ought to be attacked from the perineum by opening the urethra in front of the contraction, as practised by Gouley, of New York, Wheelhouse, and himself. A fine whaleboue bougie could nearly always be insinuated through the opening into the stricture, and its presence in the bladder demonstrated by sliding over it a fine silver tube, open at both ends, and withdrawing some urine. He considered Hunter's method of retrograde catheterism serious and dangerous.

Mr. Hulke mentioned an article by Professor Dittel, in which supra-pubic puncture is advocated as being attended with little danger, and said that in this article was contained a complete summary of the methods of dealing with difficult strictures.

Mr. Maunder said that the five cases of stricture under consideration might be conveniently divided into three sets to simplify discussion—namely, the first two in which retention existed, the two following where the bladder was empty, whilst Mr. Howse's case might stand alone. He was surprised to find that tapping above the pubis had been resorted to to relieve retention, as it was not an operation free from danger, because of the not infrequent occurrence of urinary infiltration; whilst tapping per rectum was almost harmless, urinary infiltration being nearly unknown in connexion with it. In the instances of empty bladder, opening this viscus above the pubis had proved difficult and dangerous from an operative point of view, and probably, if repeated, might prove fatal from urinary extravasation. He thought, seeing the bad state of health of the patients, that Cock's operation (opening the membranous urethra through the median line of the perineum) would have been all-sufficient. In Mr. Howse's case the conditions seemed to be very peculiar and exceptional, and the method employed justifiable. Mr. Maunder had performed Mr. Furneaux Jordan's operation once, and both his colleagues, who were present, and himself, were surprised at the facility with which it was accomplished. He was at once master of the situation in a case of stricture which had for very many weeks resisted the passage of almost every variety of instrument.

Mr. Hulke, in reply to Mr. Maunder, recollected two or three cases published during the last four or five years, in which, in London hospitals, rectal puncture had been followed by pelvic cellulitis.

Mr. Morris referred to a difficult case of stricture which he had lately dealt with by means of catgut bougies.

Mr. Lister thought that it was clear that if the stricture could be treated from the perineum, it was better to do so than to open the bladder. His plan was to open the urethra freely, and to look carefully for the posterior opening. He noticed that fair-sized instruments had sometimes been passed from behind; here surely a careful search from the perineum would have detected the opening. In some difficult cases only one manœuvre would succeed in overcoming the obstacle.

Mr. Bryant had observed that the President had not definitely given his approval to the operation he described. In Mr. Howse's case he considered that the procedure adopted was the only available one, but he thought no one would attack the stricture from behind if it could be dealt with from in front.

Mr. Rivington thought the operation a valuable addition, particularly where no fresh incision has to be made above the pubis. After opening the urethra from the perineum he had found the upper wall a useful guide.

Mr. Jordan admitted that his operation could only be an exceptional one.

The President remarked that he had brought forward his cases as bearing on Mr. Howse's. That such cases were rare was shown by his having had but one in fourteen years in which the operation was advisable. Where supra-pubic puncture had already been performed, he could see no objection to his method of treatment, which he classed among the surgical curiosities.

Litholapaxy.

Dr. Bigelow exhibited his instruments for litholapaxy, an operation which he said was based on the great tolerance by the bladder of the introduction of blunted polished instruments; he considered that these were more readily tolerated than angular fragments of stone. The operation was a new one, having been done about twenty-five times. Van Buren had had six successful cases. The meatus having been slit, a large tube, 30 to 31 gauge (Charrière), was introduced, the end of the tube being formed by an eccentric projection. In passing this tube it was important that it should be introduced vertically as far as possible, when, the head being depressed, it was pushed on with a corkscrew action into the bladder. To it an indiarubber ball was then to be connected by an elastic tube. The ball, and a glass receptacle which opened into it, were placed in an upright stand. The capacity of the bladder must first be ascertained, and care be taken not to over-distend that viscus. Then, by gently compressing the ball, and allowing it to expand again, the fragments were speedily sucked into the glass receptacle.

This action was successfully demonstrated; and, after a vote of thanks to Dr. Bigelow, the meeting adjourned.

MEDICAL NEWS.

Royal College of Physicians of London.—The following gentlemen were admitted Members on October 31:—

Edge, Abraham Matthewson, M.D. Queen's Univ., Manchester.
Francis, Charles Richard, M.B. Lond., Sutton, Surrey.

The following gentlemen were admitted Licentiates on the same day:—

Ahearne, Joseph, 7, Oakley-square, N.W.
Burry, Henry Burry Pullen, Sompting, Worthing.
Deare, Edwin Walter, 69, Malpas-road, S.E.
Gardiner, John Herbert, London Hospital, E.
Granger, Edgar Bridden, Guy's Hospital, S.E.
Howlett, Edmund Henry, King's College Hospital, W.C.
Smith, Robert Percy, St. Thomas's Hospital, S.E.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examination in Anatomy and Physiology at a meeting of the Board of Examiners on the 5th inst., and when eligible will be admitted to the pass examination, viz. :—

Breese, Thomas, student of the Aberdeen School.
Evans, Owen F. S., of St. George's Hospital.
Kidd, Arthur, of the London Hospital.
Kisby James H., of the Manchester School.
Marshall, James, of University College Hospital.
Marshall, John G., of the Cambridge School.
Milward, W. Clement, of the Edinburgh School.
Odling, Alfred E., of St. Thomas's Hospital.
Sheard, Charles, of St. Thomas's Hospital.
Sykes, R. Parker, of the Edinburgh School.
Teskey, Luke, of St. Thomas's Hospital.
White, Edward W. W., of the Dublin School.
Wilson, James, of the Belfast School.

Seven candidates were rejected. The following gentlemen passed on the 6th inst., viz. :—

Clifton, Frederick W., student of St. Mary's Hospital.
Hill, Alexander, of the Cambridge School.
Kinneir, F. W. E., of St. Bartholomew's Hospital.
Mill, William, of St. Mary's Hospital.
Pook, William J., of the London Hospital.
Pound, Francis J., of the London Hospital.
Steeves, George W., of the Liverpool School.
Winstanley, R. Wyndham, of University College.

Eighteen candidates out of the thirty-nine examined having failed to acquit themselves to the satisfaction of the Board, were referred to their anatomical and physiological studies for three months.

APOTHECARIES' HALL, LONDON.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, October 31 :—

Harvey, George Henry, Wivenhoe, Colchester.
Havens, Edward John, Colchester.
Jago, William Pearce, Plymouth.

The following gentlemen also on the same day passed their Primary Professional Examination :—

Hague, James Thompson, St. Thomas's Hospital.
Leighton, Andrew William, King's College.
Richardson, John Humphry H., Charing-cross Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to all new Appointments that take place.

PHILIPPS, SUTHERLAND REES, M.D.—Resident Medical Superintendent of Wonford House (Hospital for the Insane), Exeter, *vice* Robert Lawson, M.D., appointed Deputy Commissioner in Lunacy for Scotland.

STEELE, CHARLES EDWARD, M.R.C.S. Eng., L.S.A.—Public Vaccinator to the Southern District of Liverpool, *vice* Dr. A. B. Steele, deceased.

WILLIAMS, CHARLES, F.R.C.S.—Consulting Surgeon to the County Asylum at Thorpe, near Norwich, *vice* George W. Frith, deceased.

BIRTHS.

BERRY.—On November 5, at Bracondale House, Wimbledon, the wife of C. W. Berry, M.R.C.S. Eng., of a daughter.

HUTTON.—On November 4, at Leamington, Warwickshire, the wife of Surgeon-Major George Allan Hutton, M.R.C.S. Eng., of a son.

MCDONNELL.—On November 2, at 14, Lower Pembroke-street, Dublin, the wife of Robert McDonnell, M.D., of a son.

OWEN.—On October 31, at Kent Lodge, Southsea, the wife of A. Lloyd Owen, M.D., of a son.

PHILLIPS.—On November 1, the wife of J. W. Phillips, M.R.C.S. Eng., Cowbridge, of a daughter.

MARRIAGES.

GODDARD—COOMBS.—On October 30, at St. Barnabas, South Lambeth, Frank William Thatcher Goddard, eldest son of Frederick William Goddard, of Seymour Lodge, Brixton, to Ada, eldest daughter of Saville James Coombs, M.R.C.S., of Wandsworth-road.

HASTINGS—FRITH.—On October 30, at St. Peter's, Kensington-park-road, George Hastings, M.D., of 47, Kensington-park-gardens, to Alice, fourth daughter of W. P. Frith, Esq., R.A.

MORISON—CUNNINGHAM.—On September 5, at Chalmers' Church, Adelaide, Bentham P. Morison, L.R.C.P. Edin., third son of Alexander J. Morison, J.P., of Portelew, Pembroke, South Wales, to Effie, second daughter of Alexander Cunningham, Esq., of Adelaide, South Australia.

ROBERTS—BRUNTON.—On August 29, at Brisbane, Gordon M. Roberts, M.R.C.S.E., L.S.A., of Toowoomba, Queensland, to Joan, youngest daughter of the late Lieut. John Brunton, R.N., of Morpeth, Northumberland.

DEATHS.

BAETOKE, JULIUS, M.D., of Rome, at 34, Union-street, Greenock, Scotland, on November 1, aged 48.

BROWNING, CHARLES, M.D., at 25, Portsdown-road, Maida Vale, on November 1, in his 74th year.

DOWNING, EDWARD, L.F.P.S. Glasg., M.R.C.S. Eng., at Wellington House, Amersham-road, New Cross, on October 31, aged 70.

HARVEY, SARAH, the wife of William Harvey, L.R.C.P. Edin., at 174, Kingsland-road, on October 28, aged 36.

HOWISON, HOWISON YOUNG, M.D., half-pay A.M.D., only surviving son of the late Archibald Young Howison, M.D., of Hyndford, Lanark, and Carlton-terrace, Edinburgh, on October 31.

MACARTNEY, MAXWELL, M.D., at 21, Longridge-road, S.W., on October 31, aged 70.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

MANCHESTER ROYAL INFIRMARY.—Pathological Registrar. Candidates must be duly registered. Application to W. L. Sander, Secretary, on or before November 18.

METROPOLITAN FREE HOSPITAL, 81, COMMERCIAL-STREET, SPITALFIELDS.—Assistant House-Surgeon. Candidates must be qualified. Applications to be addressed to the Committee.

MUTFORD AND LOTHINGLAND INCORPORATION.—Medical Officer. Candidates must be registered under the Medical Act, 1858, and must be qualified by law to practise both medicine and surgery in England and Wales according to the Order of the Local Government Board. Testimonials to T. S. Allerton, Clerk, Lowestoft, on or before November 25.

ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY, WIGAN.—Junior House-Surgeon. Applications, stating age, etc., with recent testimonials, to William Taberner, Secretary, not later than November 13.

ROYAL INFIRMARY FOR CHILDREN AND WOMEN, WATERLOO BRIDGE-ROAD.—Physician. Applications, with testimonials, to the Treasurer, not later than November 18.

WANDSWORTH AND CLAPHAM UNION.—Resident Medical Superintendent; also an Assistant Medical Officer. Conditions and duties of these two appointments, and forms on which the applications must be made, can be obtained from John Sanders, Clerk, Union Offices, New Wandsworth. Applications must be sent in on or before November 11.

YORK COUNTY HOSPITAL.—House-Surgeon. Candidates must be unmarried and reside in the Hospital. Testimonials to Robert Holtby, Secretary, 5, New-street, York, on or before November 23.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Eton Union.—Mr. H. French has resigned the Beaconsfield District; area 1490; population 417; salary £20 per annum.

Lancaster Union.—Mr. P. J. Norris has resigned the Southern District; area 35,464; population 4963; salary £45 per annum.

West Derby Union.—Mr. W. Rowland has resigned the North Everton District; salary £150 per annum.

APPOINTMENTS.

Axminster Union.—Daniel O'Brien, L.R.C.P. Edin., M.R.C.S. Eng., to the Lyme Regis District.

Barrow-on-Soar Union.—Richard Frank Bell, M.R.C.S., Eng., to the Barrow-on-Soar District. Samuel Harris, M.R.C.S. Eng., L.S.A., to the Quorndon District.

Dunmow Union.—Wm. Binns, L.R.C.P. Edin., L.F.P.&S. Glasg., to the Bardfield District.

Witham Union.—William Gimson Gimson, M.D. St. And., M.R.C.S. Lond., L.S.A., to the Witham District.

MR. EDWARD ALBERT SCHÄFER has been appointed Fullerian Professor of Physiology for three years at the Royal Institution of Great Britain.

A NURSING ESTABLISHMENT AT ST. PETERSBURG.—Baron Maydell, who has been in Paris on the occasion of the Congrès d'Hygiène, has furnished an account to the *Progrès Médical* (October 19) of an establishment founded by Count Gregory Kouchelef-Besbaradko, in honour of the memory of his father, and of which the Baron is the medical director. Its object is twofold—the suckling of new-born infants, and the hiring out of wet-nurses. The infants are thirty-two in number, remain for two years, their parents or guardians who have placed them in the establishment finding guarantees for the payments and for their removal at the expiration of that time. On the first floor are placed infants belonging to persons of a position to pay twenty-five roubles per month, each infant having its own nurse until weaned, and then its own maid. At the weaning the friends also have to pay the nurse twenty roubles. Each infant has its own bed and outfit. The rooms are spacious and extremely clean, and the infants have all the appearance of health. On the appearance of any contagious disease, the child is removed to another house. On the floor above this are the infants of those who pay less—from ten roubles per

month for illegitimate children, to six for legitimate and three for orphans; some of these last paying nothing. Instead of each child here having its own nurse, these infants are suckled by a succession of nurses, who come there in order to be hired as wet-nurses; but these children are in as good health as the others, the mortality not being more than 17 or 18 per cent. The wet-nurses come from a distance of 600 or 800 kilometres, as the nurses from the poor districts around St. Petersburg have a bad reputation. They are kept and boarded in the establishment for a fortnight, when, if not provided with places, they must quit it. Upon an average, 450 nurses are thus admitted annually, and of these about 100 either do not find places or do not keep them. A person desiring a nurse pays ten roubles to the establishment, and may change twice in the month without additional payment.

Drunkenness in India.—From a report on the sanitary measures in India, just presented to Parliament by command of her Majesty, it appears that the statistics of intemperance among European soldiers were on the whole more favourable. The number of cases reported in Bengal, which in 1874 was 10,988, fell in the two succeeding years to 8926 and 7136; but the number of total abstainers was 20 per cent. less in 1876 than in 1875. In Bombay, with an improvement, though slight, in regard to drunkenness, there was an increase of 22 per cent. in the number of abstainers. In Madras, on the other hand, there was an increase of drunkenness, and also an increase of over 40 per cent. in the number of abstainers. The Army Sanitary Commission consider that 264 out of the total number of 886 deaths in the whole of the European Army must be ascribed, directly or indirectly, to the effects of intemperate habits.

Sad, Sad, very Sad!—We copy the following from the *Madras Mail*:—"We are sorry to hear that the prospects of our lady-doctors in Madras have not turned out so bright as might have been expected, and as the promoters of the movement no doubt anticipated. One would have thought some half-dozen at least of the eighty millions of women whom Dr. Balfour so graphically described as being without trained medical assistance, would have gladly availed themselves of the three ladies at their disposal, but we are informed that only one fee has as yet been received amongst them. If this state of things goes on, it will certainly not be in Class A of the Licence Tax that the ladies will find themselves enrolled. One, we believe, contemplates trying Hyderabad, and one has gone to England; so that perhaps the last, finding no opposition, may make a better thing of it. We cordially hope so."

Medical Society of the College of Physicians in Ireland.—The annual general meeting for the election of officers and Council for the ensuing session was held on Wednesday evening, October 30, in the Hall of the College of Physicians, Kildare-street, Dublin. The chair was occupied by Dr. James Little, the Vice-President of the College. The election of officers and Council for the session 1878-79 was proceeded with, and resulted as follows:—*President:* Henry H. Head, M.D., President of the College (*ex officio*). *Vice-Presidents:* James Little, M.D., Vice-President of the College (*ex officio*); Sir Dominic J. Corrigan, Bart., M.D., ex-President; Alfred Hudson, M.D., ex-President; John T. Banks, M.D., ex-President. *Council:* J. Hawtrey Benson, M.D., F.C.P.; J. Magee Finny, M.D., F.C.P.; Thomas Fitzpatrick, M.D., Hon. F.C.P.; Samuel Gordon, M.D., ex-President C.P.; Thomas W. Grimshaw, M.D., F.C.P.; Reuben J. Harvey, M.D., L.C.P.; Thomas Hayden, F.C.P.; Henry Kennedy, M.B., F.C.P.; Stephen M. MacSwiney, M.D., F.C.P.; John William Moore, M.D., F.C.P.; John M. Purser, M.D., F.C.P.; Walter G. Smith, M.D., F.C.P. *Honorary Secretary:* George Frederick Duffey, M.D., F.C.P. The report for the past session was read by Dr. Duffey, the Hon. Sec., and unanimously adopted.

Repeated Fracture of the Patella.—Dr. Pinaud relates the case of a gentleman who, when about fifty years of age, fractured his left patella, and six months afterwards fractured the right one. Both fractures united by means of a fibrous callus three centimetres in length, the articulations being therefore left very loose, and walking difficult. Eighteen months after the second fracture, his foot having caught in some weeds while walking in a garden, he fell. While endeavouring to prevent himself falling, he felt as if his leg were broken, and after going two or three paces fell down. On this occasion his right patella was fractured again by muscular action at its lower part, below the former fracture, the fibrous callus of which was quite undisturbed. He was treated by position and a bandage, and a second fibrous callus was formed. He walks painfully, the foot being raised from the ground with difficulty, giving him at a distance the appearance of a subject of incomplete paraplegia, the descent of stairs being especially difficult. This case, together with a similar one recently under the care of M. Desprès, proves that a fibrous callus is sufficient, and is as solid as a bony one. It is also interesting as an example of three fractures of the patella occurring at long intervals. —*Progrès Méd.*, October 19.

Multiple Urinary Fistulæ: Jordan's Operation: Cure.—Dr. Alex. Jamieson, of Shanghai, records the following case in the *China Imperial Maritime Customs Medical Reports*:—A sailmaker, aged thirty-six, unmarried, entered the Gutzlaff Hospital, June 10, complaining of a multitude of sinuses through which urine discharged itself whenever he attempted to pass water. He stated that in 1873, after a gonorrhœa, his penis swelled, the stream rapidly diminished, and soon became a constant dribble. After a few months an abscess formed immediately external to, and on a level with, the anterior superior spine of the ilium, and burst by three openings, whence urine began to flow. Later on, three openings appeared over the pubes about two inches above the root of the penis; then several at the root on its dorsal surface, in the peni-scrotal fold, and between the glans and the prepuce. Those at the root of the penis on its dorsal surface had since healed, but in healing they had dragged the penis on to the pubes, where it lay a nodulated, shapeless lump. The orifice of the prepuce was closed and puckered; but there was one fine opening through which urine dripped, admitting a slender whalebone bougie, which went down to the peni-scrotal fold, but apparently not through the urethra. The penis never became erect, nor had the patient emissions. The testicles were apparently healthy. The perineum was quite normal. The patient stated (falsely) that he was not an opium-smoker. On June 11, having felt for the tip of the prostate, which was reached only at the full length of the index-finger, I made an incision in the middle line of the bowel with a slightly curved bistoury, but did not reach the urethra. Slightly withdrawing my finger and the knife, I found that I had pushed the mucous membrane on the anterior aspect of the bowel upwards, so that in consequence of this and of the arc described by the point of the knife while depressing the handle to make the cut, the further end of the bowel incision was, when the finger was withdrawn, at least three-quarters of an inch below the tip of the prostate. I therefore divided the sphincter, and passing the back of the index over the posterior wall of the bowel, hooked it forwards so as rather to draw down the mucous membrane on the anterior wall. Then keeping the finger fairly on the prostate gland, not actually in front of it, the urethra was opened immediately, the slightly convex back of the knife touching the tip of the gland. A French olivary catheter was then tied into the bladder, and was replaced next day by a silver female catheter. Two days later (14th) violent diarrhœa set in, upon which the patient confessed to being an opium-smoker. The tube had to be removed, and the diarrhœa was not completely under control until the 16th. On the 17th I endeavoured to replace the tube, but though the incision in the bowel was patent enough, I could not get the instrument into the urethra. The patient was tied up, and I was in the act of introducing the knife, when he involuntarily passed a fair stream through the penis, not a drop escaping by any of the sinuses. From this time out no urine escaped except by the penis. After a few days the prepuce could be slightly retracted, when the meatus was brought into view. A No. 5 catheter (French scale) could now be passed into the bladder, but larger sizes failed, evidently in consequence of their being unable to follow the sharp curve round the pubes, due to the displacement of the penis. The stream was fully equal to No. 10. The skin gradually healed round the orifices of the old sinuses, and the patient was discharged well on July 10, after refusing to submit to a plastic operation designed to replace his penis in its natural position. No better proof could be desired than this case affords of the curative effects of physiological rest. From first to last no operative treatment was addressed to the anterior portion of the urethra.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Tint.—It is said that a very good brown colour is obtained from a solution of the sulphate of copper (four grains to an ounce of water) applied alternately with a solution of the potassium ferrocyanide of like strength. The dye, at first light brown, becomes darker by repeated use of the solution. It is said not to stain the skin.

Undergraduate.—We can hardly undertake to advise in such a matter. Would it not be better to consult one of the teachers at your medical school?

A Meteorological Observer.—The Bavarian Government are about to establish a central meteorological bureau at Munich, and thirty-four observation stations in various parts of the kingdom have been decided on. Dr. William Bezold, the Professor of Physics at the Royal Technical School of Munich, is appointed Director-General. The report of meteorological observations made at the Adelaide Observatory during the year 1878 has been published by the authority of the Government of South Australia, under the direction of Mr. Charles Todd.

A Wise By-law.—Two builders at Leeds have been fined £5 and costs, under the new building by-laws in that borough, for allowing houses which they had erected within the borough to be occupied before they had been certified by the surveyor as fit for habitation.

New Hospitals.—The Peterborough Town Council are about to erect at Dogsthorpe a two-storeyed hospital, and also a building with a ground floor only. The Barton Local Board and Rural Sanitary Authority have decided to erect a hospital for infectious diseases at Peel-green, for Eccles and district, at a cost of £3000. The hospital will be built conjointly by the authorities named. The Guardians of the Poor for the Salford Union are about to provide permanent hospitals and infirmaries for six hundred patients, together with all the necessary outbuildings and accessories, on the new site at Hope.

Overcrowding in Showmen's Vans.—Overcrowding in some of its grossest, worst features are probably to be found in showmen's vans. These itinerant dwellings must not escape the inspection of the sanitary officer. An inquest has been held upon the bodies of three children who were suffocated in a showman's van at Newtown, in North Wales. In this van six people slept. The amount of space for them was about eleven feet six inches long, six feet six inches wide, and six feet six inches high—insufficient for one person,—and in it was an American cooking-stove. Henry Holloway stated that when he arose in the morning, at half-past seven, the three children were dead, and a woman and a boy ill. The woman was sent by Dr. Pratt, who was called in, to the Monmouthshire Infirmary, and she is now recovering. The fire in the stove was supposed to be out when they went to bed. The bed in which the three children slept was on the floor, under that of the parents, and two feet nine inches space was between the two. The verdict was to the effect that the children died from overcrowding and the fumes arising from the coke fire; and they recommended that the attention of the sanitary authorities be called to such gross cases of overcrowding.

A New View of Sewer Ventilation.—A paper on sewer ventilation was lately read before the American Institute by a civil engineer, who insists that to ventilate sewers by any means is a pernicious mistake. It would, he says, be as sensible to ventilate graves. According to his opinion, the best thing to be done is, not to make apertures for permitting sewer-gas to find its way to the upper world, but carefully to stop up every cranny by which it can escape. The New York Board of Health has rigorously compelled the ventilation of sewer-pipes, sinks, and cesspools, and so have the authorities at Washington, while their drains have a very scanty supply of water. The consequence is a prevalent malaria, which might have been prevented if the sewer-gas had been carefully confined to its own quarters underground. The heat of decomposition causes the foul air in the drains to ascend, but sulphuretted hydrogen and carbonic acid are specifically heavier than atmospheric air at the same temperature, and on emerging into our streets they begin to fall, and settle in a pestilential layer on the ground. Instead of carefully arranging for this, he says, let the sewers be completely buried, pour in plenty of waste water, which is well known to absorb much of the impure gas evolved, and let the whole waste water, gas, and sewerage find its way into the sea. It may be worth while asking how the civil engineer will make sure that sewers will not ventilate themselves into the houses?

Westgate-on-Sea.—Dr. Robinson, the Medical Officer of Health of the Thanet Rural Sanitary Authority, has drawn the attention of the Board to the want of proper drainage and building regulations at this watering place, which was, he stated, a very growing place, with two miles of roadway laid out for streets. At present the houses were drained by cesspools, and there were no building regulations. He advised the Board to apply to the Local Government Board for urban sanitary powers for Westgate. It was resolved to take the necessary steps to obtain such powers.

A Poor-Law Guardian.—During the last few years several boards of guardians have resolved to try the experiment of the cottage system for the training of children of the poor, and plans on that system have been approved by the Local Government Board in six cases. A report by Dr. F. J. Mouat and the late Captain G. Bowly, recently published, gives valuable information on the subject.

Trained Nurses.—According to Lord Atherley, who lately spoke at a meeting at Ipswich in support of the local Nurses' Home, the race of "Gamp" has entirely disappeared, and in its place is a rising class of nurses, of whom medical men can have no reason to complain.

Infirmary Buildings.—The Metropolitan Board of Works has sanctioned the borrowing, for the purposes stated, of the following sums:—£6000 by the Guardians of the Strand Union, for erecting a new infirmary; and £2600 by the Guardians of St. George's-in-the-East, for enlarging their infirmary and the workshops attached to the workhouse.

An Ancient Member.—Yes, Oliver Goldsmith was examined by the Corporation of Surgeons (now the Royal College of Surgeons of England), and—rejected. The first "Master" (since changed to President) was Charles Hawkins, 1800. The last with that title was Thompson Forster, 1820, who was succeeded the following year by Sir Everard Home, Bart., as the first President of the College.

Inquisitive.—No licence is required for the sale of quinine wine if made according to the recipe in the British Pharmacopœia, and not sold as a proprietary or patent medicine.

German Army Medical Arrangements in the Field.—Referring to the International Congress of Military Surgeons lately held in Paris, a few details of the recently organised medical arrangements of a German army in the field, which are characterised as worthy to serve as a model for those of every other army, may be of interest. In the first place, to every mobilised German army corps there are attached three "sanitary detachments," each consisting of seven surgeons, one apothecary, sixteen hospital assistants, and a sick-bearer company provided with thirty stretchers, three carts, and six waggons fitted for the transport of severely wounded men. One of these three detachments is placed at the disposal of each of the two divisions of the army corps, and one is attached to the headquarters of the army corps, each detachment again being divisible into two independent sections, one of which may be detached for duty with each brigade of the division to which the sanitary detachment is told off. Each mobile army corps is also accompanied by twelve field hospitals, which during an action are established immediately in rear of the troops engaged, and each of which affords accommodation for two hundred wounded. These are brought in the first instance by the sanitary detachments from the field of battle to the field hospitals, and there remain and are tended until the arrival of the reserve hospitals, which are also attached to every mobile army corps. When the latter come up and take over the sick and wounded, the field hospitals at once move on again and rejoin their army corps, while arrangements are made for sending the wounded from the reserve hospitals of the corps to the seat of operations or to permanent hospitals in the interior of their own country.

A New Sanitary Regulation at British Indian Ports.—A system of medical inspection for all vessels entering port is to be organised, and the existing quarantine regulations for these ports are to be abolished, as endangering the safety of healthy passengers. By the proposed system persons suffering from epidemic diseases will be dectected, and, in default of being able to secure adequate accommodation and attention elsewhere, drafted off to the nearest hospital.

A Comprehensive Scheme.—The Corporation of the city of Exeter have under consideration a very comprehensive scheme for the main drainage of Exeter and the district for several miles round. The works proposed are to extend from Tiverton to Exmouth, a distance twenty-five miles. The estimated cost is no less than £200,000.

Wandering Lunatics.—A discussion recently took place at the meeting of the Guardians of the City of London Union, as to the propriety of medical officers certifying for the removal to the infirmary of wandering lunatics found by the police at night, instead of allowing them to remain in the cells of the police-station, to be taken before a magistrate the next morning. Whilst admitting that the former course was irregular, and contrary to the Act of Parliament, it was decided that medical officers should adopt it in cases of emergency.

Formerly a Ship's Surgeon.—Tobias Smollet, the author of the "Adventures of Roderick Random," was bred to the practice of medicine and surgery, and in the early part of his life served as a surgeon's mate in the Navy. His connexion with the sea, however, seems not to have been of long continuance. About 1748 he attempted to settle as a medical practitioner at Bath, and with that view wrote a treatise on the waters, but was unsuccessful. He afterwards abandoned medicine altogether as a profession, and turned his thoughts entirely to writing. "Roderick Random" is in great part, if not entirely, founded on the vicissitudes of the author's own life.

Drainage from Cemeteries.—Attention has been drawn to the fact that the larger proportion of our cemeteries are upon eminences, and that they must consequently drain themselves into the rivers, and contaminate water which is drawn for domestic uses.

M.R.C.S., Plymouth.—The person mentioned is not a Licentiate in Dental Surgery of the *London* College of Surgeons. We find the names of Messrs. C. S. Bate, F. H. Balkwill, R. H. Geldard, E. E. Jewers, and W. V. Moor, as gentlemen who have passed that examination at the Royal College of Surgeons of England. His estimation of the qualification is shown by his omission to name the place where it was obtained.

COMMUNICATIONS have been received from—

Mr. J. A. Bloxam, London; Mr. John Chatto, London; Mr. B. R. Wheatley, London; Dr. J. Milner Fothergill, London; Mr. D. Colquhoun, London; Dr. G. Ernest Herman, London; Mr. T. M. Stone, London; Mr. Spencer Watson, London; Dr. Octavius Sturges, London; The Registrar of the Royal College of Physicians of London; The Secretary of the Society for the Relief of the Widows and Orphans of Medical Men; Mr. T. Vincent Dickinson, London; The Registrar of Apothecaries' Hall, London; Mr. T. Spencer Wells, London; The Town Clerk, Hastings; Messrs. J. Richardson and Co., Leicester; The Secretary of the Royal Institution of Great Britain; Messrs. C. Wright and Co., London; The Registrar-General, Edinburgh; Mr. C. J. Cullingworth, Manchester; Dr. Norman Chevers, London; Mr. M. Becher, London; Mr. Clement Lucas, London; Dr. Edward Sparks, Mentone; Dr. J. W. Moore, Dublin; Dr. Meymott Tidy, London; Dr. J. M. Bruce, London; Mr. R. W. Parker, London; The Secretary of the Faculty of Physicians and Surgeons of Glasgow.

BOOKS AND PAMPHLETS RECEIVED—

D. Hack Tuke, M.D., F.R.C.P., A Few Notes on Lunacy in France—Angus Macdonald, M.A., M.D., The Bearings of Chronic Disease of the Heart upon Pregnancy, Parturition, and Childbed—Paris Universal Exhibition, 1878, Handbook and Official Catalogue of the Canadian Section—Memoirs of the Botanic Garden at Chelsea, belonging to the Society of Apothecaries of London, by the late Henry Field—Hugh Doherty, M.D., Organic Philosophy of Man's True Place in Nature: vol. v., Organic Method—Samuel Osborn, F.R.C.S., Hydrocele, its Several Varieties and their Treatment—Transactions of the Bristol Medico-Chirurgical Society—James Tyson, M.D., The Cell Doctrine, its History and Present State; A Guide to the Practical Examination of Urine.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Cincinnati Lancet and Clinic—Gazette Hebdomadaire—El Siglo Médico—Veterinarian—Obstetrical Journal—Brain—American Journal of the Medical Sciences—Edinburgh Medical Journal—Archives Générales de Médecine—Monthly Homœopathic Review—Journal of Anatomy and Physiology—American Practitioner—Burlington House—Glasgow Medical Journal—Journal des Sciences Médicales de Lille—Analyst—Toronto Sanitary Journal—Monthly Letter of the English Anti-Tobacco Society—Morningside Mirror.

APPOINTMENTS FOR THE WEEK.

November 9. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

11. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Dr. Gilbart Smith, "Case of Empyema complicated with Aneurism" (discussion). Dr. Drysdale, "On Syphilitic Urethritis."

12. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Royal Medical and Chirurgical Society, 8½ p.m. Mr. G. Gaskoin, "On a Case of Morphœa." Dr. F. Sémon, "On a Case of Thyrotomy for the Removal of a Membrane completely obliterating the Larynx." Dr. F. Taylor, "On the Condition of the Skin in Tinea Tonsurans."

13. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 1½ p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

Hunterian Society (London Institution), (Council Meeting, 7½ p.m.), 8 p.m. Dr. Pye-Smith, "Notes on certain Diseases of the Skin."

14. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

15. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

Society of Medical Officers of Health, 7½ p.m. Meeting.

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 2, 1878.

BIRTHS.

Births of Boys, 1277; Girls, 1255; Total, 2532.
Average of 10 corresponding years 1868-77, 2397·0.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	726	660	1386
Average of the ten years 1868-77	766·3	721·0	1487·3
Average corrected to increased population ...	...	...	1591
Deaths of people aged 80 and upwards ...	...	...	43

Note.—The births and deaths registered last week may be compared with the average numbers in the corresponding weeks of the ten years 1868-77 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	3	9	1	5	...	...	1	2
North ...	751729	1	...	12	3	7	...	8	1	6
Central ...	334369	...	1	5	2	2	...	6	...	1
East	639111	...	7	11	2	4	1	4	2	5
South	967692	2	4	12	2	4	...	9	2	7
Total	3254260	3	15	49	10	22	1	27	6	21

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·649 in.
Mean temperature	41·0°
Highest point of thermometer	51·8°
Lowest point of thermometer	31·8°
Mean dew-point temperature	38·0°
General direction of wind	N.
Whole amount of rain in the week	0·14 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, November 2, 1878, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1878.*	Persons to an Acre. (1878.)	Births Registered during the week ending Nov. 2.	Deaths Registered during the week ending Nov. 2.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3577304	47·5	2532	1386	51·8	31·8	41·0	5·00	0·14	0·36
Brighton	103923	44·1	79	26	51·0	32·4	40·7	4·83	0·04	0·10
Portsmouth ...	129461	28·9	100	43	...	...	...	...	...	...
Norwich	84620	11·3	41	36	51·0	30·0	40·3	4·61	0·45	1·14
Plymouth	73599	52·8	42	30	54·0	33·0	43·5	6·39	0·67	1·70
Bristol	206419	46·4	151	68	53·1	30·1	40·5	4·72	2·16	5·49
Wolverhampton ...	74240	21·9	62	29	49·4	29·4	38·6	3·67	0·57	1·45
Birmingham ...	383117	45·6	301	180	...	...	...	...	...	...
Leicester	121473	38·0	78	36	51·0	30·0	39·0	3·89	0·47	1·19
Nottingham ...	165267	16·6	123	56	50·4	27·0	37·9	3·28	0·24	0·61
Liverpool	532681	102·2	396	318	51·0	35·7	42·6	5·90	0·58	1·47
Manchester ...	360514	84·0	252	181	...	...	...	...	...	...
Salford	170251	32·9	115	82	56·2	26·1	38·5	3·61	0·85	2·16
Oldham	107366	23·0	83	61	...	...	...	...	...	...
Bradford	185088	25·6	131	72	48·2	32·6	39·9	4·39	0·47	1·19
Leeds	304948	14·1	226	139	51·0	32·0	41·0	5·00	0·30	0·76
Sheffield	289537	14·7	232	150	53·0	31·0	40·4	4·66	0·43	1·09
Hull	143139	39·4	134	63	51·0	29·0	40·0	4·44	0·47	1·19
Sunderland ...	112459	40·6	79	54	51·0	33·0	40·6	4·78	1·50	3·81
Newcastle-on-Tyne	144570	26·9	105	59	...	...	...	...	...	...
Edinburgh	222371	53·1	139	79	52·0	30·0	39·1	3·95	0·37	0·94
Glasgow	563940	94·0	412	227	52·0	31·7	42·5	5·84	0·00	0·00
Dublin	314666	31·3	159	144	55·0	28·2	40·9	4·94	0·05	0·13
Total of 23 Towns in United Kingdom	8373953	38·0	5982	3519	56·2	26·1	40·4	4·66	0·54	1·37

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·65 in. The lowest reading was 29·14 in. at the beginning, and the highest 30·06 in. at the end of the week.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1878 by the addition of seven years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. Nottingham, Salford, and Oldham, however, form exceptions to this rule, as the estimates for these three towns have been revised with the aid of local information as to the rate of increase of inhabited houses. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

III.

CLINICAL LECTURE ON ACHING KIDNEY—PYONEPHROSIS—STRICTURE OF URETHRA.

BEING THE THIRD OF A COURSE OF LECTURES DELIVERED AT ST. BARTHOLOMEW'S HOSPITAL

By J. MATTHEWS DUNCAN, M.D., LL.D.,
Physician-Accoucheur and Lecturer on Midwifery to the Hospital.

THE first subject of the lecture to-day is Aching Kidney. I shall read to you no individual case of this disease, because, in the class of patients that come to St. Bartholomew's, it is not considered grievous enough to secure a bed in the hospital. Among the better classes, where diseases are often unjustly appraised, it is often regarded as of the greatest importance and interest. We have had many cases in Martha of aching kidney, but in them this affection has been merely an epiphenomenon, or a part of other diseased conditions.

This disease is sometimes, both in men and women, very easily recognised. There are achings in cases of what is called floating kidney. The patient can put her hand upon the lump, and say, "Here is the pain," and there is no difficulty in recognising the disease. But there are some cases in which the disease is very difficult to identify. In pregnancy, for instance, right or left hypochondriac pain is very frequent. In many cases I have been able to be quite sure, from the history before and after pregnancy, that the disease was not to be classified in the vague way that is implied in giving it the name of hypochondriac pain, but that it was really a case of aching kidney. In pregnancy you have the very opposite conditions to those in floating kidney. If pregnancy is advanced, you cannot get at the kidney to feel it and identify its position. Here I may remark that, while the disease often occurs in pregnancy, yet that some women who are liable to it do not suffer while in that condition. A patient, now under my care, has tender aching right kidney, which began fourteen days after confinement. Before her present pregnancy she had had two attacks of it; but during pregnancy she enjoyed perfect health.

The disease in women is not a rare one, and its characters are the following:—One or other kidney is the seat of pain. It is not a neuralgic pain; it is a heavy, wearing pain, deep in the side. It is in the region of the kidney, and in many cases (as I shall presently tell you) you can easily identify it as being in the kidney itself. It is not generally that kidney pain which is a familiar symptom of calculus. In such cases the pain is the pain of the pelvis of the kidney. You have in the region of the small ribs a boring, or a nail-like pain. Patients with aching kidney generally point to the hypochondriac region, not to the back, as they often do in cases of calculus in the kidney. This pain is frequently accompanied by pain in the corresponding lower limb, referred most frequently to the course of the sciatic nerve, sometimes to the course of the anterior crural. The pain is often accompanied (and you will find this of importance throughout all the subjects of this lecture) by irritability—I do not say disease—of the bladder; and it is frequently accompanied by pain in the region of the ureter corresponding to the kidney affected. This pain is not rarely present only during the monthly periods; when it is present only during the monthly periods it may be classed with that disease, which is very ill-defined, called dysmenorrhœa. It should never be placed there, unless you wish to use the word dysmenorrhœa in a very wide sense. If we use the word as including aching kidney, we might as well use it as including headache—a use which would be in accordance with what is extensively done by writers. This disease, however, often eludes the examination of the physician, because it occurs, in many cases, only during the monthly periods. In all cases it is then aggravated. I do not think I have ever seen a case in which the patient did not volunteer the statement that the pain was worse at the monthly time.

Now, you naturally ask, What has the kidney to do with the menstrual function? And upon this interesting subject I shall make a few remarks before I go further. Embryologically, the urinary and the genital organs are closely connected. That you all know, and I have not time now to enter upon the embryology of the subject. As the genito-urinary organs become developed they get separated from one another, and their connexion does not strike the student of adult human anatomy, forgetting the anatomy of the embryo. But in the adult you occasionally find the proximity of the organs maintained. The kidneys are sometimes found in the pelvis, and cases are recorded where kidneys in the pelvis, maintaining their proximity to the genital organs, have been the cause of difficulty in labour. Now, not only have these two organs an embryological or developmental connexion, but they have an intimate connexion in pathology. Of that connexion the disease I am now speaking of is an example; and I shall give you another example, merely mentioning it. A woman, after abortion or delivery at the full time, has an attack of parametritis. This parametritis extends; and a favourite extension, as everybody knows, is along the cellular tissue in front of the psoas muscle and up to the suet. Cases have been very carefully observed where there could be no doubt that an abscess of the suet was the result of inflammation of the womb—following an operation—following an abortion—following delivery at the full time. This is another pathological connexion between these parts, and I might give you more; for analogous inflammations are observed in the virgin.

It is not usual to find both kidneys aching, and I guess—I can use no stronger word—that the left kidney is much more frequently the seat of disease than the right one. You are not left in your diagnosis in all cases merely to identification of the seat of the pain, although that may be sufficient. Frequently in the region of the pain you can find distinct fulness; that is a very important condition, that I have not time to explain to you. It can scarcely be made out in a fat woman; but in many cases this condition of fulness over the affected kidney is easily recognised. In addition, swelling of the kidney or of the suet, or of both, is not rarely to be made out. The physical examination of the kidney is too much neglected. It is not in floating kidney only that you can feel the organ. In many women who are not nervous, yielding themselves freely to examination, and who are not fat, you can feel the kidney with distinctness; and in cases of this kind you can frequently make out, as I have said, that there is a swelling of the kidney or of the suet, or of both. There is also generally tenderness, sometimes great tenderness.

Now, you can scarcely mistake this disease, in a good example, for any other. The diseases with which you are liable to confound it are pyelitis and calculus; and the diagnosis is to be made out mostly on the following grounds: In pyelitis and in calculus the pain is more incessant; and in pyelitis the disease may go on acutely with fever. Both these characters may be absent—and, indeed, are generally absent—in the case of aching kidney. In pyelitis and in calculus you generally have pus in the urine in greater or less quantity; it may be very little. In calculus you generally have, in the history of the woman, blood in the urine; and this is generally connected with some violence in the way of exercise, such as riding in a rough cab, or having a fall. In the case of aching kidney, exercise frequently aggravates the disease. You can easily understand that a woman taking rough exercise, as in a rough cab, will feel an aching, tender kidney irritated by the exercise. But this is not a very well-marked symptom. Most women who have aching kidney do not complain of exercise, although some do. Aching kidney is a disease of much less gravity, and more amenable to treatment than pyelitis or calculus.

The treatment is to be conducted on the general principles applicable to the therapeutics of neuralgia or slight hyperæmia; and these two conditions are not so very remote from one another as may at first sight appear. A neuralgia sounds as if it were something quite different from a hyperæmic condition; but that has to be proved. The remedies I have found of most service in simple cases of this kind are tonic regimen and tonic medicines, especially iron in the form of the tincture of the perchloride, combined with mild diuretics in small quantity, and especially the common sweet spirits of nitre.

Now, before I leave this subject I have to make a statement about the importance of this disease—a statement that gives it a greater importance in exceptional cases than it

has in the general run. At present I have three cases under my care where aching kidney was easily diagnosed. In one of them there are occasional appearances in the urine of a small quantity of albumen. These occasional appearances of albumen are discovered by being looked for; and the looking for is stimulated by the occurrence of general ill-defined illness, or bad headache, or something of that kind, which leads you to inquire into the condition of the urine in a woman who has aching kidney. In a few cases of aching kidney of this kind I have detected the repeated occurrence of albumen in the urine. It occurs in a very small quantity, but quite distinctly, and it occurs either without any casts, or with very few. I have under my care at present a sufferer from aching kidney who recently became pregnant, who went on in pregnancy for four months, and then albumen appeared in her urine in small quantity. It appeared without any aching in the kidney, and it was not in the form or under the circumstances in which it causes very great alarm. It was a repetition of what had occurred long before her pregnancy, while her kidney ached severely. The albumen disappeared from the urine entirely in about ten days. She was then supposed, and supposed herself, to be doing remarkably well, when a miscarriage occurred. Just as the albumen had distinct connexion with the aching kidney, so had the miscarriage. The miscarriage was caused, no doubt, by the death of the fœtus; the death of the fœtus was caused by disease of the placenta; the disease of the placenta was connected with a morbid or watery condition of the blood, which was probably present in this delicate woman in an exaggerated state. The disease of the placenta showed itself by the production of extensive yellow patches. These yellow patches are decolorised cotyledons, which have been thrombosed previously and rendered useless to the fœtus. The cotyledons in this woman's placenta became thrombosed one after another, until the placenta was reduced in useful area to such an extent as to lead to the death of the fœtus; and this thrombosis of the placenta had, no doubt, an intimate connexion with the morbid condition of the kidney that I have been mentioning.

This condition of the kidney occurring in pregnant women is not a very rare condition, and you are to distinguish it from the acute nephritis of pregnant and lying-in women, which is so frequently, or almost invariably, the basis for the great disease called puerperal eclampsia. I am not asserting that this disease does not form a minor degree of the same disease. I make no assertion about that; but to confuse the slight temporary albuminuria I am now describing with the acute puerperal nephritis that leads to eclampsia would be a great error. In the pregnant woman I have been speaking of, the disease was temporary. It no doubt partly conduced to the death of the fœtus and the miscarriage, but there was no other harm to the woman, nor indeed the slightest alarm from any cause.

That is all I have to say upon the subject of aching kidney; and it brings me to the subject of Pyonephrosis. The patient whose case is now to be under consideration, so far as her kidney was concerned, might be truly said to be suffering from aching kidney. But to give such a mere nosological name to her disease would be an injurious proceeding, not doing justice to our intelligence. For her there was nothing but an aching kidney; but we could easily make out that the cause of the aching kidney was pyonephrosis. We did not call it hydronephrosis, because we found that the tumour, which I shall immediately describe, was full of pus. It did not fluctuate; but it presented the feeling of fluid all over. There can be little doubt that it was not hydronephrosis. Hydronephrosis generally presents a lobulated solid tumour, with more or less extensive portions exhibiting fluctuation; and when the tumour is tapped, you get out a filthy fluid with urinous constituents. Before I read the particulars of this case to you, I may premise that the patient came into Martha not for nephrosis, not for aching kidney, but for irritable bladder.

A. S., aged nineteen, was in Martha ward in October, 1876, with vascular tumour of the urethra. It was removed, and she was discharged cured at the end of the month. In March, 1877, she was again admitted, with recurrence of the growths around the urethra and hymen. They were cauterised, and she was discharged relieved in April. In May, 1878, she was again admitted, and this time under my care. She states that a few days after leaving the hospital her painful symptoms returned, and are now worse than ever. She has pain and smarting on micturition, and has to pass water about every two hours. Four months ago she noticed a lump in her right side. It is gradually enlarging. Before she discovered the lump she suffered pain in the part for two months. It is constant, and, though never very severe, has occasional exacerbations. The mammary areola is of about the area of a shilling, and the mammilla not larger than in a male. In the right flank is a lobulated tumour, the chief lobe or nodule of which is just below the umbilicus and two inches to the right side. There is a feeling of fluid contents; good resonance below the tumour, and a streak of imperfect resonance between it and the liver. Impulse can be most distinctly obtained between the renal region behind and the front of the tumour. Around the posterior two-thirds of the orifice of the urethra there is arranged, in a moniliform manner, a series of five crimson flat ulcers of about the size of coriander seeds. They are slightly raised, and have irregular, starred edges. They are supersensitive. The bladder measures five inches from the orifice of the urethra to the fundus, and is natural in point of sensibility and elasticity. The cervix uteri is very small: the probe passes into the cavity two inches and a half. There is no hymeneal obstruction. On May 9 the upper and right lump was tapped with a fine trocar and aspirator. Nothing came out. On May 13 the urine, acid, had a specific gravity of 1012; faint cloud of albumen; slight deposit of pus on standing. May 18: Under chloroform, the most prominent part of the tumour was tapped with the aspirator trocar, and three or four ounces of extremely thick viscid purulent fluid drawn off, somewhat like putty, No pain or tenderness followed the operation, and she was discharged on June 27.

I have no idea what is the cause in this young woman of the obstruction of the ureter. Her disease consists in dilatation of the pelvis of the kidney, of its tributaries, and of the kidney itself, by pus. The nature of the pus extracted, and the general condition of the patient, indicate that the disease is at present obsolete, if not retrograde. That is a very important point, indicating the advice we gave. Cases of this kind are very serious, being very dangerous; and I have little doubt that sooner or later this young woman will have to call again for advice, for the disease she has is generally fatal. It is treated by one or other of three proceedings. One is to let it alone—which is a very painful resolution for all parties; the practitioner standing aside in impotence for substantial relief. Another proceeding, which has proved extremely dangerous, is to open the tumour and let the contents run out; and this is done in a variety of ways. The proceeding which we contemplated in this case was of a different kind—the excision of the kidney bodily; but we not only did not press this operation on the woman, we recommended her to go away without it. The operation is an extremely dangerous one, and the case at the time was not urgent. As I have said, however, the case will some time or other in this woman's life prove urgent if it behaves as other cases of the kind do, and the question of operative interference will come again to be considered.

That is all I have to say about the pyonephrosis part of this case, but the case introduces us to very important practical questions. You will observe that this patient came into Martha complaining of irritable bladder. It was for her a secondary matter that she had a lump in the side which ached; it was for irritable bladder that she had been in the hospital twice previously, and now for the third time—for the first time under my care. Having resolved not to interfere with her kidney, it was our duty to consider what we could do for her main suffering, her irritable bladder. In order to decide what was to be done for her irritable bladder, we had before us one of the more difficult questions in practice—Where is the disease? This irritable bladder, was it the consequence of the pyonephrosis?—was it the consequence of the condition of the orifice of the urethra that I have already described?—was it the result of disease of the bladder itself? Upon the decision depends the line of treatment. In this case we excluded disease of the bladder by examining it, and finding (as you observe is recorded in the history of the case) that the bladder was natural, not tender, and elastic. A woman suffering from a slight degree of cystitis would have her bladder somewhat contracted, exquisitely tender to the touch of the sound, and hard or inelastic. We had no hesitation in concluding that it was not the bladder that was in fault. We had next to

consider whether it was the kidney. That the kidney was the cause of the irritable bladder in this case was rendered very improbable by the fact that the irritable bladder had existed before the disease of the kidney existed, and had not been aggravated by the increase of the disease in the kidney. Lastly, we had no hesitation in concluding that the irritable bladder was the result of the disease of the external genital organs, affecting in her at one time the urethra, at another time the urethra and parts external to the hymen; and when she came to us, affecting the urethra in the peculiar way I have mentioned. Were this woman married she would infallibly suffer from dyspareunia, producing vaginismus. You will recollect my description of a case of vaginismus in my lecture a month ago. I told you then of a peculiar disease, of which this is an excellent example, which I said was like lupus in its history, recurring after it is healed or extirpated. Here is an example of it, not producing dyspareunia and vaginismus because the woman is not married, but producing irritability of the bladder, one of the most common consequences of the disease.

Notice the interesting circumstance that the disease at first presented itself as a caruncle of the urethra. The nature of that caruncle, or the fact that it was not a common caruncle at all, but a slight kind of lupus, is shown by the history of it: the presence now of little ulcers about the urethra, the absence of caruncular swelling, the presence of little ulcers around the hymen, contrasted with a mere caruncular swelling when she first came to the hospital. You thus observe that we settle the question as to the cause of the irritable bladder by a study of the time or the order of appearance of the various phenomena which we use to help us in forming a judgment, by the characters of the phenomena, and by their severity. Using these methods of judgment will not enable you to solve the question in many cases. In this case, I think, it does enable us to solve the question. Long essays have been written by eminent men —especially by surgeons studying diseases of the bladder in the male—upon this very point, whether this irritable bladder arises from disease of the bladder, or of the urethra, or of the kidney; and, having read them, I must tell you I consider that nothing could be more unsatisfactory. We get further in the case of women than it is possible to do in the case of men in settling this very important practical question; and you will observe it depends upon the settlement how you are to direct treatment. Your treatment will be in wrong lines unless you form a good judgment on this point. Now, here is a case of this disease not producing dyspareunia and vaginismus, but producing irritable bladder. I told you in my lecture a month ago that it had been observed in the lower animals that irritation of the orifice of the urethra produced contraction of the bladder. Here is an example, and no doubt can remain upon the subject, for when this woman was cured of the irritation of the orifice of the urethra, she was cured of irritability of the bladder; and when the disease causing the irritation of the orifice of the urethra came back, the irritability of bladder came back.

To conclude this case, I must tell you that we did nothing by operation. The patient had been thoroughly, even heroically, treated twice; yet the disease came back, and we did not feel disposed to begin again. If she returns we may reconsider that, and give her another chance of getting rid of these irritable ulcers, this lupoid disease about her vulva.

Lastly, I come to a case of Stricture of the Urethra; and I am fortunate in having it to relate, because, if I were to make a case to illustrate what I have been saying, I could not get a better one. A woman came to us suffering from irritable bladder. She had to make her water frequently, sometimes every few minutes. It was not a case of hours, but of minutes, and she could not get good sleep. On examining this woman we found that there was no orifice of the urethra in the natural situation. She had no history of syphilis, of operation, or of injury; yet there was no orifice in the situation of the urethra. A little to the right side of the natural position of this orifice was a very slight redness. A little surgical probe pressed against this redness entered the bladder. The orifice of the urethra, then, was strictured. On examining the woman's bladder we found it not expanded. It was a large bladder, but not larger than you frequently see in healthy women; but we found the urethra expanded. The bladder-cavity did not begin at the internal orifice of the urethra, but its expansion began at the external orifice. There was no urethral canal. The bladder was not inflamed in any degree; it was soft, not tender, and large, though not unnaturally large. Now, here is a very plain case. A little operation was performed with a bistoury, enlarging the external orifice of the urethra, so that a number 15, 16, and then 18, were passed into the bladder. Within two days the canal of the urethra had re-formed itself; and from the moment of the operation the woman was cured. She slept that night, she had no irritability of the bladder at all, and made no complaint. She remains cured. A volume might be written upon this case, as illustrating very important subjects both in uterine and in vesical pathology. To-day I have only time to show you how important it is as indicating that disease at the orifice of the urethra may produce irritable bladder. It confirms in a very remarkable manner—as remarkable as if we had made an experiment for the purpose—the statement I have made, that an irritable bladder may be due to a disease affecting the external orifice of the urethra or its neighbourhood. In subsequent lectures I shall recur to this case, for it is one fruitful of valuable suggestions.

ORIGINAL COMMUNICATIONS.

REMOVAL OF HYDATIDS OF THE OMENTUM AND FROM THE PELVIS

DURING SEVENTH MONTH OF PREGNANCY—RECOVERY.

By J. KNOWSLEY THORNTON, M.B., C.M.,
Surgeon to the Samaritan Free Hospital for Women and Children.

On March 5 in the present year I was asked to see a woman at Tottenham who was some months pregnant, and was suffering much from some obscure abdominal tumour. I saw her the same evening, and was very much in doubt as to the nature of the case, and advised her removal to the Samaritan Hospital in order that I might have her under observation for some few days, and take the advice of my colleagues at our weekly consultation. She was admitted on March 7.

E. P., aged thirty-two, married five years, and mother of one boy three years and a half old; a dark, sallow woman, with furrowed brow, as if in constant pain, markedly emaciated.

History.—Had enjoyed fairly good health up to the time her child was born, three years and a half ago. On the third day after her labour she had a sharp attack of pleurisy in right side, which passed off in ten days. She did not, however, regain her usual health, but continued weak, and in three months noticed a lump in the right side of the abdomen. It gave her a good deal of pain, and she also suffered from pain over the pubes. She consulted a London physician, who told her she had fibroid tumour of the uterus. The lump first noticed continued to grow slowly, and with the increase of pain, and at times much bearing down of the uterus. In the early part of 1877 she was supposed to have miscarried at the fourth month of pregnancy; but as no fœtus was seen, and menstruation seems to have been irregular rather than suppressed, I think it must have been a mere menorrhagia from some other cause.

Her last period before admission ceased on September 8, 1877, and, as the pregnancy advanced, her size increased more than it should have done; other lumps could be felt in the lower part of the abdomen; and the pain and uterine bearing down became much more severe, so that at the time I saw her she had been spending most of her time in bed, and was constantly taking sedatives: without them she could not rest at all.

I kept her under observation for a week, and found that the pain was really constant and severe, and that the emaciation was rapidly increasing. At this time there was a large dull tumour occupying the left side of the abdomen, in which the fœtal movements could be readily detected and the fœtal heart heard. In front and to the right of this were several round hard masses, to some extent movable over its surface and from one another; one immediately over the pubes was of considerable size, and in this an indistinct sense of fluctuation could be detected. The pelvis was occupied by a grape-like bunch of small round bodies, which lay behind the

uterus; these did not seem to be connected with the abdominal tumour nor with the uterus. More to the right there was a separate soft elastic body about the size of a walnut; it appeared to be fixed to the sacrum. The os and cervix were in the normal condition of pregnancy. Vaginal examination caused much pain, especially down the left leg, which was also the seat of pain when she got up and attempted to walk.

I was inclined to regard the tumour in the abdomen as ovarian, and closely connected with the uterus; the pelvic tumour I thought was probably the other ovary in an early stage of cystic degeneration. The discovery of the separate fixed nodule, together with the fact that certain fresh small nodules in the upper part of the abdomen had appeared while she was under my observation, made me fear that there was infection of the peritoneum from rupture of one or more of the cysts. On March 15 I presented her to my colleagues for consultation; and I extract the following from the report published in the *British Medical Journal*, March 23, 1878:—

"Mr. Thornton now wished for the opinion of the staff as to the best course to pursue. He was himself decidedly in favour of making a small exploratory incision with careful antiseptic precautions, proceeding either to the removal of the tumour, or to the mere raising of the pelvic portion, according to circumstances. He advocated this course as affording the best means of obtaining a perfect diagnosis, with the chance of complete relief and but little risk to the patient. The alternative course—induction of premature labour—would, if found necessary, still be available after the small exploratory incision had healed. The success which had attended ovariotomy during pregnancy, in the practice of Mr. Spencer Wells, rendered the course clear in any ordinary case as to the alternative of removal of the tumour or the induction of premature labour; but in this instance there were peculiar difficulties. Dr. Greenhalgh was in favour of an exploratory incision, with removal of the tumour if then found practicable. This was preferable to the induction of premature labour, to which he saw grave objections. Mr. Spencer Wells admitted that this case was of more interest than ordinary cases of ovarian disease coexistent with pregnancy. He had himself removed ovarian tumours from pregnant women, with perfect ease and excellent results. But in this patient, from the character of the growth and the morbid conditions detected in Douglas's space, the operation would anyhow be difficult, and pregnancy much increased the risk. On the other hand, the patient was in a miserable condition, and some interference was imperative. The tumour was too solid for tapping, so as to give the patient temporary relief during pregnancy. The wisest course was to induce premature labour and to remove the tumour after the patient's recovery. Dr. Day, taking into consideration the nervous susceptibilities and the extreme discomfort from which the patient was suffering, considered it best that an exploratory incision should be made, and the tumour at once removed, if possible. The great liberties which might safely be taken with the abdominal viscera under antiseptic precautions contrasted favourably with the admitted dangers of the induction of premature labour. Dr. Bantock considered the case unfavourable both for operation and for the induction of premature labour, but had no objection to an exploratory incision under antiseptic spray. But if, on making that incision, it were found that the tumour could not be removed, considerable delay would be involved. On the whole, he was in favour of induction of premature labour. Dr. Champneys considered it advisable to wait for about a month, and then induce premature labour; for both that course and ovariotomy were very hazardous at the present stage of the patient's illness; but at the seventh month, delivery would be attended with much less risk and would remove the main complication. Mr. Doran was of opinion that the sum of the dangers from induced premature labour followed by ovariotomy was rather greater than the total amount of risk involved in ovariotomy during the patient's present condition followed by natural labour. Mr. Thornton determined on abiding by his original decision, after duly explaining the patient's condition to herself and her husband, and speaking to them on the proposed alternative of induction of premature labour."

The case having been explained to the patient and her husband, an exploratory incision was decided on, but as she was suffering much from cough, I requested my colleague, Dr. Day, to be kind enough to examine her chest. He reported her as suffering from subacute bronchitis, and the operation was unavoidably delayed till March 28.

In the interval both the abdominal and pelvic growths had considerably increased in size, and fluctuation was now quite distinct in the mass just over the pubes.

At 3.30 p.m., on March 28, Mr. Meredith administered bichloride of methylene, and, assisted by Dr. Bantock and Mr. Doran, I operated under the spray, and with full antiseptic precautions. I first made an incision three inches long, and gradually prolonged it to five or more. I came upon a white-looking cyst closely adherent to the parietes, and, failing to find my way into the peritoneum either above or below, I cut into it. Some yellowish-green, purulent-looking fluid escaped, and pushing back a small inner cyst which presented, I passed my finger into an irregular cavity, rather to the right of the median line; it had a rough surface, and gave me the impression of a false cyst formed by peritoneal adhesions, and covered with papillomata. Pulling at its lining membrane, it came out as a thin yellowish-white bag. I now began to suspect what I had to deal with, and ruptured the bag. Pulling it away, I was able to pass my hand into the peritoneal cavity, and felt the pregnant uterus. The nodular parts of the abdominal tumour I found to be separate hydatids growing in the omentum (the preparation is in the museum of the College of Surgeons); its whole lower half was fringed and hung with them, from the size of a hen's egg to that of a small marble. By drawing the omentum down I was able to get above the hydatids, and removed its whole lower half, ligaturing the remainder in five or six pieces with medium carbolised silk. I now removed as much as I could of the mass at first opened, applying several ligatures very close to the fundus of the bladder, which formed the lower wall of the false cyst. The mass in the right side of the abdomen was so extensively spread out in the parietal peritoneum, and was so difficult to get at owing to the size of the uterus, that I left it untouched. I now attempted to pass my hand over the top of the uterus, but was obliged to enlarge my incision, and then with considerable difficulty passed my hand into the pelvis. I drew out a group of of hydatids like a bunch of small potatoes, attached by a long vascular pedicle to the bottom of the pouch of Douglas. I ligatured the pedicle and returned it. A second similar bunch was then dealt with in the same way, and now I could feel nothing but the small adherent hydatid in the right side of the hollow of the sacrum. It was very difficult to touch at all, and as I had already decided to leave one mass in the abdomen, I left this also. The sponging was very difficult, owing to the hand having to be passed over the large uterus. But I was determined to clean the peritoneum thoroughly, and hence both the intestines and uterus received rather rough handling. The wound was closed with fine silk sutures, and dressed with protective and carbolised gauze, just as after ovariotomy. The total weight removed was rather more than four pounds, the omental mass being three pounds. She was treated exactly in the same way as a patient after ovariotomy, rather more laudanum than usual being given by the bowel, as she had become accustomed to sedatives, and they did not act readily. Six hours after the operation the temperature was normal, pulse 112, respirations 20. The skin was acting well, and there was plenty of clear, rather dark urine. Thirty hours after the operation the temperature was 100·4°, pulse 144 (weak), respirations 24. She had been frequently sick, just bringing up mouthfuls of iced water and a little phlegm; probably the latter prevented any trouble from the cough. Fifty-four hours after operation the temperature was 100°, pulse 132, respirations 20. She had had two ounces of beef-tea with half an ounce of port wine by rectum every two hours since previous night. She was seen by Mr. Wells, Dr. Greenhalgh, and others, it being consultation-day at the hospital. All thought her doing well. At 1 p.m. on the third day only a very little flatus had once passed, and distension was becoming painful, in spite of atropine and morphia mixture by mouth, as well as frequent doses of laudanum by rectum. Temperature 99·4°, pulse 132, respirations 20. The movements of the fœtus were frequent, and caused her pain.

At 11 p.m., eighty hours after the operation, I removed the dressings for the first time under the spray. There was a good deal of bloody serum in the gauze, and in the centre of the wound there was a slight inclination to gaping. I sponged the abdomen all over with warm carbolic lotion

with much relief to the patient, and reapplied the dressings. The percussion-note was clear everywhere, showing that the distended intestines had forced their way between the uterus and parietes. I turned her on her left side, and made a prolonged attempt to pass a long rectum-tube, but failed; then on her right, and, after an hour and a half, was at last rewarded by a free escape of flatus with some liquid fæces. The patient was constantly sick during this procedure, and was bathed in perspiration and much exhausted when it was over. Temperature 99°, pulse 148. From this time the temperature became normal, once or twice only rising to 99·4° or 99·6°, when there was much pain from flatulence; the pulse also gradually dropped to 104° on the morning of the seventh day. She had some threatening of a return of the pleurisy in the right side, where she had had it before, but it passed off with poultices.

I dressed the wound on the fifth day, and removed alternate sutures, though it had gaped a little in two places; and on the seventh day, the flatulence having subsided, I thought it safe to remove the remainder of the sutures. In the afternoon she had some cough, and at 6 p.m. the nurse noticed a red stain on the dressings. I was sent for, and, removing the gauze under the spray, found the wound open from top to bottom, the large uterus entirely filling the opening and protruding somewhat. I carefully reintroduced the sutures, and strapped the abdomen very firmly, fearing, while I did so, the effect of the pressure on the uterus. Shortly after I left, labour pains began. I was sent for at 10 p.m., and sent for my colleague Dr. Champneys, who had kindly promised to undertake the obstetrical care of the case. She had a slow, troublesome labour, and we remained with her till a fine seven-months boy was born alive at 6 a.m. on the morning of the eighth day. Immediately after the delivery, pulse was 96, temperature 98·4°. The baby lived twelve hours, and weighed after death three pounds and a quarter. There was little to note after this, the highest afternoon temperature being 100·2° on the second day, when the lochia were a little offensive, and an antiseptic (carbolic lotion, 1-60) injection was ordered every three hours. The bowels acted on the third day, and naturally each day afterwards. On the twelfth day after the operation, fourth after delivery, I dressed the wound, and finding all the sutures rather loose, and causing irritation, I removed them. At 6 a.m. the next morning she had another coughing fit, and something gave way. I was not sent for, and at 10.30, hearing of this, and patient complaining of pain in wound, I removed the dressings in the presence of Dr. Marion Sims, and found the wound had partially opened again, and two knuckles of small intestine were protruding and lying in contact with the carbolised gauze. They were already sticking very firmly to the gauze and to the lower angle of the wound, and bled when I peeled them off. I washed them with 1-40 carbolic lotion, and returned them, closing the wound with three hare-lip pins introduced through the whole thickness of the abdominal-wall and peritoneum. The temperature on the day before this happened had been all day about 99° to 99·4°, and it continued so for three days afterwards, so that no fresh fever followed the accident. On the morning of the fifteenth day, while the nurse was syringing the vagina, the patient suddenly complained of uterine pain and faintness, and some hæmorrhage occurred. I saw her half an hour later, and found her with a very anxious expression, very rapid feeble pulse, and bathed in perspiration. Temperature 100°. I believe the nurse had passed the pipe into the uterus and distended it with the lotion. At noon the temperature was 103·2°, pulse 144, respirations 28. It then gradually subsided, and there was no further complication. The wound healed very slowly. On the nineteenth day I removed two pins, and the other on the twenty-third day, but the superficial sore healed so slowly, in spite of a great variety of dressings, that she was not on the couch till a month later, and did not leave the hospital till the beginning of June, two months after the operation. Up to the time when she went home neither the abdominal nor pelvic hydatids seemed to increase in size, but the latter caused some return of the pain in the left leg. I have heard lately that the abdominal one has since enlarged a good deal, and she contemplates returning in October for further treatment.

October 21.—Patient has presented herself according to promise. She is in very good health. Abdominal incision sound and strong; abdominal hydatid little if at all increased in size, and pelvic one but very slightly larger, but it still gives her pain in the leg. The patient has gained flesh and colour, and looks altogether so different that I did not recognise her at first when she came into my room. I have strongly advised her to be content without farther treatment so long as she continues in such good health.

There is little room for remarks on this case, which tells it own tale. I think it is unique in so far as the performance of the operation during pregnancy is concerned, and it certainly is as to the patient's recovery, in spite of so formidable an operation followed by reopening of the peritoneum, labour at seventh month within seven days of such an operation, and a second reopening of the wound six days later. That the patient owed her life to the strict adherence to Mr. Lister's method in every detail, until all danger of re-opening of the peritoneum had entirely passed, is certain; and I feel sure that she would have died of septicæmia in the first few days without antiseptics, when I remember the quantity of bloody serum at the first dressing, and the partly gaping wound, with red irritable edges; and, added to this, the enormous flatulent distension itself, often the first serious symptom of septic mischief in my patients after ovariotomy before I began antiseptics.

The error in diagnosis I do not wonder at, for I believe it is, and always will be, impossible to give an absolute diagnosis in some of the rarer forms of ovarian and other abdominal tumours; but I think it was remarkable that, with all the discussion on this case before the operation, and though she was seen with me by many eminent men outside the staff of the hospital, no one even hinted at the possibility of the case being one of hydatids. I still think the operation was the right course to take, for had the induction of premature labour been attempted, I feel sure some, if not all, of the pelvic masses must have been broken up; and I think the danger of hæmorrhage from their pedicles would not have been small; and the risk of pouring a quantity of hydatid fluid, blood, and hydatids, free into the peritoneum of a puerperal woman, is great. Judging by her steady downward progress during the time she was under my observation before the operation, I do not think she would have lived if left to struggle on to the end of gestation with mere palliative treatment; or had she done so, there would still have been the danger and difficulty of the descent of a larger head through the obstructed pelvis. I never saw a case in which the indisposition to healing was so great, and I do not know whether to attribute it to the puerperal state, or to the fact that the patient had for some time been allowed large quantities of stimulants as well as sedatives. The carbolic acid, which so often gets all the credit of slow healing in antiseptic cases, certainly was not to blame here, for I tried nearly every lotion I knew of, as well as dry dressings and ointments.

THE ORIGIN OF SOME MOTOR DISORDERS.

By OCTAVIUS STURGES, M.D.,
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(*Continued from page* 484.)

We have yet to show from an analysis of affections of this class, such as chorea, the motor symptoms of hysteria, catalepsy and ecstasy, and the mismovements of later life, *first* that the essential characters of these disorders strictly correspond with the natural characters of the time of life at which they respectively appear; *secondly*, that their phenomena when fully developed are no other than normal phenomena in undue prominence or exaltation; and, *thirdly*, that in each instance the particular agency by means of which this exaltation has been produced is, as a matter of fact, demonstrably present.

Such an inquiry, it may be said, misses its aim unless it can demonstrate the actual condition of the nerve-centres on which the motor phenomena immediately depend. I shall allude to that point presently. Meanwhile the question whether or not the process of analysis now proposed tends to simplify the facts of motor disorder will be best answered by the actual experiment. If on such an appeal the relationship here asserted can be established, I shall at least claim for these disorders the same kind of recognition as is accorded to common exhibitions of passion or emotion. They must take their place with these amongst the recognised laws of our being, some of which are capable of simpler

expression and some likely to remain in their present shape as ultimate facts of human nature.

So far as chorea is concerned I have urged these points before(a) maintaining that the restlessness of that affection as regards its manner and the muscles it selects is like nothing else in the world but ordinary restlessness which in childhood very readily settles into a habit and the more readily when it comes to be treated as disease. Mental disturbance, I have urged (although for many reasons easily overlooked), is a very common incident of childhood and, even on the showing of statistics, by far the most common and unimpeachable of all the alleged causes of chorea. On the other hand the association of the affection with rheumatism(b) has, in my belief, been very much overstated owing to the fact that limb and joint pains as well as valvular heart murmurs belong to chorea as such altogether apart from rheumatism. This view it is true is not generally accepted. There are, in fact (as I readily admit) difficulties in the way of it, yet not insuperable ones. At any rate if it is impossible to accept such a doctrine it is not quite easy to set it aside. The manner of ordinary chorea movement, which is neither spasmodic nor involuntary and varies with the mind and the age, is quite unlike the symptoms of any disease whatever of which the seat is anatomically demonstrable. Chorea does not affect the limbs as it ought to affect them supposing it due to some vascular or other change, local or general, of the brain or cord. It *does* affect the limbs as it ought to do supposing them to yield in the order of their relative strength considered as instruments of expression, selecting the faces of grown girls but the limbs of young children, preferring the arms to the legs and the hands to the arms, and, with the adult, acquiring the character of rhythm. Quite commonly too it begins in some slight movement or habit of awkwardness on the part of the child, such as shrugging a shoulder or winking the eyes, which it is quite impossible to connect immediately with a central morbid change, which, indeed, is often directly copied from another. From such beginning, after a certain amount of correction and physic, the affection will sometimes spread until it becomes general.

But suppose for a moment that mental causes have little or nothing to do with chorea, but that it is produced, let us say, by embolic or thrombic plugging of the vessels of the corpus striatum. Although, through this explanation, my reading of chorea should be disallowed yet still I may fairly ask the pathologist whether embarrassed and frightened children are not very like in their movements to these others who (by the hypothesis) are carrying plugs in their brains. And if he should answer that the movements by means of which children express mental disturbance are always temporary and never affect the heart I would venture to ask him how he knows that, and whether he has found in his own experience of the effects of fear or disappointment or overstrain upon the muscular conduct and carriage of those who are far better able than children to command their bodies, that the consequences have been always temporary or that they have never affected the heart.

I pass on, however, to consider *Hysteria* in its motor relations. And, that it may not be thought that the affection is being distorted so as to favour preconceived views, I will adopt the description of a well-known text-book which is frequently announced as a "standard work." Hysteria is there discussed under three aspects:—"(1.) That which is characterised by *globus hystericus*. (2.) The paroxysmal form in which the *globus* occurs with convulsions. (3.) Irregular and *anomalous* phenomena occurring in the intervals of severe attacks." As regards the first of these three forms it will be admitted that hysterical persons are recognisable apart from the *globus hystericus* and are sometimes found without it. The abiding hysterical state admits of description no less than its occasional symptoms. In an early stage of their infirmity—before, that is, what is here called the paroxysmal form is reached—these people are unnaturally mobile, their features undergo frequent changes of expression, while the general aspect indicates, not distress or perplexity of thought but rather emotional restlessness. Winking and quivering of the eyelids is especially characteristic. There is hardly a hysterical person to be found who winks slowly and deliberately as old people do. As a rule at this early period of the affection active and excessive muscular movement accompanies speech. To this mobility there corresponds great variability of temper. The mental condition is in fact one of abiding yet changeful emotion which the smallest turn of events will convert from grave to gay, and which readily relapses into spasm whenever an unexpected occurrence or injudicious management or temporary weakness grants the occasion.

The hysterical state is apt thus to intrude itself to the notice of its possessor in public assemblies, at times, that is, when no active exertion is possible and when it is felt that any unusual movement will be certain to attract general attention. With these favouring circumstances the hysteric sensation ebbs and flows repeatedly while the inclination to succumb by means of emotional outbreak gets more imperative each time it is gratified. Women in this condition are recognised less by aspect than by their uneven respirations. There will be a few rapid and shallow inspirations, then a pause, longer or shorter, and then a sigh—a sigh which, unlike that which contemplative persons employ to make up for arrears of breathing,—is quite unsatisfying and rather intensifies the sense of want of breath or (as they often put it) want of air. In the course of a single sitting at church or opera this feeling may often be seen to recur several times, its access being denoted by restless movement and the use of smelling-salts and its departure by the return of regular breathing and composed attitude.

Now there is nothing in this condition so far which does not correspond with the condition of all mankind under the stress of overwhelming circumstances imperfectly apprehended. The hysteric woman is in the same relation to ordinary phenomena as is the non-hysteric to extraordinary. It is true that we miss those particular attitudes which characterise the several kinds of emotion. The gestures of hysteria, unlike those of fear or despair, are indefinite, expressive of nothing except a mental overwhelming from causes which the mind fails to interpret, or which it interprets so ill as to make the occasion of laughter at one moment and tears the next. What the hysteric condition resembles the nearest is that of suspense, where the thing expected is awaited with mixed feelings of hope and fear. In situations of this kind, (supposing, of course, that the issue is regarded as all-important) painful uncertainty betrays itself in conduct which is in fact hysteric, not only in motor respects but often in the rising in the throat, the nausea and the frequent and abundant micturition.

But the condition of the young girl at the age when she first becomes hysteric is yet further peculiar. The mind is not concerned between two issues only; it is altogether perplexed. The change impending in her life is already felt both physically and mentally without being understood. She is at once excited and bewildered. By appropriate treatment, as we know, the existence of this strain may in great measure be concealed, it is sure to appear, however, in moments of weakness and to elicit a kind of motor disturbances, whether by laughter or tears, which is as incoherent as the mental condition on which it depends.

With further soliciting or weakened endurance this yielding creature replies by spasm, we reach the paroxysmal form "in which the *globus hystericus* occurs with convulsions." "The trunk and limbs" (I quote our great master of clinical description) "are agitated with strong convulsive movements, she struggles violently like a person contending, rises into a sitting posture and then throws herself back again, forcibly retracts and extends her legs, while the body is twisted from side to side—the face is flushed, the eyelids closed and tremulous, the nostrils distended, the jaws often firmly shut, but there is no distortion of the countenance. If the hands are at liberty she will often strike her breast repeatedly and quickly and carry the fingers to her throat as if to remove some oppression there, or she will sometimes tear her hair and rend her clothes. After a short time this violent agitation is calmed but the patient lies panting and trembling and starting at the slightest noise or the gentlest touch, or sometimes she remains motionless during the remissions—the whole attack frequently terminates in an explosion of tears and sobs and convulsive laughter." (c) It must be added that not only does the attack end in this way; it generally begins so. "The patient" (says Dr. Aitken) (d) "bursts out into a fit of

(a) "Chorea and Whooping-Cough." Five lectures.
(b) "The Rheumatic Origin of Chorea," *Lancet*, August 31st.

(c) Sir T. Watson, i. 681. (d) "Practice of Medicine," ii. 341.

immoderate laughter or crying, the *globus hystericus* begins to form and rise, and no sooner reaches the throat than she falls to the ground," etc., etc.

Now what is this again but the proper motor response which happens everywhere when emotion is so powerful that tears and laughter which are its proper instruments no longer suffice to give it full expression? When these have had their play, there still remain in reserve wringing of the hands, tearing of the hair, beating of the breast, acts which are the property of all mankind, no less than tears or laughter, when the circumstances are deemed adequate. We find for example that the emotion of fear gradually rising excites contortions which will pervade the body more and more as fear approaches terror, until when the strain becomes excessive both body and mind succumb. Sir Charles Bell describing this passion says "the breathing is laboured and gulping with catching at the throat," "all the muscles may become rigid or be thrown into convulsive movement." "But with the terror arising to extreme pitch all the muscles of the body are relaxed, utter prostration follows and the mental powers fail." Dr. Crichton Browne has described the attitude of terror as he himself witnessed it in language which almost repeats Sir T. Watson's account of the hysterical fit. "The woman holds her arms out stiffly before her, then suddenly bends the body forwards, sways rapidly to and fro, clutches at her neck, the skin is flushed over face and neck, mouth partly open, nostrils raised and extended."(e)

This then is no other than the proper attitude of the muscular system prompted by extreme fear. It is as much its normal action under such circumstances as is smiling at a good story or jumping for joy. I have said already that the facial expression of hysteria is inexpressive and this applies to the fits no less than the habitual state. There is no real danger or tangible shape of calamity present to the mind of the hysteric as to the mind of the terrified or grief-stricken. On the contrary she remains conscious that nothing is *really* threatening and that, in the popular judgment, her conduct is without adequate cause. The features therefore do not exhibit actual terror or actual despair for no such sentiments are present. The continually recurring circumstances of daily life are sufficient of themselves to produce all the motor effects of real disaster. Moreover, by frequent repetition the hysteric soon learns to appreciate the relief which spasm or extravagant movement affords. With the world at large the spasm or the start of real occasion is part of the mode in which emotion is discharged and complementary of the mental part. It is not so felt, however, because the event is rare and there is no knowledge of the actual force of the particular shock. But with the hysteric it is different. She has experience that the access of spasm brings with it very sensible relief. At the same time the moral effect of such yielding with the knowledge that the fit is without proper justification and that it is so regarded by others cannot fail to have influence in making the hysteric different from the woman who is moved by real calamity or danger. Hence come small deceits and simulations which, in a very true sense, complicate the affection. These do not concern us now. It is enough to notice that the hysteric spasm in itself calls for no special explanation having indeed parallels enough and to spare in a world of many terrors and catastrophes.

(*To be continued.*)

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—The next meeting of this Society will be held this evening (Friday, Nov. 15) at half-past seven. The Council will present a report on the following subjects:—1. The power of the Privy Council to make "orders" under Section 34 of the "Contagious Diseases (Animals) Act, 1878." 2. The communication from the National Health Society in reference to the prevention of the spread of Infectious Diseases by persons attending the waiting-rooms of Hospitals and Dispensaries. 3. The steps advisable to be taken to give effect to the opinion of the Society, "That the relief afforded to the Sick in Hospitals for the treatment of Infectious Diseases should be completely dissevered from any relation with pauperism." Dr. Collier, Medical Officer of Health for Hammersmith, will be balloted for as a Metropolitan member. A paper by Mr. Harry Leach, on "Port Sanitary Work," will be read.

(e) Quoted from Darwin's "Expression of the Emotions."

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

UNIVERSITY COLLEGE HOSPITAL.

CASE OF TUMOUR IN RIGHT ILIAC FOSSA, RESEMBLING COLLOID CANCER IN STRUCTURE. NO EVIDENCE OF MALIGNANCY.

(Under the care of Mr. MARSHALL.)

[For the following notes we are indebted to Mr. S. H. Burton, Surgical Registrar.]

Esther A., aged fifty-five years, married, admitted into the hospital on May 29, 1878. On admission there is a tense, elastic swelling in the right iliac fossa, which can be traced inwards towards the mid-line for about three inches, and outwards over the iliac crest towards the spine. The swelling is painful, but does not interfere with the movements of the hip. The thigh is not flexed. Along the fold of the groin there are several sinuses, opening below Poupart's ligament, and running backwards and upwards. In the region of the iliac crest are two other shallow sinuses. From the sinuses in the groin there is a constant discharge of thick creamy pus; from one of the iliac sinuses a tenacious mucus exudes, resembling in appearance the contents of a ganglion. The tumour is dull on percussion, but some resonance can be obtained at inner and anterior parts. There is no interval of resonance between tumour and liver. There is no spinal disease; no difficulty in defæcation or micturition. No dead bone has been discovered.

History.—When about fourteen years of age patient had an abscess over the hip, which opened and remained so until she was eighteen. Since then until two years ago she had been perfectly healthy. She then noticed a tumour in her right side, and was admitted here under the care of Mr. Hill, who performed some operation on her groin, and she has had an open wound there since. Patient has never had children.

Treatment.—June 8.—To-day, Mr. Marshall (patient being under ether) enlarged a sinus at the anterior part of the iliac crest, and passed a large drainage-tube through it towards a sinus at the posterior border of the ilium. About an ounce and a half of semi-gelatinous purulent matter escaped. No dead bone could be detected. The probe passed in at the other sinuses went in the direction of the sacro-iliac joint.

11th.—Patient has been somewhat weak since operation, but seems now a little better. Evening temperature is about 101°; there have been no rigors, and the discharge from the sinuses is considerable.

20th.—Boracic lotion is being daily syringed through sinuses, and an oakum pad is kept over them; the discharge is somewhat fetid.

27th.—Discharge abundant. Very little alteration in condition.

July 5.—Patient feels a little stronger; the discharge is still profuse. Urine examined, and found normal.

August 3.—The sinuses are being injected with iodoform in mucilage. Patient is comfortable.

6th.—Discharge less, and sweet; the tumour does not seem less in size.

12th.—For the last few days patient has been steadily sinking.

15th.—Patient died this morning.

Post-mortem.—An examination was made about nine hours after death. Rigor mortis well marked; body much emaciated. In the right groin and lumbar region were the sinuses before noted. In the spleen and kidneys were several well-marked hæmorrhagic infarcts; the thoracic organs and liver presented no points of special interest. The uterus had two small fibromata attached to it; both Fallopian tubes seemed blocked, and their extremities were distended with clear fluid; both ovaries were atrophied. Occupying the right iliac fossa was a tumour covered by thickened peritoneum of a greyish-black colour. To its inner side the cæcum and vermiform appendix were closely attached. A probe passed into any of the sinuses led directly to this tumour. On dividing the peritoneum, that membrane was found to be about one-eighth of an inch thick, and very dense at parts. A

gelatinous mass of pale yellow colour was laid bare, dotted here and there with collections of pus. On closer examination the colloid material was found to be contained in distinct capsules, many of which were as large as a pea. On removing the growth, pretty strong fibrous bands could be felt to snap beneath the fingers; they seemed to be running in all directions. When the mass had been cleared away, it was found that no trace of the iliacus muscle could be seen above the brim of the pelvis, and that the outer portion of the psoas muscle had been similarly replaced by the tumour. Below the pelvic brim the insertions of the two muscles were very dense, evidently from chronic inflammatory infiltration. The bone was not attacked by the growth. No glands were involved, nor were any secondary deposits found in other organs.

Microscopical examination showed the presence of a few irregularly shaped, large flat cells, but the mass presented few formed elements, its substance being finely granular, with here and there an appearance of dense fibrous tissue. The septa of the alveoli were formed of interwoven connective tissue.

SOFT FIBROMA OF THE RIGHT ANTRUM—REMOVAL—RAPID RECURRENCE—SECOND OPERATION—RECOVERY.

(Under the care of Mr. HEATH.)

Julia P., aged twenty years, servant, unmarried; admitted July 1, 1878. Patient is a pale-looking but fairly healthy girl. There is a uniform swelling over the right cheek, the skin over which is normal. The right malar and superior maxillary bones feel fuller than those of the opposite side. Internally behind the second superior bicuspid of the right side there can be felt a hard and fixed swelling extending to the end of the alveolus. On the outer side the tumour is softer towards the antrum; and the second molar tooth, with the tumour, is freely movable from side to side.

History.—Patient states that four years ago, in the autumn, she first noticed a swelling of the face, unaccompanied by pain. This did not quite subside, but in the following year again appeared, and she poulticed it, fancying it was worse than before. She noticed nothing more until the spring of last year, when she found there was a swelling inside the mouth as well as outside. And she also suffered a good deal from toothache on that side, and noticed that there was a copious offensive discharge into the mouth from the internal swelling. After the removal of some teeth the pain left her for some time, but the swelling has been increasing since.

Treatment.—July 3.—Patient being under chloroform, Mr. Heath made an incision into the antrum, above the molar teeth, and with his fingers scooped out a gelatinous mass from that cavity. This mass was as large round as a half-crown, and under the microscope was seen to consist of bands of translucent wavy fibres, a few round and spindle-shaped cells, and much intercellular substance.

9th.—Patient has been going on fairly well, but now has an attack of acute double tonsillitis.

12th.—Throat is much better. Examination of the upper jaw shows the presence of a soft fleshy growth, about as large as a hazel-nut, descending from the antrum through the old wound.

17th.—To-day, patient being under chloroform, Mr. Heath raised the upper lip, and removed the anterior wall of the antrum with a piece of the tumour as large as a pigeon's egg attached. Finding a large quantity of the growth remained, he made an incision as for removal of the superior maxilla, and removed that bone from its surrounding attachment. Attached to the posterior wall of the antrum was a piece of the tumour as large as a bantam's egg. There was moderate hæmorrhage, which was checked by the thermo-cautery. On examination the tumour had the structure of a soft fibroma, that part of it in the anterior wall being firmer than the posterior portion.

18th.—Patient is blanched, and complains of the face feeling very sore. The plugs have been taken out, and the wound has been syringed with Condy.

25th.—Patient is improving; the syringing is still proceeded with.

30th.—All the stitches have been removed; the discharge is free.

August 13.—The wounded parts are contracting, and the patient is doing well.

On August 21 patient left the hospital, and when seen on October 25 she appeared to be in excellent health. Beyond some sinking-in of the cheek, little trace of the operation was visible, the scars scarcely showing. There was no sign of any recurrence of the growth, and the inside of the mouth was healthy, although, of course, a large depression remained where the superior maxilla had been removed.

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The Medical Times and Gazette *is published on Friday morning: Advertisments must therefore be sent to the Publishing Office not later than One o'clock on Thursday.*

Medical Times and Gazette.

SATURDAY, NOVEMBER 16, 1878.

COLONIAL DEGREES.

In a number of the *Canada Medical and Surgical Journal* recently received is a leading article on the subject of the recognition of Colonial Degrees. The tone is not altogether satisfactory, for, whilst contending for the equivalence of Canadian with home qualifications, there is a threat, something more than implied, that if the demands of the Dominion be not complied with, a law may then be passed excluding British qualified practitioners from the loaves and fishes to be obtained among the Canadians. For says the writer, "it should be remembered that in all matters of educational interest we possess the right of legislating for ourselves." A scheme, it seems, has already been proposed in the Legislature for the non-recognition of all foreign degrees, "but did not carry; it might be brought up again, and become the law of the land." The grievance complained of is, we believe, to a very great extent a sentimental one. Few men of Canadian extraction and education would probably come to settle in England. But says the writer, "there is a growing interest, a desire to have the institutions in this country recognised for all they are worth." There is a homely phrase which very well measures this sentiment. It is evident that the Canadian faculty want us to recognise the fact that "Jack is as good as his master." Abstractly there can be no tenable objection to the proposal indicated. The difficulty is to show other people, including the master himself, that Jack is in the right. And partly to this end at least the writer proceeds to show what is done in Canada for the well-being of the profession generally, but especially as regards the

education given to, and the demands made on, those who propose to enter it. "There are," says the writer, "many facts connected with Canadian universities which are entirely ignored, whether unintentionally or with a direct object we cannot say. The Canadian universities, three in number, in this province, all hold Royal charters, and the privileges granted under these charters are the same as those granted to the universities of the mother country. Where then lies the difference? The preliminary examinations are equally stringent, the curriculum of medical study is the same as that in British universities and colleges, and the professional examinations are a literal copy of the method of testing the candidate followed by those institutions. In nearly all our schools the professorial chairs are held by British graduates. But to add to the security of the public that the work is systematically and faithfully performed, the Provincial Medical Board have introduced, under act of our Local Legislature, a method of visitation. Two members of the College of Physicians and Surgeons of the province of Quebec are appointed by the Board to visit and attend the medical examinations of the various universities, colleges, and incorporated medical schools of the province, and who shall report to the Provincial Medical Board upon the character of those examinations. Those visitors or assessors cannot be chosen from among the teachers or professors of any of the universities, colleges, or medical schools. Laxity in the work done, in the examination of candidates, if reported on, the Provincial Medical Board has the power to refuse registration of the degree or diploma of the institution so reported against, until such a method of examination shall have been amended."

All this is no doubt very true, but we are bound to reply—Granted your university privileges are the same, granted your system is the same, even with the addition of State inspection; how can we tell that your requirements are the same, that your standard is equivalent to, or higher than, that required for our ordinary pass examination? This is the difficulty we labour under. We may safely assure our Canadian brethren that no shade of jealousy interposes to incline us to make light of their efforts towards the improvement of medical studies and education: rather the contrary. But we exact here a sum of medical knowledge the average of which is tolerably well known, and a course of training which is perfectly known, from all those who are desirous of entering our profession. We have absolutely no means of judging of the relative value of the demands made on the would-be practitioner in Canada. We are threatened here with the enforcement of a conjoint scheme for more or less universal examination. It would add an element sadly foreign to such a plan to allow of the unchecked registration of foreign and colonial degrees. The principle we gladly accept, but the working out of it does not seem easy. The only thing we could suggest would be a permanent board, which, on the payment of a fee equivalent to our present registration fee, would certify to the competence of all and sundry presenting themselves with the necessary credentials, and after due examination to become duly registered British medical practitioners.

BATTEY'S OPERATION.

Last year we commented on the operation first practised by Dr. Battey (of Georgia, U.S.), and described by him under the name of "Normal Ovariotomy," but which many think deserves to be called, in justice to its originator, "Battey's Operation." At the time we wrote, the published cases were much fewer than they are now, and, therefore, some further remarks on this subject, in the light of the larger experience since put on record, may not be out of place.

The questions at issue concerning this mode of treatment divide themselves naturally into two groups: first, those relating to the operation itself, its mode of performance, difficulties, dangers, and results; and second, as to the class of cases to which it may be thought applicable. It is not possible here to consider every point that arises; we shall merely refer to those which seem to us most important.

The contributions to which we are chiefly indebted for facts bearing on the first class of questions are two papers by Dr. Engelmann, of St. Louis, one published in the July number of the *American Journal of Obstetrics*, and the other in the August number of the *St. Louis Medical and Surgical Journal*. This writer has collected forty-seven cases, but of these four are, for different reasons, not available for purposes of comparison. We have, therefore, forty-three upon which to found our opinions. We find that of these 20·9 per cent. were cured; 25·5 per cent. were more or less improved, but not completely cured; 20·9 per cent. were either not benefited at all or made worse; and 32·5 per cent. died. Put briefly, the figures show that more than half the operations proved either fatal or useless. An adverse critic, who affected a "brutal frankness," might with accuracy say that the operation more often killed than cured. This is not an encouraging prospect.

Looking more into detail, we find that the removal of one ovary is certainly less dangerous than the removal of both; but that it is also less efficacious. It appears, also, that it is much safer to remove the ovaries through the vagina than by abdominal incision; the mortality by the former method being 17·6 per cent., by the latter 42·1 per cent. Dr. Engelmann, for reasons the force of which is not apparent to us, pronounces the less dangerous method of operating to be "unscientific." We hold that the result is the final and conclusive test of all operative procedures, and one before which our preconceived notions of what is scientific or not must give way. The fact that a less percentage of cures followed extirpation of the ovaries by the vaginal method, we think must depend upon the cases chosen for this operation; for if the ovaries are effectually taken away, we cannot see how the physiological effects due to their absence should be altered by the mode of their removal.

This, then, is the operation, as to the applicability of which we have to form a judgment. The majority of the patients subjected to it not benefited at all, and the cures less numerous than the deaths. We cannot agree with Dr. Engelmann in thinking it a "promising" one.

Still, may there not be cases of disease, otherwise incurable, and causing such severe suffering that even so desperate a measure as this is to be welcomed? This is the question which next arises, and to which Dr. Battey, in a paper published in the second volume of the *American Gynæcological Transactions*, offers an answer. He thinks there is a field for it, but defines it with less precision than does Dr. Engelmann, who describes individual cases, and also formulates, though in general terms, conditions in which he thinks this dangerous proceeding indicated. These conditions we proceed to examine.

His first class includes "menstrual hystero-neuroses, cerebral, pulmonary, gastric, or other reflex symptoms, associated with, or dependent upon, the monthly period of pelvic congestion." Now, these remote nervous phenomena are of the kind called hysterical. It is well known that hysterical symptoms are often present without disease of the generative organs, and that, conversely, severe disease of the generative organs may be present without hysteria. From this it follows that in such cases the predisposing condition of the central nervous system is the essential thing, and that it is comparatively an accident whether the exciting cause shall be in the uterus or somewhere else. If this be so,

it further follows that cure will not necessarily result from the removal of the local disease. Our view is borne out by the results; for of the cases given by Engelmann under this head, the single one which recovered was only somewhat improved. If the symptoms are not hysterical, but depend upon organic disease in some other part, then this argument applies with still greater force. We must bear in mind also that hysterical symptoms hardly ever endanger life, and that their prognosis is most uncertain, for there is always a possibility that under some powerful emotional excitement the patient will get well, it may be, quite suddenly. Therefore, while fully recognising that uterine disease, where it exists, ought to be cured if possible, we yet do not think that it is sound practice to so greatly imperil the patient's life, with so little prospect of the cure being complete, for a disease which may be benefited by methods much less dangerous. When we read of cases in which the symptoms were merely hysterical, and it was thought that the patients were dying, and that every means of treatment had been exhausted, we can only think that perhaps another physician might have taken a different view. Is it possible that a vivid description of the risk of this operation might have cured some of these patients by sheer terror?

As to the next group, which includes cases of "dangerous hæmorrhage, menorrhagia, or suffering caused by uterine tumours not suitable for removal," we see no reason for altering the opinion we expressed last year. This is the class of case in which the operation seems to be most successful, for of the five cases all got well, two were cured, and three greatly improved.

Dr. Engelmann's next set of cases embraces those of "absence of uterus or vagina, or other malformations of the sexual organs, when accompanied by distressing menstrual molimina." This we suppose is not intended to include cases in which the trouble is simply retained menstrual product, for in such the proper treatment is well known and obvious, viz., to make an exit for the fluid. But as to the cases which seem to be meant, viz., those of absence of uterus, with vicarious hæmorrhage and other distressing symptoms, we would point out that the uterus, or ovaries, or both, may be either absent or imperfectly developed in women who enjoy perfect health; and that therefore it is certain that the symptoms in question are not a necessary consequence of defective menstruation. We will venture further, and say that it has never been demonstrated that of this cause solely, they are at all a consequence. The few cases on record which seem to support the theory that they are, may be explained on other hypotheses. From *suppression* (not *retention*) of the menstrual flow alone it has, we think, never been proved that symptoms ever arise. It is almost always, if not always, an effect, not a cause, of disease, and is often conservative. We of course know that there are many diseases which become aggravated at the menstrual epoch; but in such the menstrual molimen cannot be said to cause the disease. We therefore do not think that enough is known about this condition to make such a perilous mode of treatment justifiable. Of the three cases given, one died, in one the cure is marked with a query, and the other was a case of atresia of the vagina.

The next groups we may link together. They include ovarian dysmenorrhœa, chronic ovaritis, and ovaralgia. And here the importance of our contention, that we do not know enough about the pathology and diagnosis of the conditions in question, is most evident; for in some the removal of the ovaries did not cure the patient, and in others adhesions, previously unsuspected, were found when the operation came to be done. We think that surgical gynæcologists will do better if they will learn to diagnose ovarian pain and ovarian inflammation before they devise perilous operations for the cure of disease which has been only guessed at. Gynæcology is no exception to the rule that accurate diagnosis must precede successful treatment.

The danger of this operation is not our ground of objection to it. This might be diminished by practice, as has been the case with many other surgical procedures. But we think that before such a dangerous operation can be justified, we ought to have tolerable certainty that the cases will not get well under any other treatment; that there is danger to life in letting them alone; and that the operation will cure them if they recover. We have seen that there is the greatest uncertainty about each of these points, and therefore we cannot but think that, in the present state of our knowledge, this operation is not one which ought to be practised.

After having to express so unfavourable a judgment, it is most satisfactory to be able to add that the manner in which this operation has been brought before the profession, the fulness of the details supplied as to the cases, the candour with which the results have been made known, and the tone and temper in which it has been discussed, deserve all praise, and are in the highest degree creditable to its originator and worthy of imitation.

THE NOTTINGHAM "COUNTER-PRESCRIBING" CASE.

After many delays, the action instituted by the Society of Apothecaries, under the Act 55 Geo. III., cap. 194, sec. 20, against a Nottingham chemist named Shepperley, to recover two penalties of £20 each for having on two separate occasions acted as an apothecary, came on for hearing last week in the Exchequer Division of the High Court of Justice, before Baron Pollock and a special jury. Great importance has been attached to this case by a large section of the medical and the whole of the pharmaceutical world, as it has been regarded as a test action to settle the question whether chemists and druggists can supply medicines of their own selection or not, or, in other words, whether the practice known as "counter-prescribing" is illegal.

This issue is one of very great importance both for the profession and the public, and it is to be regretted that the prosecution should have selected so feeble a case to test so momentous an issue. The evidence against the defendant was extremely weak, and it is surprising that, under the circumstances, the Society of Apothecaries should have consented to a prosecution, or that anyone could have believed that a jury would have given a verdict against the defendant; though it must be admitted that some of the evidence given by Mr. Shepperley himself, during the trial, gives very good reason for the belief that he does carry on "counter practice" of the strongest type.

The following are the chief facts of the case:—Some time last year a branch of the Medical Defence Association was started at Nottingham, in which town the chemists are said to prescribe largely in medical cases, and it was decided to endeavour to check this practice. Two men were engaged to get up evidence of medical practice against any chemists in the town. These amateur detectives went to a chemist named Shepperley, and under the pretence that they were suffering from simple ailments—in the one case a sore throat, and in the other pimples on the face—got him to prescribe medicines for which they paid a trifling charge. This was all the evidence on which the prosecution relied to sustain a conviction for infringement of the Apothecaries Act. The defence was, that, in acting as he had done, Mr. Shepperley had only followed the custom of the trade which prevailed at the time of the passing of the Act, and which was specially protected by the 28th section. To support this point three aged chemists were produced, who deposed

that it was customary for chemists to give medicines of their own prescribing before the passing of the Apothecaries Act in 1815. The defendant himself was also examined, and denied that he was in the habit of prescribing, and asserted that he never gave medicine for any serious complaint without a prescription or the advice of a medical man. In summing up, Baron Pollock said that the only question the jury had to decide was, whether the defendant had, in either or both the cases set out in the statement of claim, acted as an apothecary. The jury, after a very brief consideration, returned a verdict for the defendant, and judgment was entered accordingly.

The case may perhaps be regarded by the pharmaceutical trade as a triumph, but in reality it leaves the real question at issue between medical practitioners and chemists and druggists as far from settlement as ever. And this is, apparently, the view taken by the *Pharmaceutical Journal*, which observes that the verdict seems to have left altogether out of view the important question "whether, in virtue of usage prior to the Apothecaries Act, 1815, the chemist and druggist has a right to act as an apothecary in the treatment of minor ailments, and the administration of simple remedies for their relief." The only question decided is that in this particular instance the facts were not strong enough to warrant a conviction; and, as we before stated, we cannot understand how a contrary result could have been expected. Of course the decision may be appealed against, but in the circumstances it would be very unwise to do so. Other, and very much better, opportunities of taking the opinions of the judges in the Court of Appeal will doubtless present themselves shortly. It is to be hoped that the Medical Defence Association will not be discouraged by this temporary check. This organisation has done good work, and much more remains to be done, but the mistake committed by the Nottingham Branch, of fighting an exceptionally weak case, must not be repeated. We are sure that neither the leaders of the Medical Defence Association nor the general body of the profession have any desire to interfere with the legitimate business of the chemist and druggist; and, on the other hand, we believe that the majority of chemists and druggists have no wish to usurp the position of the profession. The illustrations given by Sir Henry James, the counsel for the defendant in the Shepperley case, of the "exercise of discretion" by chemists and druggists in dispensing and vending drugs and medicines, which he claimed as being within their rights, were not such as can be thought to constitute any infringement of the Apothecaries Act. If, when a customer asks for a black draught, an aperient pill, or even "a tonic," the chemist inquires whether the medicine is required for a child or an adult, a strong person or a weakly one, no one would wish to even suggest that such an exercise of "discretion" is practising medicine. But the *Pharmaceutical Journal* admits that "it would be wrong to disguise the fact that counter practice sometimes exceeds reasonable limits"; and there can be no question that, in the poorer districts of the metropolis and in mining and manufacturing centres especially, there are chemists who do large medical practices. In the interests of the public as well as of the profession, these must be dealt with; and we have little doubt that it will be found, if the cases are selected and managed with judgment, that, notwithstanding the verdict of the jury in the Nottingham case, the law is sufficiently stringent to prevent any gross interference by chemists with the rights, privileges, and functions of the medical profession.

We are glad to learn that B. Barrow, Esq., J.P., F.R.C.S., has been elected Mayor for the borough of Ryde for the fifth time in succession.

THE WEEK.

TOPICS OF THE DAY.

A case was heard last week in the Queen's Bench Division of the High Court of Justice, in which a plaint had been filed in the Rochdale County Court against the Corporation of that town (as the sanitary authority of the district), under the Rivers' Pollution Act, for a breach of the same in throwing sewage into the river. The plaint would shortly come on to be heard, but the Town Clerk had made an affidavit that the case raised questions of great importance, unfit to be dealt with in the County Court, which could not be determined there, and were fit to be decided in the High Court, upon which an application had been made to a judge at chambers for an order to restrain the County Court Judge from proceeding; he, however, declined to grant any such order, observing that he would much rather make an order to restrain the Corporation from throwing sewage into the river. On the part of the Corporation, it was now shown that the case could not be finally determined in the County Court, as there was an appeal given on the merits, and it would certainly come before the High Court, as it raised the whole question of drainage and the mode of disposing of sewage; consequently it would only be increasing expense to allow the case to be heard in the County Court. On these grounds a rule was eventually granted.

Our contemporary, the *Builder*, says:—"There has just been completed at Widnes, in Lancashire, what is believed to be the largest covered reservoir in the kingdom. It has occupied two years and a half in construction, having been begun in April, 1876. The total cost, including the mains attached to it, amounts to over £30,000. Widnes is a manufacturing town of about 22,000 inhabitants, and the water-supply is under the control of the Local Board of Health. A very large quantity of water is required for manufacturing purposes, and the supply is exclusively from two wells. The object of the new reservoir is the storage of the water pumped from these wells. It is upon a lower level than the old reservoir adjoining it, the new one being intended to supply the town and the lower parts of the district, while the old one is to be reserved for the higher portions." The new reservoir will, it is said, contain 10,000,000 gallons of water when full.

Some time since we commented on the decision of the Lord Chief Justice of England in a case of adulteration tried before him, in which he ruled that the whisky sought to be proved adulterated had been purchased by the sanitary inspector for analysis, and not for consumption; consequently the purchaser had not been prejudiced within the meaning of the Food and Drugs Act of 1875. We then stated that, in the face of this decision by one of the chief law officers of the country, the Act in its present form would become a dead letter, and a recent case heard at Bow-street confirms this opinion. A milk-seller of Bloomsbury was summoned for selling milk adulterated with water. The purchase was proved by the sanitary inspector of the district, who stated that he obtained the sample for the purpose of analysis. Sir James Ingham referred to the decision we have quoted above, and stated that he thought it would be unbecoming in him to express an opinion contrary to such a high authority, and accordingly he dismissed the summons. If the Act is to be of any use for the purposes for which it was passed, it is imperative that its clauses should be amended at an early day in the next session of Parliament.

Torquay, which is already an exceptionally pretty place, and possessed of at least one good-sized open space or park, is about to be provided with a beautifully situated piece of land as a recreation-ground through the liberality of Sir

Lawrence Palk, M.P., who has offered the same to the Torquay Board of Health for the nominal rental of 2s. 6d. per annum.

A revenue return recently published will somewhat startle the advocates of total abstinence from fermented drinks and tobacco. The return is made up to March 31 of the present year, and shows that the Excise and Customs duty from spirits in the United Kingdom during the year ended at that date was £20,675,928; the duty on malt amounted to £7,721,549; on wine to £1,628,295. The Excise duty on sugar used in brewing amounted to £526,208; Excise licences for the sale of spirits, beer, etc., realised £1,941,912; and to these amounts must be added the duty on tobacco—viz., £8,006,836. The total amount realised from the foregoing sources (£40,504,600) is distributed as follows:—England, 29,000,000; Scotland and Ireland, each £5,000,000. The population of the respective countries, calculated to June 30 last, was—England, 24,000,000; Scotland, 3,000,000; and Ireland, 5,000,000 inhabitants.

At the last week's meeting of the Metropolitan Board of Works a deputation was received from the inhabitants of Paddington and St. Marylebone on the subject of acquiring a certain open space of ground near Kilburn for the formation of a public park. We last week noticed the local meeting at which it was decided to appeal to the Board, and upon the present occasion most of those assisting upon that occasion took part in the deputation. Sir Thomas Chambers, M.P., Recorder of London, explained all the facts of the case to the Board, and ultimately it was unanimously agreed to refer the matter to the Works and General Purposes Committee for consideration and report. Another deputation attended the Board on the same day from the inhabitants of Kilburn, to present a memorial on the subject of the defective drainage of that locality. Sewage floods occasionally take place, owing, it is stated, to the fact of two large sewers draining into a small one; and although the attention of the Board was called to the matter in May last, up to the present time no steps have been taken to remedy this state of things, and it has recently been ascertained that the accumulation of offensive deposit in the sewers in question still remains in the same, if not in a worse, condition, to the great prejudice of the public health. This memorial was also referred to the Works and General Purposes Committee for report.

The *Globe* learns that the Russian Government is about to establish an army medical reserve. Each province in the Empire will contribute a number of doctors and surgeons in excess of the actual needs of the troops, and these will be sufficient in the aggregate to make up the deficiency experienced by the Russian arms during the recent Turkish war.

A lively discussion took place last week at a meeting of the Brighton Sewers Board, which is composed of Hove Commissioners and Brighton Town Councillors. The former, when in majority in committee, had given sanction to a sewer in their district being connected with that of the Board, and the Corporation representatives now opposed it on the ground that the Commissioners shirked their responsibility by neglecting to make sufficient outfalls for overflow of storm-water. The Board eventually resolved not to sanction any sewers in the Hove district being connected with the intercepting sewer till the Commissioners provide outfalls to relieve it of pressure from storm-water.

Speaking recently at a meeting of the Royal Albert Hospital, Devonport, the Earl of Devon bore testimony to the fact that the Contagious Diseases Acts and the Lock wards connected therewith had effected, and were still effecting, the greatest possible moral and physical good, not only among the women, but upon the whole population; and Admirals Farquhar, Stewart, Willes, and Napier, together with several clergymen, bore similar testimony. It would almost seem that, for once, common sense was about to triumph, and that the day for making opposition to the Acts a hustings cry had departed for good and all. It is undoubtedly an acknowledged fact that many who began by opposing them, have, under the results obtained, become their warm supporters.

Last week the town of Hastings proceeded to elect its Town Council and Urban Sanitary Authority for the coming year, and it has been hinted to us that we might, with great advantage to the locality, remind the future Water Committee of the obligations which still exist for providing an improved and adequate supply of this primary necessity for the district. In spite of much acrimonious controversy it is still a fact that the necessary steps have not yet been taken; that the deepest well which has been sunk is less than 110 feet, while it is well known that the Corporation of the neighbouring town of Brighton has gone much deeper down in its search for water. The authorities of Hastings should remember—and we say it in the most friendly spirit—that the prosperity of the town will some day suffer a rude shock if its water-supply is not immediately and most considerably improved.

At a recent meeting of the Carlisle Health Committee, Dr. Elliot, their medical officer, in submitting his report, called attention to what he was considerate enough to designate an *oversight* on the part of the Committee. Nearly three years ago he had brought forward the necessity of endeavouring to lessen the outbreaks of typhoid fever in the town by suppressing the escape of sewer-gas into dwellings. To effect this, he suggested the substitution of iron grids for the close wooden tops at present covering the openings in the middle of the streets where they lead into man-holes and lamp-holes. The matter was at that time submitted to a surveyor, who cordially approved the scheme. This was followed, however, by a step which took time—namely, written applications to about forty borough authorities for opinions on the subject. About ten of these reporting favourably, the Health Committee recommended the City Council to promote the undertaking, and the latter body actually instructed their surveyor to take action. But, remarkable to relate, at that time the office of surveyor was vacant, and when the post was subsequently filled, the new official elected to consider that the matter was still in the hands of the Council. The decision to effect the improvement, Dr. Elliot shows, was passed on January 7, 1877: nearly two years afterwards no steps have been taken. This is an excellent illustration of parochial zeal and intelligence.

THE REGISTRAR-GENERAL'S LAST QUARTERLY RETURN OF BIRTHS AND DEATHS IN ENGLAND.

The Registrar-General's quarterly return of births and deaths in England for the quarter ending September 30 last exhibits many noticeable details both from a statistical and sanitary point of view. During the three months 222,004 births were registered, equal to an annual rate of 35·4 per 1000. This birth-rate is high, and exceeded that in the third quarter of last year by 0·9, and the average rate in the corresponding period of the ten years 1868-77 by 0·8 per 1000. The sex proportion of the children born was 104 boys to 100 girls. The birth-rate in England contrasted markedly with that in Ireland during the similar period, the number registered in the latter country being only equal to an annual birth-rate of 24·1 per 1000 of the estimated population, a return that is under that for the third quarter of any of the last five years.

The number of deaths registered in England and Wales to the end of September last was 129,148, and the annual rate

of mortality was equal to 20·6 per 1000 of the estimated population in the middle of the year. This death-rate corresponded with the average rate in the third or summer quarters of the ten years 1868-77, but exceeded the rate that prevailed in the corresponding period either of 1875, 1876, or 1877. The annual rate of mortality in the September quarters of the forty years 1838-77 averaged 20·5 per 1000, so that they scarcely differed from the rate that prevailed in the quarter ending September last. The increase in the death-rate for the third quarter of this year is stated to be undoubtedly induced by the excessive fatality of diarrhœa, the result of the high temperature that prevailed in the latter part of June and during the greater part of July and August. Not only was the temperature unusually high during last July, but scarcely any rain was measured, and the weekly returns from the twenty large English towns showed a steady increase in the fatality of diarrhœa during that month, the maximum fatality being recorded in the week ended August 3, after which it declined. The annual death-rate from the disease averaged only 1·0 per 1000 in the twenty towns in the last week of June, and had risen to 8·3 in the week ended August 3. It is somewhat remarkable that in several of the towns, especially Portsmouth, Norwich, and Birmingham, the disease did not reach its height until fully the middle of August, and the meteorological returns from these places show nothing to account for the variation. Infantile summer diarrhœa, the Registrar-General remarks, is so essentially an urban disease that there appears to be no good ground for disputing the correctness of its classification among filth-diseases, to which the term preventable may be safely applied. Among fourteen millions and a half of urban population the death-rate from diarrhœa was equal to 3·7 per 1000, while in the rural population of rather more than ten millions it did not exceed 1·5. In the twenty largest English towns the rate averaged 4·2 per 1000, and exceeded the rate in any summer quarter since 1873; it ranged from 2·4 in Oldham to 8·7 in Leicester and 10·2 in Hull; this fatality in the latter town, compared with that recorded in the summer quarter of any of the eight preceding years, is remarkable. The rate in Leicester, although again more than double the average rate in the twenty towns, was not so high as in the summers of 1871, '72, '73, or '75. In Merthyr Tydfil the rate was only 0·3, and corresponded with the rate of last year. The low rate in this place is stated to be one of the most remarkable features of urban diarrhœa fatality, as during the nine summers of 1870-78 it averaged only 0·7 per 1000, the highest rate being 1·7 in 1874. The immunity from diarrhœa of Halifax (1·3 per 1000) stands out in strong contrast with the rates in most of the other large Yorkshire towns, as does the Oldham rate (2·4) among the Lancashire towns.

Scarlet-fever was, after diarrhœa, the most fatal zymotic disease in England and Wales during the quarter under notice, and caused 4348 deaths, equal to 0·69 per 100. The death-rate from this disease in the eight summer quarters of 1870-77 averaged 0·71 per 1000, and ranged from 1·32 in 1870 to 0·42 in 1872. The increase in the fatality of this disease now recorded was confined to the West-Midland and North-Western registration divisions. One of the most remarkable local outbreaks of scarlet fever occurred in Oldbury (Staffordshire) sub-district, the present population of which may be estimated at 20,000. In this sub-district no less than 233 deaths were registered last quarter (the average number in the three preceding corresponding quarters being but 94), equal to an annual rate of 47 per 1000. Of these deaths 132 were referred to the seven principal zymotic diseases, including 112 from scarlet fever, equal to a zymotic death-rate of 26 per 1000. Oldbury has been several times brought under the notice of the Local Government Board authorities, yet at the present time it is reported to be in want of good water and proper drainage.

Only 90·5 per cent. of the deaths registered were certified by properly qualified medical practitioners, and in some of the registration districts the proportion of uncertified causes of death is stated to be still remarkably high. The large proportion of uncertified deaths in such urban districts as Helston, Redruth, Keighley, and Durham, appears, in the opinion of the Registrar-General, to call for investigation.

The deaths referred to different forms of violence during the quarter were 4684, and exceeded the number returned in any previous quarter since the beginning of 1870; they were equal to an annual rate of 0·75 per 1000, and to 3·6 per cent. of the total deaths. Liverpool possesses the unenviable notoriety of invariably showing a marked excess in the death-rate from violence.

THE NORTHERN COUNTIES ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

The Northern Counties Association of Medical Officers of Health held their autumn meeting in the Freemasons' Hall, Durham, last week. Dr. Elliot, of Carlisle, the President, took the chair, and among those present were Drs. Yeld (Sunderland), Armstrong (Newcastle), Eastwood (Darlington), Mackey (Heighington), Graham Forster, etc. One of the most important features of the meeting was the submission of a draft of the memorial to be presented to Parliament, asking for power to extend inspection to schools. It was shown that the spread of infectious diseases was largely due to the contagion being caught in schools; and instances were adduced proving that strict legislation was the only means for dealing with the difficulty. The memorial was read and unanimously approved, and steps will be taken to forward it to the proper quarter. The President afterwards read a paper "On the Sources of Water-Supply"; and Dr. Yeld followed with another, "On the necessity of Legislation empowering Urban Sanitary Authorities to prevent the proprietors of houses erected before the constitution of Local Boards from building upon the whole of the open spaces belonging to such houses." Want of space prevents our giving the heads of these discourses. Several votes of thanks were subsequently passed, and Mr. W. C. Blackett was complimented for the trouble he had taken in arranging the details of a very successful meeting.

THE PHYSIOLOGICAL ACTION OF PEROXIDE OF HYDROGEN.

Dr. Paul Guttmann, of Berlin, has repeated the experiments of Assmuth and Schmidt on animals with a solution of peroxide of hydrogen of 1006 specific gravity, obtained from Messrs. Hopkins and Williams, London. This solution has long been used for bleaching purposes in this country, and is very permanent. The injection of four cubic centimetres under a rabbit's skin immediately caused severe dyspnœa, clonic convulsions, and death followed in a few minutes from asphyxia. The cause of the asphyxia, which Dr. Guttmann has been the first to explain, is the development of innumerable bubbles of gas in the right auricle and ventricle, so that the blood froths just as if air had entered by the veins. Microscopic examination of the pulmonary circulation in curarised hogs injected with the peroxide showed that the bubbles of oxygen due to the decomposition of the peroxide never penetrated the branches of the pulmonary artery. Dr. Guttmann has found that if he injects one syringeful or three-quarters of a cubic centimetre of peroxide solution into one side of a rabbit's abdomen, and two syringefuls of a 20 per cent. solution of ferrous sulphate simultaneously into the other, the animal does not die, though three-quarters of a cubic centimetre is the lowest fatal dose. Hence he concludes that at least part of the oxygen liberated from the peroxide

combines with the sulphate, and that the remainder is insufficient to obstruct the circulation and cause asphyxia, for under ordinary circumstances, while three-quarters of a cubic centimetre kills, one-half of a cubic centimetre does not. Dr. Guttmann has, like Thénard and Schönbein, observed the powerful antiseptic action of the peroxide. Ten cubic centimetres of urine mixed with one cubic centimetre remained nine months without putrefying. To this action is probably due the good effect of the peroxide on soft chancres noticed by Stöhr in 1867, and confirmed by Guttmann. Guttmann has also tried the peroxide in chronic dyspepsia (ten grammes to 200 of water—dose, half an ounce three times daily), and with good results. Dr. Richardson, it may be remembered, in 1862 published a number of observations on the subject, in which improvement of the digestion was one of the main features. In the discussion on Dr. Guttmann's paper at the Berlin Medical Society, Dr. Fränkel stated that he had found the peroxide solution rather weaker antiseptically than carbolic acid. He had used it with benefit as a mouth-wash in a case of fætor oris. Guttmann's experiments have been repeated with similar results by Dr. E. Schwerin (*Virchow's Archiv*, lxxiii., 37). Slight divergencies of opinion between their results, and generally speaking between those of other observers on the same subject, seem all explicable by the solutions used not being of uniform strength.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS IN IRELAND.

The first regular meeting of the session 1878-79 was held in the Hall of the College of Physicians, Kildare-street, Dublin, on Wednesday evening, November 6, Dr. Head, President, in the chair. The annual report was read by Dr. Duffey, Honorary Secretary, and was formally received and adopted. The President delivered an inaugural address, in which he ably reviewed the work done by the Society during the past session, and paid a warm tribute to the memory of Dr. William Stokes and of Dr. Fleetwood Churchill, both of whom "had as their object the elevation of their profession and the welfare of their fellow-men. Liberal and generous to those in need, both had earned the gratitude of many, while the lives of both equally demonstrate the fact that men can be at the same time great and good." At the conclusion of the President's address, Dr. MacSwiney detailed at length a "Fatal Case of Railway Spine." After a short discussion on this paper, Dr. Harvey made a communication entitled "Notes on so-called Compensatory Emphysema in Acute Thoracic Diseases." A discussion ensued, after which the Society adjourned till the first Wednesday in December.

STEAM SPRAY-PRODUCER.

At the meeting of the Clinical Society, Mr. Parker showed a new steam spray-producer. It is manufactured by Messrs. Allen and Son, of Marylebone-lane. If Lister's method of dressing cases become general, no doubt a spray-producer will come to be considered as an essential part of the ward furniture, and under these circumstances it is very desirable that a serviceable instrument should be obtainable at a much less cost than is possible at present. This one is designed in this view, for it is cheap (£2), well made, and amply large enough to work for four hours without refilling. We doubt not that many hospitals will be glad to take advantage of the opportunity.

THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY ON CROUP AND DIPHTHERIA.

At the meeting of this Society held on Tuesday, the 12th inst., the President, Dr. West, on taking the chair, said that Dr. Dickinson and Dr. Greenfield had been co-operating with the Secretary, Dr. Andrew, to frame an abstract of the report of the Committee on Croup and Diphtheria. The Council had, however, determined to print and circulate among the Fellows the whole of the report, together with the whole or such part of the appendix as might be deemed necessary. This would be printed in the same form as, and would ultimately appear in, the *Transactions*, so that its circulation would entail but small expense on the Society. Their thanks were again due to the gentlemen who had undertaken the work of preparing an abstract, even though that should remain unpublished. In this way the discussion on the report would probably come on some time in the beginning of the new year.

BUST OF MR. T. M. STONE.

The friends and admirers of this old and well-known College official might like to know of the existence of an excellent bust, modelled by Kempe, which is, or rather was, when we saw it, under the paternal protection of its prototype at Lincoln's-inn-fields. We hardly know whether to compliment Mr. Stone or Mr. Kempe. We were at first inclined to associate the head with that of Lord Salisbury, but a closer examination, and the kindly presence of the original, showed us how well the artist had depicted one for whom every member of the profession for the last forty years has had a good word.

THE PLAGUE IN CHINA.

The late Dr. David Manson, writing from Amoy in the *China Imperial Maritime Customs Medical Reports*, gives the following notes by Mr. E. Rocher, of the Customs service, on the plague in Yünnan, which will be read with interest. They prove unmistakably the existence of bubonic plague in China, and that this dread disease has spread over a larger area of late years than is generally known. They are of great value as showing that the disease did not entirely disappear between the years 1844 and 1873, as some epidemiologists believe; and they thus do away with the necessity for the supposition that in the latter year there was a re-creation of the plague virus.

In 1844 the plague disappeared completely from Egypt and Turkey in Asia, and we were told to congratulate ourselves on being finally rid of the most terrible of all epidemic diseases. For years there was no sign of it in its favourite haunts, and there seemed good reason for the belief that it had become a thing of the past. But in 1873, after an absence of nearly thirty years, it once more broke out in Mesopotamia, and ever since has been steadily extending its area, till last year it reached the shores of the Caspian. To account for this reappearance after so long a period of complete absence, some epidemiologists have propounded their belief in the spontaneous generation of the plague virus, as it is absurd to suppose that parasites could retain their infective powers for nearly thirty years. But in the light of Mr. Rocher's notes such a thing is unnecessary, as his dates bridge over twenty years at least of the thirty during which the disease was supposed to be dead, and show that an extensive epidemic may rage in mid Asia, and Europe be in complete ignorance of the fact. In such a country as Central Asia, where the distances are great, and travelling very slow, we can understand that such a disease as plague would take a long time to pass from west to east and back again from east to west, and that an interval of thirty years might elapse before the disease returned again to the place whence it started. Our knowledge of the countries to the north of the Himalayas is so meagre, and communication with them so difficult, that the plague might pass through them without our hearing about it at all, and one can readily suppose that it did actually pass thus from Yünnan to Mesopotamia or Persia to originate the epidemic at present raging in these countries. Mr. Rocher's description of the disease is sufficiently clear to justify us in calling it plague.

Notes on the Plague in Yünnan.

The sickness known in Yünnan under the name of Yang-tzŭ,

and which appears to be nothing else than the plague, carries off yearly many victims from that province.

According to the men of note of the various districts, the disease appears to have been imported from Burmah. It is exceedingly difficult to say when it was first introduced. The learned say—and a great part of the population hold the same opinion—that the centre and east of the province were exempt from the plague until the outbreak of the rebellion; while others assert that it had appeared in the extreme west, near Talifu, several years before this date. It is extremely difficult to fix these dates, but supposing the last statement correct, the disease must have passed over very lightly, seeing that neighbouring districts were not cognisant of its presence. Since the commencement of the civil war, however, it has spread over the whole province, decimating the population.

There is a fact that inclines one to think that the epidemic is owing to exhalations from the soil, and it is this: those animals that live in the ground, in drains or in holes, are the first to be attacked. This is particularly noticeable with the rats. As soon as these animals are ill, they leave their holes in troops, and after staggering about and falling over each other, drop down dead. The same phenomenon occurs in the case of other animals, such as buffaloes, oxen, sheep, deer, pigs, and dogs. All are attacked, but the dog less severely than the others.

When these phenomena appear, it is not long before the disease spreads to man; and knowing this, the people take every precaution to guard themselves from the plague. They begin to purify their houses by lighting fires in every room, and in certain towns they abstain from pork. In man the disease commences with a slight fever, which rapidly increases, and in a few hours becomes very violent. The patient clamours for drink, and his thirst is insatiable. By-and-by a dark red swelling shows itself in the armpits, groins, or neck, and the fever continuing to augment, the patient becomes rapidly unconscious. The bubo increases till the second day, after which it remains stationary, and when it has attained its full size it is about as large as a hen's or goose's egg. At this stage consciousness returns, but there is still great danger, for if the swelling, which up to this point is very hard, becomes soft, and if the fever still continues, the case is considered hopeless. On the contrary, if the tumour opens externally—which is a very rare occurrence—there is a chance of recovery. Some Chinese physicians have attempted to cut these tumours, but either they have delayed the operation till too late, or else they have performed it imperfectly, for few have survived this treatment. Many of the practitioners whom I have seen at work do not hesitate to declare themselves powerless, and instead of giving a quantity of medicine, as is their practice in ordinary cases, content themselves with prescribing large doses of musk as a last resource.

During my stay in Yünnan I have seen a great number of people struck with this disease, and I can say that very few recover. In places where the plague passes but lightly through, one might estimate the mortality at about 4 per cent.; while in places where it stops for some time, whole families disappear one after the other, and the population is completely decimated; and in some districts the inhabitants, to avoid the violence of the pestilence, abandon their homes and harvests, and camp out on the heights, where even sometimes the epidemic follows them.

What, to my mind, aggravates the evil, and brings about much greater mischief, is the practice of not burying the bodies of those who die of this disease, which the superstitious Chinese have adopted. Instead of being buried, the body is placed on a bier and exposed to the sun. The idea is that all who die of the plague are possessed by a devil, and may not be interred, lest the repose of their ancestors be disturbed, and he sanctity of the Fung Shui interfered with. As a consequence of this practice, the traveller passing the outskirts of a village where the plague is raging is nearly choked with the nauseous smell emanating from the exposed and rotting corpses.

During the years 1871, 1872, and 1873, I remarked that the epidemic began about the commencement of the rice planting —that is to say, in May or June. Onwards from this time its ravages were severe wherever it passed. During the summer, which in Yünnan is the rainy season, although the epidemic still held its course, yet it was of a milder character; but it is from the time the rain ceases to the end of the year that the disease is most active and deadly. A peculiar fact with regard to the track of the epidemic I have observed in several places both in the north and south of the province. Instead of visiting every village in its direct line of progress, it would pass some completely by, visiting places near them and on both sides, to return to those forgotten spots several months afterwards, when the epidemic would appear to have passed far away. Another fact not less curious is, that after having appeared in almost every one of the villages scattered about the plains, it ascends frequently the mountains, where among the aborigines (I-jên) who inhabit the high lands it claims many victims. One is inclined to believe that the disease is imported by the men and women who descend into the valleys to barter, or work at certain seasons at the harvest, as it is chiefly the mountains adjoining the plains that are visited by the disease. However, I am quite certain that the epidemic was constantly present among the Imperial troops operating in this part of the province.

ANOTHER HUMAN MONSTROSITY.

The following interesting description of the conjoined twins Marie-Rosa Drouin is recorded in the *Canada Medical and Surgical Journal* for October, by Dr. D. C. MacCullum, M.R.C.S. Eng., Professor of Midwifery and Diseases of Women and Children, McGill University:—

This remarkable specimen of the fusion in part of the bodies of two female children was brought to Montreal for exhibition during the month of April, 1878. It was exceedingly difficult to make a thorough examination of the children, as the mother was strongly opposed to having them handled or touched. By frequent visits, and by obtaining the consent of the mother to see the children whilst she was washing and dressing them, I succeeded in making out, not only the most important points relating to their union, but also in obtaining an excellent drawing, by Hawksett, of the appearances which they present anteriorly and posteriorly.

The children lie in their mother's arms so that the two upper separated portions are about in a line with each other, and each forming nearly a right angle with the single trunk. The one named *Marie* resembles the mother, has a fairer complexion, is more strongly developed and healthier looking than her sister *Rosa*, who is smaller, darker, more delicate-looking, and resembles the father. They are both bright, lively, and intelligent-looking children. The two bodies from the heads as far as the abdomen are well formed, perfectly developed, and in a state of good nutrition. The union between them commences at the lower part of the thorax of each, and from that part downwards they present the appearance of one female child—that is, there is but one abdomen with one navel, a genital fissure with the external organs of generation of the female, and two inferior extremities. The floating ribs are distinct in each, as is also the ensiform cartilage. The lateral halves of the abdomen and the inferior extremities correspond in size and development respectively to the body of the same side; and the same remark applies to the labia majora. The spinal columns are distinct, and appear to meet at a pelvis common to both, although the fusion of the children commences at some distance above their junction. From near the extremity of each spine, a fissure extends downwards and inwards, meeting its fellow of the opposite side at the cleft between the buttocks near the anus, including a somewhat elevated soft fleshy mass, thicker below than above. At a central point between these fissures, at the distance of two and a half inches from the point where the vertebral columns meet, and three and a half inches from the anus, there projects a rudimentary limb with a very movable attachment. This limb, which measures five inches in length, and is provided with a joint, tapers to a fine point, which is furnished with a distinct nail. It is very sensitive, and contracts strongly when slightly irritated.

The respiratory movements are not synchronous, nor do the pulsations of the hearts correspond—Marie's heart beating at the time of examination 128 per minute; Rosa's, 133. The sensation of hunger is not always felt at the same time, as very frequently one child sleeps while the other is nursing. When one child cries and the other is tranquil, the abdomen on the side of the crying child contracts and

expands, and the limb of that side is agitated, while the corresponding parts of the opposite side are at rest. There is slight movement of the lateral half of the abdomen on the side of the quiet child, but this is evidently communicated. Precisely the same phenomena are observed when either child forces during a motion.

From these observations it would appear that the spinal, respiratory, circulatory, and digestive systems of these children are quite distinct. They have each a separate diaphragm, and the abdominal muscles on each side of the mesial line, and the limb of that side, are supplied with blood by the vessels and are under the control of the nervous system of the corresponding child. They have each a distinct stomach and an alimentary canal, which probably opens at a point close to the common anus. It would follow also that the accessory organs of the digestive system are distinct for each child.

The two fissures behind are evidently the original clefts between the buttocks of each child, one buttock remaining in its integrity, whilst the other in a rudimentary condition is fused with that of the opposite child, forming the soft fleshy mass from the upper part of which the rudimentary limb projects.

These children are the products of a second gestation. They were born at St. Benoit, county of Two Mountains, on February 28, 1878. The mother, a fine, healthy-looking woman, aged twenty-six, states that she experienced unusual sensations in the womb during the period of gestation, and that towards its close the abdomen became so prominent she was ashamed to be seen by her friends. The weight also greatly fatigued her, and the movements of the children were very distressing. During her labour she was attended by a midwife. It lasted seven hours, commencing at 1 a.m. and terminating at 8 a.m. One head and body were first born; this was shortly followed by the lower extremities, and immediately after the second body and head were expelled.

FROM ABROAD.

The Yellow Fever at New Orleans.

A New Orleans correspondent of the *Boston Medical and Surgical Journal* (October 3) supplies some interesting observations upon the epidemic. Every visitation, he observes, has some characteristic of its own. That of 1867 was marked by its widespread influence over the population, including negroes, with a prevalence amounting to a total of about 40,000 cases, and the low mortality of about 8 per cent., as estimated from the most probable data. The most striking characteristic of the present epidemic is its partiality for young children, most of the subjects and most of the deaths thus far having occurred amongst those born since 1867. Several infants born since the commencement of the fever have been attacked. Another characteristic is the frequently unprecedented severity of its onset among young children, death having occurred within twelve hours in some instances, with a temperature of from 106° to nearly 108° Fahr. Heretofore, young children have got off for the most part very lightly, and the opinion was formerly prevalent that children born here were exempt. Even now, some people, including a few creole physicians, adhere to this antiquated belief, in face of the hundreds of native children that have died this year with the most marked symptoms of yellow fever. The great prevalence of the fever among young children is plainly referable to the fact that they have not been subjected to its infection before; and its unexampled fatality is reasonably explained by the want of that early and gradual *seasoning* to the morbid influence which was formerly acquired by the yearly presence of the disease and the frequency of its epidemic visitations.

As to treatment, there is no plan of general adoption, and most allow that each case must be treated on its own merits as indications arise. The advocates of the old quinine method continue to give large doses (some with the addition of opium) at the inception of the fever, with the view of promoting perspiration and obviating the usual severe pains in the forehead and lumbar region. A large proportion commence by a thorough evacuation of the alimentary canal, and rely for the rest chiefly, in ordinary cases, upon moderate diaphoresis, which is generally maintained by a single blanket, warm drinks, and foot-baths *pro re natâ*. Most cases can be taken through successfully without a single dose of physic by the mouth after the preliminary evacuation of the primæ viæ. A new mode of treatment (to this city, at least) has been introduced, with especial reference to cases marked by excessive temperature. This is the external use of cold water; and it has been found highly efficacious in cases adapted for its application. The most effectual appliance is one invented by Dr. Kibbie, of New York, who is now here putting it to a practical trial. (It has already been described in these columns, and therefore it need only be added that the irrigation process is repeated as often as the temperature rises above the point of danger—say 104°.) The plan has been found highly satisfactory in a number of cases, and will be further tried.

The value of the clinical thermometer is found inestimable in the treatment of yellow fever this year, and its possession gives us a great advantage not enjoyed in 1867. It serves both as a compass to point the way in management, and as a beacon to warn of danger; and, besides, it has proved the fallacy of an old notion, that this is a fever of a single paroxysm and a definite limit to seventy-two hours. We now find the fever subject in many cases to irregular fluctuations, and that it may last even to ten days, and then terminate favourably.

Surgical Treatment of Dysmenorrhœa.

At the third annual meeting of the American Gynæcological Society, held at Philadelphia from September 25 to 27 (*Boston Journal*, October 3, and *New York Medical Record*, October 5), Dr. Marion Sims forwarded an elaborate paper upon the above subject, describing and distinguishing the operations devised by Sir James Simpson and himself, and furnishing the indications for their respective employment. In the discussion which followed, Dr. Fordyce Barker observed that although thirty-three and twenty years had passed away since Simpson and Sims had devised their respective operations, we have not even at this day arrived at any settled practical ideas upon the subject, such as prevail in other departments of surgery: great difference of opinion prevailing as to what operation should be performed, or whether any at all is advisable. Dr. Barker considered it most remarkable that while one practitioner had incised the cervix nearly a thousand times within twenty years, another 380 times, and another had performed the operation 377 times within a few years, others who fully believed in the necessity of operation in stenosis, and had equally wide fields of observation, had never found it necessary to have recourse to it oftener than in a fifth of the smallest of these numbers. Many who had formerly had recourse to the operation had gradually arrived at the conclusion that it was required much seldomer than they had supposed. Dr. Barker felt convinced that the operation was often performed unnecessarily and injudiciously. He was cognisant of fifteen deaths which had followed, even where the operations had been performed by skilful surgeons. He questioned whether successful results were so often obtained as had been reported, and he had himself seen over a hundred cases in which an incision had been previously made, no relief following. Dr. Elwood Wilson, of Philadelphia, also, without denying the existence of cases in which an operation might be necessary, believed that this had been performed much more frequently than was justifiable. Treatment by forcible dilatation is that which he prefers. It does not confine the patient to bed for more than twenty-four hours, is not followed by unfavourable results, while permanent benefit may be procured. Dr. Noeggerath agreed with Dr. Peaslee in regarding these two operations as dangerous, although cases may occur in which a slight incision may be justifiable—as one-fifth of an inch at the inner os, and one-fourth at the outer. He believed that the vast majority of cases reported as cured were only relieved for two or three months, and in most instances at the end of eight or ten months were in the same state as before the operation. The tendency is now to supplant the operation by other methods of treatment which are less dangerous and equally successful. Dr. Wilson, of Baltimore, thought that there were many cases of stenosis of the internal os associated with anteflexion in which no other measure was adequate to rectify the condition. Although he had himself operated upon many patients upon whom, with maturer experience, he would now refuse to

operate, yet he thought that the operation should not be entirely discarded. He had also seen most serious results from the introduction of a sponge-tent for the purpose of dilatation. Dr. Lyman observed that although he had not had any fatal results following the operation, he generally found his patients in the same state six months after as before it, and the results were not so good as those obtained by forcible dilatation. Dr. Emmet directed attention to the fact that when the flexion was above the vaginal junction it indicated the existence of trouble elsewhere, as, for example, thickening of the broad ligaments in consequence of former attacks of cellulitis or peritonitis. When the operation had been performed in such cases he had never known the woman permanently relieved. Such thickening gave rise to obstruction of the circulation, and was the cause of a chordee of the uterus, which after a time became permanent. In the beginning the fault did not rest in the uterus, nor did the operation relieve the condition of the uterus in such cases. He believed firmly that mechanical dysmenorrhœa was a myth. In all cases where such an operation is contemplated, he urged strongly the searching for the results of a previous cellulitis. Were this done, the operation would soon come to be a thing of the past.

Necessity of Early Delivery.

At the same meeting of the Gynæcological Society, Dr. Emmet read a paper on "The Necessity of Early Delivery as demonstrated by the analysis of 161 cases of Vesico-vaginal Fistula." Its object was to prove that instrumental delivery had rarely, if ever, any agency in the production of vesico-vaginal fistula. The direct cause was always in the delay in delivery after impaction of the fœtus had taken place; while the indirect one was, in a large proportion of cases, neglect to empty the bladder. Dr. Emmet believed that the extent of the injury did not necessarily bear any relation to the length of the labour, but generally depended upon the mode of delivery. That assertion rested upon the supposition that we could determine the average amount of damage by the length of time necessary to repair it afterwards; and an analysis of the 161 cases showed that the duration of treatment in those instances in which the accident occurred in connexion with natural delivery was considerably more than in connexion with instrumental delivery. Dr. Emmet did not hesitate to state that he had never seen a case of vesico-vaginal fistula which could be shown to have been caused by instrumental delivery. His paper, therefore, had an important medico-legal value. A practical point to which especial attention should be paid was that the catheter should always be introduced prior to forceps operations, regardless of the statements made by either nurse or patient with reference to the condition of the bladder.

In the discussion which followed, Dr. Fordyce Barker observed, with reference to the influence of an over-distended bladder in retarding or protracting labour, that it was doubtless in the observation of every experienced obstetrician that, by the introduction of the catheter, what had been regarded as a proper case for instrumental delivery had been converted into active labour, terminating in speedy delivery. Although obstetric writings taught the great importance of watching the bladder, yet there was nothing which was more commonly neglected. In forceps cases it was his practice to introduce the forceps, bring the head down so as to relieve the urethra from pressure, and then use the catheter before completing delivery. He alluded to another cause of prolongation of the first stage of labour, viz., exhausted nerve-power. In such cases he regarded it as necessary either to give the patient rest by the use of opium, or to overcome the inertia by means of large doses of quinine administered at short intervals. He believed that the danger from the use of the forceps had been very much exaggerated. The older he grew, and the larger his sphere of observation became, the more frequently he found it necessary to resort to instrumental delivery; and he could see his error in not having used the forceps earlier and oftener than he had done in years past. Dr. Penrose observed that one of the most important points in Dr. Emmet's paper was his statement with respect to the exact time when the forceps should be applied—namely, when the head ceased to recede after the occurrence of a pain. Delay at that time is dangerous, and the woman is in great pain unless speedy delivery is effected. Dr. Barker, however, thought that the failure of the head to recede in the interval of uterine pains is an uncertain rule to guide us in the use of the forceps; for there were many labours in which it was found that in the interval the head remained exactly as it was, and yet the labour went on normally. He would say that as soon as it was evident that the head had ceased to advance, providing the uterine contractions were sufficiently powerful, the forceps should be resorted to. Dr. John Atlee was in favour of the frequent and early use of the forceps, and regarded the use of ergot in the early stage of labour as nearly as constant a cause of vesico-vaginal fistula as any which has been recognised. He believed that the forceps should be used for the purpose of relieving pain and cutting short the labour. Dr. Storer believed that the forceps were often applied under improper circumstances, and the Society should be cautious in the expression of its views. In nearly every case of laceration of the perineum that had fallen under his observation, the injury had been produced by the forceps. Dr. Godsell also thought that the tendency of the discussion was to make too light of the application of the forceps, their proper use requiring a certain amount of practice and skill. He advocated their removal as soon as the head came to the perineum, unless there were symptoms demanding urgent delivery. In answer to a question, Dr. Emmet said that even when the head was pressed against the pelvic brim, it could be pushed back often by means of the forceps, allowing the catheter to be introduced. If this could not be effected, he believed in tapping the bladder with the aspirator through the abdominal wall, rather than running the risk of trying to extract a head while the bladder was distended.

REVIEWS.

A Manual of General Pathology for the Use of Students and Practitioners of Medicine. By Ernst Wagner, M.D., Professor, etc., at Leipzig. Translated from the Sixth German Edition, by John Van Duyn, A.M., M.D., and E. C. Seguin, M.D., of New York. London: Sampson Low, Marston, Searle, and Rivington. Pp. 728.

This important work has already been so long before the profession, that we owe an apology to the author, the translators, and the publishers, for having failed to give it an earlier notice. We plead, as some excuse for having turned the volume to practical use before reviewing it, the nature of the work itself. Although primarily intended by the author for students and practitioners of medicine, as stated in the title, it is, in our opinion, better adapted to the use of lecturers on pathology, medicine, and surgery, or of the working morbid anatomist who may be seeking for principles to guide him in his special investigations. In systematic lectures on the subjects just mentioned, it is difficult altogether to avoid the omission of important points, and to insure accuracy of every positive statement, without occasional reference to a trustworthy authority. Under such circumstances no better guide could well be named than this work of the veteran Professor of Pathology at Leipzig. Wagner's field of observation of disease is, in many respects, more like that of an English physician than of the ordinary German teacher. He has been for years engaged as a practical observer at the bedside, as well as in the capacity of a systematic lecturer and an arduous worker in the post-mortem room and laboratory. He therefore possesses special qualifications for writing a treatise on General Pathology, which shall refer not only to post-mortem appearances and morbid processes as interpreted thereby, but also to disease in its living aspect—to its causes and origin, its course, and phenomena; and finally, to its effects as demonstrated by the scalpel and microscope.

The early chapters of the work fully justify the high expectations that we had formed of it. Part I. is devoted to General Nosology, and treats of such subjects as—the general conception of health and disease, symptoms, signs, diagnosis, clinical examination, prognosis, duration, course, varieties, and terminations of disease; the signs and causes of death, mortality, etc. These subjects are discussed in the style, at once exhaustive and succinct, which characterises the best English works on the Principles of Medicine. Details are fully given, but at the same time are kept thoroughly subordinate to the broad or general statements which the author aims to impress upon the reader.

Part II. relates to General Etiology, and is laden with an

immense amount of information upon the subject of the causes of disease. Whilst bearing most directly upon Etiology, however, these chapters have necessarily a very close relation to Hygiene. As a mass of reference and condensed information on Etiology, this part should be consulted by every lecturer on the Principles of Medicine. The question of inheritance as a cause of disease receives notice from the author in all its aspects, such as the influence upon the offspring of either sex, consanguinity, condition of the parents during generation, and maternal impressions. Age and the different periods of life in their relation to mortality are discussed at length and very satisfactorily. Sex, constitution, habit, temperament, climate, soil, the dwelling, clothing, bedding, food, drink, and occupation, are examples of the subjects that are similarly treated. We would especially refer to the sections upon the properties of different fabrics and textures in the matter of clothing, and upon underground water in connexion with the etiology of cholera and typhoid fever, as examples of valuable summaries of recent knowledge. The subject of parasites receives an unusual amount of space. The account of vegetable parasites, and especially of bacteria, is extremely full, and by far the best that we have seen as a collection of opinion and of references. This part ends with a discussion of the subjects of contagion and epidemics.

"General Pathological Anatomy and Physiology" is the title of Part III., which constitutes a large proportion of the work. It treats of the all-important subjects of disturbances of the circulation, such as anæmia, hyperæmia, and inflammation; and of degenerations, gangrene, regeneration, and new growths. Although the work is intended as a manual of general pathology, the amount of special information upon each of these subjects will be found to be not only abundant but exhaustive. Here, even more than in the earlier parts of the volume, the reader realises the enormous amount of labour that must have been expended by Wagner in the collection and abstraction of such a mass of research and opinion, and in the accurate citation of authorities. We need hardly say that this character of the work, which renders it so valuable to the lecturer or independent thinker, may, in the opinion of some, seriously interfere with its claims of fitness for the ordinary student of medicine, as long, at least, as he has to face examinations conducted on the present system. The diversity of opinion, which is faithfully stated, upon many of the subjects just referred to, would certainly tend to hinder or prevent that crystallisation of knowledge which in these days is considered (we do not say wisely) to be essential for a successful appearance before English examiners in medicine. These chapters on Pathological Anatomy possess, however, one character which must be considered admirable in a manual for students. We allude to the free reference that is made under most subjects to the normal condition and working of the parts. Nothing is more disappointing to the teacher of practical medicine and surgery than the deplorable want of appreciation amongst students of the value of a knowledge of the facts of Physiology and Histology towards the comprehension of Pathology and Treatment. In Wagner's manual the student's mind is being continually refreshed on points of pure physiology and anatomy; and from such points he is carried easily onwards to a rational pathology.

If space had permitted us we would have dwelt at some length upon the fourth and last part of this work. In many respects it is the most interesting of all. It is headed "The Pathology of the Blood," but the reader will find in it no evidence of return on the part of Professor Wagner to the doctrines of the Humoral Pathologists. The blood is treated as a tissue and as a complex chemical fluid, and is thoroughly investigated as regards its several components. Anæmia, chlorosis, Addison's disease, leukæmia, Hodgkin's disease, cholæmia and jaundice, asphyxia in all its bearings, uræmia, and lithæmia, are all fully discussed here, as are also polyuria and diabetes. The unsettled state of the great subjects of septicæmia, pyæmia, and fever, is well illustrated by the large amount of space devoted to them, and by the pages that are filled with quotations and abstracts of opposed views. The student of the febrile process will find in this part of the book a quantity of most useful material ready to hand.

We close this volume of Wagner's with the resolution that it shall not be put away like an ordinary student's manual, but kept beside us as a most valuable book of reference.

Transactions of the American Gynæcological Society. Vol. II. for the year 1877. Boston. 1878. London: Trübner and Co. Pp. 697.

The second volume of these *Transactions* is in no way inferior to the first. It contains very much that is of interest and value. We have read with especial pleasure the thoughtful paper which stands first in the book—viz., the address of the President, Dr. Fordyce Barker. It seems to us to contain words of counsel and warning peculiarly needed just at present. With respect to the surgical treatment of diseases peculiar to women (a branch in which much real progress has been made, but upon which discredit has been reflected from its having been taken up by persons reckless in what they did, and inaccurate in what they wrote), here is what he justly says: "An operation for the removal of an intra-uterine tumour, which interferes but slightly with the functions of the vital organs, which probably will cease to increase in size after the menopause, and may possibly disappear by the conservative processes of nature, cannot be defended, if, on being attempted, it should cause death; still less, repeated fatal results from operations, whose sole object is the possible relief from symptoms which have but a slight disturbing influence on the general health or the problematic cure of sterility."—(Page 31.) After remarking on this subject, he turns to another "burning question," that of uterine displacements. He finds that, "since 1845, 102 men have sought immortality by devising new forms of pessaries, descriptions of which have been published." Upon this he asks, "Is there any evidence of a corresponding activity in ascertaining the etiology, in defining symptoms, and in discovering remedies for the various organic and functional diseases of the organ, as in devising means for keeping it in its place?"—(Page 34.) We hope that in the future a more satisfactory answer to this inquiry will be possible than could be given now.

The address has also a clinical value, for the speaker narrates some most interesting cases: one of a tolerably healthy woman made ill for years by a stem pessary—an event, we believe, not uncommon, but which, for reasons which will occur to everyone, is seldom made public; others of hysterical symptoms cured by altered conditions of life, and by strong emotional excitement—cases very important in relation to the proposed removal of the ovaries for the cure of such diseases. As to this last topic, he puts the real issue in very few words—"Is it not well to inquire if psychical remedies cure some such cases as successfully as extirpation of the ovaries, whether other remedies may not be found equally effective in curing others? The difficulty in settling this question, it seems to me, lies in coming to a decision as to what cases are absolutely incurable by other means." The keynote of the address is indicated in the sentence, "Medical gynæcology should bear as important a part in the work of this society as uterine surgery."

Dr. Chadwick writes on the subject of the anal sphincters. He thinks that the internal sphincter (so called) is rather a detrusor than a sphincter proper. In our opinion it probably acts in both ways. The paper is an able and interesting one. Dr. Dalton contributes a long and elaborate report on the corpus luteum, much too important to be condensed in a few lines. Spiegelberg, in a short paper (considering the wideness of the subject), treats of puerperal convulsions in a systematic way.

We have a curious paper by Dr. Ely van de Warker on the present status of the intra-uterine stem in the treatment of flexions of the uterus. He is a firm believer in their usefulness, and thinks that "the feeling of insecurity attending their use is traditional, and not the result of accumulated experience." The cases of Valleix, which are the most important cases bearing on this subject ever published, because the only ones ever fully sifted, Dr. Van de Warker rejects, because he thinks the form of instrument used was a bad one. He also objects to Dr. Tilt's statement, "that fourteen fatal cases are known to have occurred," because "it is not usual to make statements of such vast importance as this in so summary a manner." The only cases anything like equal in value to those of Valleix—viz., the cases of Olshausen, almost the only author who has reported his whole experience with these instruments—Dr. Van de Warker does not mention. It is true he gives Olshausen the credit of having designed a stem: an achievement which we think that able author cannot be very proud of. He gives a long list of

English obstetricians who have invented, or rather modified, stem pessaries, but does not seem to have made any attempt to weigh the value of the utterances of these inventors. We may point out that, of the names he quotes, some have simply designed and exhibited a stem, but made no attempt to prove its usefulness; some have written lengthy papers, expressing general opinions and theories, without contributing any new facts; and others have narrated a few cases which they call "typical," but which others might probably think exceptional; but we say, without hesitation, that among the names he mentions there is not one who has tried to prove the value of the stem in the only scientific way—*i.e.*, by publishing a full account of *the whole* of his cases. The cases of Valleix and those of Olshausen are almost the only satisfactory material we have for forming a judgment on this subject, and their facts tell against the use of intra-uterine stems. Some of the so-called "typical" cases which have been published seem only to show how a healthy uterus will tolerate a foreign body.

The volume before us is very rich in matter relating to the diseases of the ovary. Dr. Goodell describes a case of vaginal ovariotomy, performed by himself; and to it he is enabled to add one by Dr. Atlee, these two cases being the sixth and seventh on record. Dr. Atlee's case, although now first recorded, was anterior in date to all the others. Dr. Parvin gives a table of all the recorded cases in which tetanus has followed ovariotomy. Dr. Paul Mundé contributes an exhaustive report on the treatment of ovarian tumours by electrolysis. His conclusion is that this mode of treatment is less successful and more dangerous than ovariotomy, the cures being 55 per cent., and the deaths 17·6 per cent. Dr. Atlee describes four cases of sarcoma of the ovary. Dr. Gilman Kimball reports and comments on some cases illustrating important points in ovariotomy.

We find a paper by Dr. Ellwood Wilson, on the radical treatment of dysmenorrhœa and sterility by rapid dilatation of the canal of the neck of the uterus. His paper is an illustration of the fallacy which vitiates so much obstetric literature. He publishes only what he calls "typical cases." These prove nothing. So many departures from health tend to get well spontaneously, that there is hardly any method of treatment, not positively fatal, that may not sometimes be followed by improvement in symptoms. Selected cases are valueless. To judge of the worth of Dr. Wilson's mode of treatment, we must have *the whole;* we must know to how many the treatment was applied, and how many of them got well; and we must have enough detail to show what was the matter, and what was the extent and duration of the improvement.

In a paper by Dr. Thaddeus Reamy we find the teaching of Emmett (on which we commented in our number of July 20) carried still further. Emmett thinks laceration of the cervix uteri the cause of very numerous ills. Dr. Reamy finds that all sorts of remote symptoms, including insanity, arise from laceration of the perineum. We have no doubt that the two theories are about equally correct, and are supported by much the same kind of evidence; and our criticisms of the one apply, *cæteris paribus*, to the other also. We think that a coincidence has been taken for a causal relation. Dr. Battey writes on the operation which goes by his name; and Dr. Engelmann, in a paper on the menstrual hystero-neuroses, treats a closely allied subject. We comment on this topic elsewhere.

There are other papers of interest in the volume, but space forbids us to comment further. We have criticised freely, for to do so is really the best compliment to the compilers of the book. We appreciate highly the public spirit and scientific zeal and labour which have led to the production of this handsome volume. We shall be glad to see it yearly succeeded by others of still greater interest and value.

THE VIENNA GENERAL HOSPITAL.—According to the report of this celebrated institution for 1877, there remained 1638 patients within its walls at the beginning of the year, and 20,105 new ones were received during the course of the year, so that there were 21,743 patients treated. Of these there were discharged 11,508 cured, 3659 improved, and 2101 uncured. The deaths were 2793 (or 13·9 per cent., and, excluding phthisis, 9·2 per cent.).—*Allg. Wien. Med. Zeit.*, October 22.

FOREIGN AND COLONIAL CORRESPONDENCE.

FRANCE.

PARIS.

INFANT MORTALITY IN FRANCE (*continued*).—HISTORY OF THE FOUNDLING SYSTEM—THE "TOURS"—PRESENT STATE OF THE QUESTION—PROPOSED LEGISLATION—CHARITABLE SOCIETIES WHICH GIVE ASSISTANCE TO YOUNG MOTHERS.

IN my last letter I called attention to the subject of the infant mortality in France, dealing more especially with the causes which have tended to bring about that mortality. In my present letter I wish to speak of the means which have hitherto been taken to combat this evil, and of the measures which are now being advocated with a view to greater success in this undertaking.

The history of past attempts practically resolves itself into the history of the struggle with illegitimacy, for hitherto very little has been done—apart from the aid given by the General or Children's Hospitals—to assist married women in rearing their children during the first year or two of life. For many centuries past the question of aid to unmarried mothers and to their children has occupied men's minds. As far back as the time of Constantine provision was made for foundling children, but State aid seems at that time to have been confined to pecuniary help, the first foundling hospital having been founded in 787 at Milan by a priest named Datheus. It was not till the twelfth century that any provision of this kind was made in France, but about that period the system of the "tours" was first established in many of the large towns, and in addition an orphan asylum was founded in Paris, which received a few foundlings amongst its legitimate orphans.

In 1445, Charles VII. passed an edict that, in the interests of morality, none but legitimate children should be admitted into these establishments, and the result was that the illegitimate children were sold to acrobats, were mutilated and sold to beggars for the sake of exciting compassion, that a very large proportion died, and such as grew up went to swell the ranks of criminals and prostitutes. Notwithstanding, however, that the consequences of this repressive legislation were so disastrous, and were recognised at the time to be so, it was allowed to remain in force for more than two centuries, until the time of St. Vincent de Paul, who, taking matters into his own hands, founded a large establishment for friendless children, whether legitimate or illegitimate, which a few years after his death was incorporated by Louis XIV. as one of the recognised asylums of Paris under the protection of the State. From that time onward, foundlings were received without inquiry and without restriction, with the result that the number of children in the charge of the State became so large as seriously to embarrass the Government.

In consequence of this, in the year 1784, Neckar, who was at that time Minister of Finance to Louis XVI., called the attention of the King to the difficulty; but in doing so he expressed his opinion that there could be no doubt of the utility, and even of the necessity, for some provision for foundling children. Before any action was taken in the matter the Revolution came; but even at the worst period of the Reign of Terror the subject was not forgotten, and a law was passed in 1793 which ordained that any unmarried woman, pregnant and willing to nourish her child herself, should have the right to claim assistance from the State. This law was not found to work well, for experience proved that the great majority of young unmarried pregnant women were ashamed to confess their condition; and in the year 1811 the Emperor Napoleon issued a decree by which he re-established the whole system of foundling hospitals, and the "tours," about which so much has of late years been said. This will be the place to say a few words about the "tours." As their name implies, they are little towers, either within the precincts of the foundling hospitals or in the neighbourhood, in which there is accommodation for an infant, and it is so arranged that a mother can deposit her child with perfect secrecy. The foundling is then taken charge of by the authorities and placed in the hospital. The question of the "tours," then, is in reality the question of permitting mothers to dispose of their children without in any

way betraying themselves. It had already been found that without the assurance of secrecy comparatively few mothers would leave their children, and that when kept by the mothers the majority died before the end of the first year, either by natural causes or by foul means. On the other hand, when complete secrecy was maintained, large numbers of legitimate children were placed in the "tours," and the burden became almost too great for the State. Napoleon, thinking the latter to be the lesser evil of the two, decided in favour of secrecy, but made it a law that all male foundlings should be brought up for the army, hoping in this way to keep the numbers within reasonable limits. Notwithstanding this condition, however, the number of foundlings continued to increase, and from 40,000, which they had numbered in 1784, when Neckar had called attention to the subject, they had grown to 68,000 in 1815, and to 100,000 in 1819. About this time Louis XVIII., on the ground of economy, suppressed the "tours" system, but, to avoid the opposite evil before alluded to, although he obliged the child to be delivered directly into the hands of the authorities of the hospitals, he still permitted the mother to keep her name secret if she wished. In the year 1827, Charles X. re-established the system of complete secrecy, and this again gave rise to so rapid an increase in the number of foundlings that in the year 1833 there were no fewer than 131,000 in the charge of the State. Thus the system was again seen to be unsatisfactory; but the Government felt itself unable to propose any satisfactory alternative, and resorted to the policy of allowing the prefect of each department to do as seemed right in his own eyes. Many prefects at once closed the "tours," and abolished the plan of secrecy, and in no less than thirty-two departments it was decided to refuse help of any kind to illegitimate children; but the confusion resulting from the differences of system in different parts of the country became so great, that in 1849 a commission was appointed to inquire into the whole matter. This commission recommended the universal abandonment of the "tours" system; but the opinion of the country was still so divided upon the subject that no law to this effect could be passed through the Legislature until the year 1862. In that year the "tours" were finally closed, and it was henceforth necessary for the mother herself to bring the child to the foundling hospital, and to declare her name and circumstances to the authorities, who were to judge of the fitness of the case for admission. After sixteen years' experience of this plan, the whole question has been again revived. The number of foundlings has indeed greatly diminished, but the number of children dying during their first year has increased *pari passu*; and it is therefore obvious that legislation on this point has by no means reached finality.

I will now endeavour briefly to describe some of the measures which have been suggested for further combating these evils. In the first place, as regards the wholesale destruction of children by the farming-out system, which I referred to in my last letter. For some years the subject has been before the Legislature, and a Bill has been drawn up which is expected to become law during the next session of the Chambers, the object of which is twofold: in the first place, to regulate the supply of wet-nurses, and to see that no abuses are allowed to grow up under this system; in the second place, to institute local committees whose duty it should be to inspect and report on the condition of all children under the age of two years who are brought up away from their parents, and whose keep is paid for. This law, which is known as "la loi Roussel" (after Dr. Théophile Roussel, who has been the leading spirit in urging its necessity), seems likely to be of very great benefit, and, if it can be successfully carried out, it will in great measure solve the baby-farming question, which is as great a problem, and productive of probably as great evil, in England as in France.

It is a far more difficult matter to devise any means to check the practices of abortion and infanticide, and to lessen the mortality among illegitimate children during the first few weeks of life. The first-mentioned object will probably be attained by placing all the "maisons d'accouchement" under strict Government inspection—a measure which is almost certain to be adopted before very long. Another important legislative reform bearing indirectly on this point will be to allow the search for paternity and to oblige the father to help to support the child. This is also nearly sure of adoption sooner or latter. But it is the problem of preserving life during the first weeks which presents the greatest difficulty.

It is very certain that the present system of relief afforded by the foundling hospitals has altogether failed to stop the great mortality of the first weeks above alluded to. On the other hand, if the "tours" were to be re-established it is equally certain that in a few years the State would be charged with a burden almost too great for it to bear, whilst, at the same time, the ease with which married people could rid themselves of their responsibilities would be calculated to deteriorate the national morality. The question is—How is a plan to be devised which shall combine the advantages of these two systems, whilst reducing to a minimum the evils resulting from each of them?

The question of the re-establishment of the "tours" formed the basis of the discussion at the recent Congress, and there was great diversity of opinion as to its advisability. The majority of the speakers appeared to be in favour of their re-establishment; but I think that when the matter comes before the Legislature the resulting evils will be considered too great to allow of this becoming law again, and that some middle course will be pursued—at any rate, for the present. A very able pamphlet has been written upon the subject by Dr. Drouineau, of La Rochelle, who has studied it from every point of view; and I think that though the plan sketched out by him may not be followed out in its entirety, yet that it will exercise a considerable influence in the future consideration of the question. Dr. Drouineau starts by saying that the young unmarried girl requires assistance at and after her confinement, and the baby from the very moment of its birth. He proposes that, just as there are general hospitals, lying-in hospitals, and asylums, throughout the country, so there should be establishments where these young girls could be admitted for their confinement, and where this might take place in strict secrecy. The director should be a medical man, with a staff of midwives under him. A register should be kept, to allow of identification in case of necessity; but this register should be in the hands of the director alone. The women should be encouraged to suckle their children themselves, and to keep them permanently wherever this is possible; but for cases where this is impossible there should be a *crèche* attached to the hospital, into which the children could be received when the mother is discharged. The children would be kept in this *crèche* until two years of age, after which they would be drafted off into the ordinary foundling hospitals. To encourage the mothers to retain their children, and to enable them to do so where this might interfere with their employment, the hospital should be in communication with private societies, whose function it should be to assist the poor girls after they leave the hospital. Several such societies have already been founded, and are doing a good work in this way. The first society of the kind was established by M. Marbeau, the immediate object being to aid mothers in nourishing their children without having to give up the work by which they get their living. This was soon followed by a society founded by Drs. Mayer and Barrier, by which a corps of inspectors was organised, who undertook to look after young mothers and their babies, to see that the child was properly tended, and to recommend help where it was wanted. Two years ago a third society was founded by Madame Léon Bequet with the assistance of Dr. Mayer, who has just been mentioned, the object of which is much the same as that of the society of M. Marbeau, viz., to aid young women, married or unmarried, in rearing their children themselves. Between sixty and seventy of the doctors of Paris have put themselves into communication with the society, and this number, as well as that of the subscribers, is rapidly increasing. The charity is administered in the form of food, clothing, etc., rather than in money, and there can be no doubt of the great utility of the movement. I must not close my list without mentioning the "Société de Charité Maternelle," which confines itself to married women only. This society was established to help women who had lost their husbands, or whose husbands were unable to assist them in any way; and, secondly, women with more than two living children below the age of fourteen. Now that the attention of the whole nation has been so thoroughly awakened to the necessity for doing something to stop the frightful mortality which has hitherto prevailed, we may expect to find these societies not only increasing in the extent of their operations, but multiplying in all parts of the country. Thus one of the

elements required for the carrying out of some such plan as that advocated by Dr. Drouineau will be supplied; and as the State is evidently prepared to spend a considerable sum of money to meet its share of the responsibility, we may hope that the other element—that of provision for the accouchement in secret of unmarried women—may also be supplied before long. The question is one of the greatest interest and importance, and the different stages through which it passes in France will be carefully watched by the neighbouring countries, for though from the population point of view it is less important in other countries than in France, it is for them quite as serious from the social aspect, as anyone can testify who has seen the havoc which repeated illness and death make in the *ménages* of the labouring classes. We may have to attack the evil from another side in England; but none the less shall we do well to study closely the effect of legislation in France.

GENERAL CORRESPONDENCE.

INDIARUBBER BANDAGES.

Letter from Mr. E. L. Hussey.

[To the Editor of the Medical Times and Gazette.]

Sir,—Cases have been lately reported with the experience of different practitioners in the use of bandages of indiarubber as the best means of making even pressure, or of giving continued support, in cases of old ulceration or chronic swelling of the legs. Mr. Callender has mentioned a case of swelling of the knee after rheumatism, with effusion into the joint, treated in the same way.

Allow me to suggest to your readers the use of the material in the treatment of the swellings of the fingers, which are often tedious and painful, in persons of rheumatic or gouty constitution.

For two or three years past I have used a piece of an indiarubber finger-stall in fissures and slight cuts of the fingers; and for twelve months or more I have used it in cases of thickening or deposit around the joints of the fingers after injury, with great relief to the patient. It has seemed to me that the brown finger-stalls of pure rubber are better than the black or vulcanised.

A piece of tubing may be cut into lengths of about an inch or an inch and a half. One of these can be slipped over the joint by the patient himself after he has been taught how to do it. It should be worn constantly day and night. The patient will soon learn how to roll it off, and re-apply it after washing his hands. When it has become too loose to give the necessary support another length can be taken.

Oxford, November. I am, &c., E. L. Hussey.

Dublin Hospital Sunday.—Last Sunday, November 10, was Hospital Sunday in Dublin. The day was comparatively fine, although cold, and the returns which have been published up to the present go to prove that the collection was fully up to the average this year. In St. Matthias's Church no less a sum than £313 was collected at the morning service; and in Christ Church, Leeson-park, the morning collection alone amounted to £161. For some weeks open enemies of this philanthropic movement have been uttering the old insensate cry of "Vivisection in Hospitals," while some rather injudicious friends of the movement have imperilled its success this year by raising the question of nursing in the Dublin hospitals, on the very eve of Hospital Sunday. Truly, "there is a time for all things."

Surgical Society of Ireland.—The election of Council for the session of 1878-79 took place at the Royal College of Surgeons, Stephen's-green, Dublin, on Monday, November 4. The following gentlemen were elected officers,—*President:* Philip Crampton Smyly. *Vice-President:* Edward Dillon Mapother. *Council:* Charles Benson, Philip Bevan, William Colles, Humphrey Minchin, M. Harry Stapleton, George H. Porter, Benjamin Wills Richardson, James Stannus Hughes, Jolliffe Tufnell, Rawdon Macnamara John Barker, Edward Hamilton, Henry Gray Croly, Henry J. Tyrrell, Archibald Jacob, William Stokes, Anthony Corley, Benjamin Francis McDowell, Edward S. O'Grady, W. Thornley Stoker, William Thomson. *Honorary Secretaries:* B. Wills Richardson, Jolliffe Tufnell.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

Tuesday, November 5.

Charles Murchison, M.D., LL.D., F.R.S., President, in the Chair.

Spontaneous Cure of Aneurism.

Dr. Ralfe showed a specimen of a large thoracic aneurism which had undergone spontaneous cure. The subject had been a patient in the Seamen's Hospital, under Dr. Ralfe's care, for a short time, suffering from heart disease complicated with bronchitis and general dropsy. A loud systolic murmur was heard over the chest, and the diagnosis, as far as it could be made, was of simple mitral incompetence. Post-mortem, both ventricles were found dilated, containing recent coagula. The mitral valves were incompetent, and these, as well as the aortic valves, were thickened. An aneurism as large as the fist occupied the arch of the aorta; and its cavity was almost obliterated by a large pale clot, which weighed seven ounces and three-quarters. A small lumen, corresponding with the passage for the blood, contained a post-mortem clot weighing three-quarters of an ounce. The liver presented syphilitic changes. The surface of the spleen was studded with small purulent collections; and under the capsule of the kidneys small abscesses were found. The apex of the left lung contained a ragged cavity with puriform matter, and the lungs otherwise were congested and pigmented. Old cretaceous masses were found in both lungs. The larynx was small and anæmic; and the epiglottis presented some ulceration. Most of the arteries of the body were small and atheromatous. Dr. Ralfe said that there was positive evidence of syphilis in this case. It was impossible to say how the obliteration of the tumour had commenced. The cavity of the lung was of interest in connexion with the aortic aneurism. It was a matter for speculation how far the presence of mitral incompetence might not have contributed to the obliteration of the aneurism. Nature gave an encouraging suggestion to art in such cases.

Dr. Douglas Powell showed a specimen of "spontaneous" consolidation of an aneurism of the aorta after eleven weeks' rest. The patient was a professional musician, and accustomed to blow a wind instrument. There was a doubtful history of syphilis. For five years he was under Dr. Powell's close observation; and in October, 1875, he was treated by absolute rest on his back. The physical signs were not specially peculiar. After a time, as the patient complained of faintness, palpitation, etc., he was allowed to rise, when he was found to be wonderfully relieved. Hereupon he took a business in an easy way; and it was not until September, 1877, that his health slowly failed, and he sank worn out with profuse expectoration. No medicine was given during this time, with the exception of large doses of morphia to relieve pain. Iodide of potassium was tried for a short time, but caused diarrhœa, and had to be stopped. Post-mortem it was found that the aneurism was consolidated throughout, the clot being pale and laminated. A small channel alone was left occupying the lower part of the arch. The right carotid and subclavian were not involved; the left subclavian and carotid were partly involved by clot. In this case it had been decided that no surgical interference should be attempted. The lungs were found to be partly emphysematous and partly collapsed.

The President said that the spontaneous cure of aneurism was a subject of clinical as well as pathological interest. When a student at Edinburgh he had seen a case of aneurism of the abdominal aorta, under the care of Dr. Hughes Bennett, in which Valsalva's treatment was adopted. The patient suffered great pain, and finally poisoned himself. Post-mortem a large aneurism was found in the chest, which had formed during the cure of the other in the abdomen. The President added that he had since seen cases of partial cure.

Dr. Greenhow said that some years ago he had a case where aneurism of the aorta appeared to have been completely cured by its own pressure upon the distal vessels. The tumour was as large as a fœtal head. He believed that he had seen a similar case in the abdominal aorta.

Mr. Hulke related how he had seen two cases of thoracic aneurism under the care of Dr. Todd, both of which appeared to be ready to burst through the sternum. The patients were kept quite quiet on their backs with limited diet, and

both of them improved greatly. One of the cases was known to have continued well for three years.

Mr. William Adams said that cases of the spontaneous cure of aneurism were rare. The clot was generally formed of laminæ, but occasionally a radiating appearance was presented instead. He believed that the consolidation of such an aneurism coincided with the death of the patient, the fluid tumour becoming a solid tumour, and pressing upon the nerves. A well-known case of the kind had lately occurred in a member of the profession; the consolidation appeared to have been rapid in that instance, inasmuch as the arrangement of the clot was radiating and not laminated.

Dr. Morison gave an account of a case which he had seen lately of aneurism of the commencement of the ascending part of the aortic arch growing towards the right. It was as much without as it was within the cavity of the chest. The great bulk of the tumour consisted of laminated clot.

Dr. Greenhow said that Mr. Adams' remarks implied that consolidation, in his opinion, meant death. He (Dr. Greenhow) did not agree with this. The effect of consolidation would depend upon the position of the tumour.

Mr. Adams replied that the case he had cited was a case of aneurism of the innominate artery and of the arch of the aorta, and measured three inches in diameter. The condition was suspected before death.

Dr. Douglas Powell said that he wished to withdraw the name of "cure" which had been given to these cases. At the same time, if one were to argue from Mr. Adams' statement, one would be altogether discouraged from pursuing the ordinary treatment of aneurism, which aimed entirely at consolidation. As a rule, such treatment was successful, but too rapid consolidation might be dangerous. Still, in the hands of surgeons, rapid consolidation was a method of treatment which had done much good lately.

Mr. Hulke said that he failed to understand how an aneurism plugged with fibrine could exert more pressure than a pulsating fluid tumour. Besides, it was generally believed that fibrine contracted after its coagulation, thus occupying less bulk; indeed, the radiation which Mr. Adams had described in the clot in his case appeared to be an indication of such contraction.

Dr. Coupland mentioned a case of spontaneous cure of aneurism of the abdominal aorta, in which the patient died from granular disease of the kidneys and uræmia. He said that it was remarkable how long patients might live with a large aneurism, provided it did not press upon vital parts. He had seen a case where the skin of the chest was already undermined by the aneurism, yet the patient was known to be not only alive, but walking about. In another case at University College Hospital, a young man was known to have lived for five years after the skin had been felt to be thin.

The President asked Dr. Ralfe what was supposed to be the cause of the purulent deposits in the kidneys and spleen in this case.

Dr. Ralfe replied that it was probably the suppurating cavity in the left lung.

Colloid Cancer of Mamma and Lymphatics.

Mr. Godlee showed these specimens, which had been removed the same morning by Mr. Lister. Microscopical sections of the tumours were also exhibited. The structure of the growth, both in the mamma and in the axillary lymphatic glands, was characteristic of colloid cancer.

Viscera in Rabies.

Dr. Crisp exhibited the viscera of a dog that had died from rabies, including the brain and spinal cord, the tongue and larynx, the stomach, spleen, heart, etc. The animal died without violence having been employed, three weeks after having been bitten by a rabid dog. The symptoms were those characteristic of the disease. Post-mortem an extremely small cicatrix was found on the nose, where the bite had been inflicted; the spot was not inflamed. The muscles were of a dark red colour. The brain and spinal cord proved to be highly vascular. No microscopical examination had yet been made of them. The nasal sinuses were vascular and covered with mucus. The tongue was not enlarged, and presented no vesicles or papulations. The lungs appeared healthy. The heart contained dark grumous blood on both sides. The liver, spleen, and other viscera were normal, and the blood presented a natural appearance. Decomposition was very rapid. Fowls fed upon the flesh of the dog still remained healthy.

The President referred to the observations of Dr. Gowers and Dr. Allbutt upon the pathology of hydrophobia, and hoped that some observations might be made upon the present specimen microscopically.

Mr. Hulke asked Dr. Crisp whether he had examined the urine in this case. He referred to a case of hydrophobia many years ago at King's College Hospital, in which during the last hours of life dark porter-like urine was passed, and in which acute desquamative nephritis was discovered post-mortem. The patient had been kept under the influence of chloroform for many hours, and the question arose whether the condition of the kidneys was referable to the chloroform. Some time after, Mr. Hulke found, in another case of hydrophobia in a young woman who died at Charing-cross Hospital, a similar condition of urine and of kidneys. Similar observations did not appear to have been often made.

Dr. Duckworth said that in a case of hydrophobia which he saw two years ago albuminuria was found. No post-mortem examination was made.

Dr. Crisp replied that the urine was not examined in the case of this dog. The kidneys were congested. Albuminuria was a common symptom in hydrophobia, but it was not mentioned in accounts of rabies in the lower animals.

Dr. Ralfe said that in the lower animals some cases of tetanus were probably confounded with hydrophobia. Another class of doubtful cases occurring frequently in Somerset were promptly cured by immersion in the Bristol Channel! Albuminuria might be expected to occur in hydrophobia and acute tetanus.

The Lymphatics in Leprosy.

Dr. Hoggan exhibited microscopical specimens, drawings, and photographs, illustrative of the condition of the lymphatics in anæsthetic leprosy. He referred to Dr. Vandyke Carter's description of the morbid anatomy of this disease, and to his opinion that leprosy is zymotic in its origin, micrococci and zoogloœa being found in the affected parts. A brief history of the case that was investigated was then given:—T. C., born in India, came to England at the age of ten, and soon after began to suffer from leprosy of the anæsthetic form. Sight and smell were gradually lost, and cutaneous sensibility and voice had almost disappeared before death. After death a careful examination of all the parts was made by Dr. Hoggan; but the present communication referred to the condition of the lymphatics only of the skin. By the aid of silver, gold, and osmic acid preparations, the lymphatics of the skin were distinctly brought out. The cells forming their walls were found to be well defined, and the walls altogether were absolutely healthy. The following changes were discovered to be present:—1. The lymphatic vessels were more dilated than usual, especially at the valvular pouches, like great reservoirs. 2. The lymphatic plexus was denser than normal—probably because the skin was greatly thinned by pressure and condensation of the layers. The same circumstance might have been the cause of the dilatation of the vessels. 3. The bloodvessels were greatly dilated. 4. The skin was highly elastic, and in this respect was quite different from the normal. 5. The vessels described by Dr. Carter as lymphatics were found to be veins. 6. The "leprous cells" were generally found near bloodvessels, in the usual situation of wandering cells. This observation was easily made in the early or invasion-stage only of leprosy, for the groups afterwards came together by pressure. These "leprous" cells were therefore only altered wandering cells, which had pierced the vascular walls on account of the lack of vitality; and this lack of vitality was in its turn due probably to involvement of the nerves. The cell-groups gradually extended up to the epidermis, and destroyed the epithelium, thus causing ulceration. With respect to the lymphatic sheaths of the nerves, which Dr. Carter had described as being diseased, Dr. Hoggan believed that their existence was purely hypothetical. Finally, he believed that the lymphatics themselves had no share in the causation of leprosy, which must be sought for elsewhere.

The President referred to the differences between this account of the histology of leprosy and that given in the *Transactions* by Dr. Vandyke Carter.

Dr. Tilbury Fox said that he had seen the patient some years ago, and the disease was unquestionably true leprosy. He had himself always questioned the accuracy of Dr. Carter's account of the pathology of the disease, the appearances described being probably due in part to the method of preparation employed. The clinical history of leprosy supported Dr Hoggan's pathological account, and he had been quite

prepared to hear that the lymphatics took no part in the disease.

Dr. COUPLAND asked whether Dr. Hoggan's observations indicated a nervous origin of the disease. He seemed to have disproved a lymphatic origin; but had not swellings been found upon the nerves? He wished to know whether Dr. Hoggan had seen such swellings; and, if so, whether he considered that they had any relation to the changes on the skin.

Mr. MORRANT BAKER suggested that the specimens should be referred to the Morbid Growths Committee.

Dr. HOGGAN, in answer to Dr. Coupland's question, said that he had another and more important communication to make at another time upon the condition of the nerves in leprosy. The nerves, like all other affected organs, atrophied, and their place was taken by fibrous tissue.

EARLY CHANGES IN ADDISON'S DISEASE.

Dr. GOODHART showed microscopical specimens of early changes in the supra-renal capsules. The first case was that of a man of thirty-six, who died in Guy's Hospital of old-standing disease of the sacrum, psoas abscess, and amyloid disease. The supra-renal capsules presented, at their upper extremity, a small cartilaginous-looking nodule which was just beginning to caseate. The second case was in a child of five years, with tubercle in various organs, and a mass in one supra-renal capsule. These two cases were examples of the two forms of the change in the supra-renals that had been described, viz., one form with tubercle, and the other form with spinal or other disease. The specimens presented fibro-cellular growth leading to destruction of the cells, and was much the same in the two cases. There was no certain evidence of extension of the disease from without, and it was therefore probably intrinsic, and connected with over-stuffing of the capsules. Neither of the subjects suffered from the symptoms of Addison's disease.

CONGENITAL OPENING IN THE SEPTUM VENTRICULORUM.

Dr. COUPLAND showed this specimen of malformation of the heart, which, according to Dr. Peacock, must be considered very rare. There were no clinical facts connected with the case that could be obtained. The subject, aged about forty, was brought into the Middlesex Hospital dead from hæmorrhage in phthisis. The aperture of unnatural communication between the ventricles of the heart was situated on the right side immediately under the posterior cusp of the pulmonary artery. Immediately under the opposite cusp was a patch of endocardium greatly thickened. The passage admitted a No. 12 catheter, was oval in shape, and its upper border, being lunated, hardly touched the pulmonary artery. The orifice on the left side was situated below the right anterior cusp of the aortic valve. Thus the orifice on the right side was not in the usual situation towards the auriculo-ventricular opening, but close under the pulmonary artery. The opaque patch of endocardium had probably received the impact of blood coming in a current from the left to the right side of the heart. There was no narrowing of the pulmonary artery or aorta, and no other malformation in the body.

CLINICAL SOCIETY OF LONDON.

FRIDAY, NOVEMBER 8.

GEORGE W. CALLENDER, F.R.S., President, in the Chair.

A CASE OF QUININE RASH.

DR. FARQUHARSON exhibited a drawing by Dr. Westmacott of a case of quinine rash occurring at St. Mary's Hospital, in the practice of Dr. Cheadle, who had kindly allowed him to bring a few brief notes before the Society. The patient, a boy aged fourteen, was admitted with pyrexial symptoms, and after the first suspicion of typhoid was allayed, it was decided to try the effect of quinine in bringing down the temperature, which had stood for several days at 100°. Ten grains were accordingly given thrice a day, and on the fourth day a variolous rash appeared universally over the body, composed of flat slightly raised patches of a rose pink, and accompanied by much tingling and irritation. No other symptom of cinchonism was observed, and on withdrawal of the medicine the eruption rapidly subsided. Quinine symptoms may be divided into two classes—those of an eczematous character, which are described by some continental authorities as occurring on the skin of workers in quinine manufactories; and those which follow the internal administration, usually of very small doses of the drug, and which may be either erythematous or rubeoloid in character. The present case was strongly suggestive of urticaria, which it doubtless was, and it may naturally be argued that the real causation was some chance error of diet, instead of the more roundabout reason just given. The diagnosis, however, was most amply confirmed by one of the students, Mr. Luscombe, who had suffered two attacks in his own person, precisely similar to this in every respect save in the addition of very troublesome and long-continued gastric irritation. It is worthy of remark that the quinine not only caused no lowering of the body-heat in the first instance, but that on the appearance of the cutaneous eruption the temperature ran up to 102°, the explanation of this probably being that the dose was really too small to produce any decided antipyretic effects.

Dr. GREENHOW denied that the case related by Dr. Farquharson was of the same nature as those where the rash arose from the physiological effects of the substance, as in the case of the bromides or iodides. True, it might have been the result in one sense of the quinine, as that may have caused indigestion followed by urticaria. He had used quinine for forty years, and had never seen such a result.

Dr. B. YEO suggested that the rash might have been due to a disease already incubating when the quinine was given.

Dr. NUNN, from Georgia, U.S., who had lived in a malarious country where they were often obliged to give quinine in large doses, was quite familiar with the rash. He observed it in one lady of fifty, in whom large doses always produced patches of erythema in various parts, especially the chin and behind the ears.

Dr. FARQUHARSON, in reply, said the rash he described was not like the ordinary quinine rash, twenty or thirty cases of which were on record. He did not think it was connected with anything else.

FATAL CASE OF OGSTON'S OPERATION.

Mr. BARKER read notes of a case as above, with the object of affording a few data for a just estimate of the value of this operation, though the result was unfortunately fatal. The patient was six years of age, and deformed by genu valgum on both sides, but mostly so on the right. On this limb the operation was performed as follows:—A tenotome was passed down in front of the middle of the joint from a point about two inches above the internal condyle. Along this line a narrow-bladed saw was inserted, and its cutting edge laid on to the bone. The latter was then divided, due care being taken that the soft parts behind it should not be injured. The limb was then brought into a straight line, but could not be brought beyond this, owing (as was seen at the post-mortem) to the position which the spine of the tibia then held. It came up against the under surface of the inter-condyloid notch, while the external lateral ligament held the bone from going any further. A little blood oozed from the wound, which had been made under the strictest antiseptic conditions, and similarly dressed. The limb was put up straight in plaster of Paris. All went well until next morning, when the patient was free from pain or any trouble, the temperature standing at 99·8°. The plaster bandage was a little tight. An hour or two later the temperature stood at 105·4°, and patient was weary. At 9.30 p.m. the plaster bandage was removed as the limb was too much compressed by it, and at this time the thigh near groin was tender and swollen; the glands being specially so. Limb put upon a long splint, with cotton-wool and flannel covering; dressings not changed, all around the knee being quiet. The temperature remained above 105° the whole night, and in the morning the boy was delirious. The dressings were then removed under antiseptic spray for examination of the joint, which was found perfectly at rest; no trace of inflammation about it. Consolidation of the base of the right lung, however, was now discovered. The boy became worse and worse, and died at 2.30, exactly forty-eight hours after operation. Post-mortem examination showed the cause of death to be septic pneumonia, with hæmorrhagic infarcts in the body of the inferior lobe of the right lung. The joint was found almost quite free of inflammation; the wound showed slight suppuration. But in the body of several muscles on the anterior aspect of the thigh, diffused pus was found with ecchymoses, but not connected in any way with the joint. None of these were found in the muscles of the

leg; all the veins of thigh quite normal. The cut in the bone was planted as accurately as it could have been. It left the crucial ligaments entire, lying inside of them; the ligamentum mucosum was also intact. The chief points of interest in the case lay in the rapid supervention of septicæmia, in spite of the most rigid antiseptic precautions both before and after the operation.

Subcutaneous extra-Articular Osteotomy of the Condyles in Knock and Bow Knees.

Mr. Reeves made some observations on the subject of osteotomy generally, and stated that he had had occasion to perform nearly a hundred osteotomies. He related the particulars of four severe cases from a total of twenty-three operations, of which twenty-one were for genu valgum and two for varum. He also drew attention to a case of Mr. Parker's, which was present, and which had been operated on by his method, in which the deformity was quite corrected, and in which the child was able to walk one week after the second knee had been operated on. Photographs of several case, both before and after operation, were shown. He summed up the results of his own experience and that of other surgeons by stating, "That in those cases of knock or bow knee in which osteotomy is called for, the plan of simply loosening, and not separating, the offending condyle is preferable to Ogston's operation or division of the shafts of the femur, tibia, and fibula: first, because of its safety; secondly, it is much more quickly done; thirdly, passive motion can be begun much earlier; fourthly, the condyle being simply loosened, there is no fear of non-union and necrosis; fifthly, there is no need to interfere with the large joint in the body, and even if this be accidentally done, it being a much more subcutaneous injury than that inflicted in Ogston's operation, there is very much less likelihood of joint mischief leading to excision, amputation, or death; sixthly, less damage is done to the epiphysis; seventhly, the cases are much more rapidly cured. He thought that Dr. Ogston's operation was good and justifiable, until a simpler and safer method was applied, and that subcutaneous extra-articular osteotomy supplied these desiderata.

Mr. Clement Lucas said that, previous to hearing Mr. Barker's paper, he had considered Ogston's operation one of the safest. In all cases he had seen it do well, and he had even operated on both condyles on the same day. In one case he had some difficulty in straightening the limb, but he used force, which was followed by no bad effect. He could hardly suppose that the joint would remain unopened on Reeves' method.

Mr. Howse had operated in Ogston's way some seven times, and had never thought it risky, but there must be some chance of mischief if the joint was opened—pulpy mischief might follow. He had, for instance, a case of injury to the elbow-joint where pulpefaction followed. Hence he held that if the deformity was not extreme it should not be attacked thus. There were a certain number of cases where splints would not do. Operation, too, below the joint was of no use; he had been compelled to divide above the joint after, but he thought Ogston's plan better than this. He also preferred the saw to the chisel, for two cuts with the chisel at different points might cause death of the intervening portion of bone.

Mr. Parker showed two cases of genu valgum, treated by different methods. The one was a child, aged four. It could hardly walk before the operation. He divided the femur with a chisel, the two femurs, just above the condyles, with an interval of one week between the operations. There was no constitutional disturbance and no suppuration. At the end of three weeks the child could raise the limbs from the bed. The internal malleoli could now be made to touch without any difficulty, whereas before the operation there was an interval of about eleven or twelve inches. The boy could walk about, but owing to his ligaments being very loose, some deformity still persisted. The other case was also a well-marked example of genu valgum, which had undergone "orthopædic" treatment in one or two hospitals without getting much benefit. In this case the internal condyles had been partially separated with a chisel, in the manner suggested by Mr. Reeves. Mr. Parker thought that his case demonstrated very well that the operation was sometimes—to say the least—extra-articular, for the boy could and did semiflex the joint on the eighth day after the operation, and in course of the next week was able to touch the tuber ischii with his heel. At the end of the second week from the first operation all appliances were discontinued; and in the course of the third week the boy was up and dressed, and could walk about. He had done five cases by the former method (femorotomy) and eight operations on three children by the second method (Mr. Reeves'). Making all allowance for want of skill and experience in the earlier cases, not only as regarded the operation, but the after-treatment also, he regarded the condyle operation as the better one; and of the condyle operations (Ogston's and Reeves') he was in favour of the latter. The cases in which the femur was cut through required a longer time for recovery, and, moreover, although the deformity could be overcome, its cause still continued. He thought, too, this operation was a more serious one than partial separation of the condyle, even though the joint might occasionally be entered. If further experience should show that the joint, as a rule, escaped, then no doubt it was the better and more appropriate operation. The earlier cases were done without any so-called antiseptic precautions; but latterly he had adopted the spray, in order to give the patients any dditional advantages which asepticism might afford.

Mr. Barwell said he differed from most of the speakers as to the benefits to be obtained from section of the femur and of the tibia and fibula. He did not take the operations separately, but conjointly; it took longer time, but the results were better. Section of the condyle did not remove the cause of the deformity, for the inner condyle lay lower than the other. He could show a patient where the results on this plan were as good as could be. Osteotomy with the chisel and on the antiseptic method was perfectly safe. Ogston's operation was no doubt good, but in a certain number of the cases the result would be unfavourable. He could not understand Mr. Howse's objection to the chisel properly used.

Mr. W. Adams thought that any subcutaneous operation must claim precedence over an open wound. He had a case now in hospital where Ogston's plan did perfectly well. On Reeves' plan the joint must be opened. He never used antiseptic precautions in subcutaneous operations.

Mr. Golding Bird recorded one satisfactory case. He thought Reeves' operation must be intra-articular. He would prefer a clean cut with a saw to a tear of the articular surfaces.

The President said there were many varieties of this deformity. He would not like to use Ogston's plan among young children, but only after middle life. Five cases of his own had all done well. By the way, Mr. Bigelow had remarked to him that genu valgum was rare in the United States.

Dr. Nunn said that in the South deformities of any kind were rare among the whites, all the labour most likely to induce them being carried on by blacks; but among these also deformities were rare.

Mr. Barker and Mr. Reeves having replied, the meeting adjourned—Mr. Reeves maintaining that whether his plan opened the joint or not, in certain of the cases the patient was well in three weeks.

Suicide and the Press.—At a congress of Italian medical practitioners recently held at Pisa, there came under discussion the psychologically interesting subject, What influence is exerted on the number of suicides by the publicity given in the press to their occurrence? The congress came to a resolution which solved this thorny question in a very summary way. After paying the press the compliment that it, in general, had rendered distinguished service in promoting the moral progress of the nation, the congress declared, on the other hand, that it had contributed to an increase of the number of suicides, the detailed accounts of these which it furnished acting as a moral contagion. It therefore expressed its wish that the political journals would for the future omit accounts of suicide.—*Allg. Wien. Med. Zeit.*, Oct. 22.

Elastic Adhesive Plaster.—Dr. Morgan, in a notice to the *Boston Journal* (September 19), states that he had been for some time in search for an elastic covering, which, attached to the skin, would yield to its movements without causing a sensation of stiffness or an uncomfortable wrinkling. At last he spread some adhesive plaster on a sheet of indiarubber, and found the material he was in search of. After using it as a simple covering in cases of psoriasis, intertrigo, etc., he employed it for incised wounds, abscesses, etc., and found it invaluable. Placing one end of a strip upon one lip of the wound, and then stretching the rubber and fastening the other end to the opposite side, he procures perfect apposition, the elastic substance keeping the parts together. When not able to obtain sheets of the rubber, he gives a coat of plaster to broad letter-bands.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—The following is a list of the candidates who have passed the Second M.B. Examination:

First Division.—William Henry Blake, University College; Robert Edmund Carrington, Guy's Hospital; Henry Davy, Guy's Hospital; John Topham Gadsby, University College; Walter Baugh Hadden, Liverpool School of Medicine and St. Thomas's Hospital; George Courtenay Henderson, University College; John Francis Nicholson, St. Thomas's Hospital; Sidney Philip Phillips, University College; Arthur Bancks Prowse, St. Mary's Hospital; Thomas Steele Sheldon, Guy's Hospital; Kenneth Rawlings Smith, University College; John Caldwell Uhthoff, Guy's Hospital; Neville Scott Whitney, University College; Frederick Willcocks, King's College; Joseph Wiglesworth, Liverpool Royal Infirmary.

Second Division.—Frederick Lucas Benham, University College; Charles Walter Evans, University College; John Samuel Joule, University College and St. Bartholomew's Hospital; Montague Lubbock, Guy's Hospital; Charles Arthur Mercier, London Hospital; Richard Shalders Miller, University College; Edmund Howard Paddison, Guy's Hospital; Arthur Quarry Silcock, University College; Benjamin Arthur Whitelegge, B.Sc., University College; Arthur Thomas Wilkinson, B.A., B.Sc., Owens College.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the ordinary monthly examinations for the licences of the College, held on Monday, Tuesday, Wednesday, and Thursday, November 4, 5, 6, and 7, the following candidates were successful:—

For the licence to practise Medicine—

Beale, Thomas William.
Bell, Thomas Vesey.
Corr, Richard James.
Fennell, David.
Mackie, William James.
Reeves, Francis Casement.
Twiss, George Edward.

For the licence to practise Midwifery—

Mackie, William James.
Magner, Edward.
Reeves, Francis Casement.
Twiss, George Edward.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 11th inst., viz.:—

Baber, Henry Aitkens, L.S.A., Exeter, student of Guy's Hospital.
Bull, Edwin George, M.B. Edin., Edinburgh, of the Edinburgh School.
Collington, Arthur Gabourel, L.R.C.P. Edin., Falmouth-road, of Guy's Hospital.
Dallaway, Joseph William Dennis, L.R.C.P. Edin., Torquay, of St. George's Hospital.
Davies, John, L.S.A., Chester, of King's College Hospital.
Dixon, William Edward, L.R.C.P. Edin. and L.S.A., Canonbury, of the Middlesex Hospital.
Farrer, George Albert, L.S.A., Brighouse, Yorks, of St. Bartholomew's Hospital.
Garstang, Thomas Walter Harropp, L.S.A., Forest-hill, of St. Bartholomew's Hospital.
Granger, Edgar Bridden, L.R.C.P. Lond., Nottingham, of University College Hospital.
Illingworth, Charles Rumney, M.B. Edin., Mildmay-park, Islington, of the Edinburgh School.
James, Philip, L.R.C.P. Edin., Pontypridd, of Guy's Hospital.
Leahy, Albert William Denis, L.S.A., Oxford-street, of the Charing-cross Hospital.
McCrea, Frederick, L.R.C.P. Edin., Guernsey, of Guy's Hospital.
Sarkies, Sarkies Carapiet, L.R.C.P. Edin., Calcutta, of St. Thomas's Hospital.
Sellers, Richard Burdett, L.R.C.P. Edin., Rochdale, of the Manchester School.
Wadham, Frederick, Darlington, of St. George's Hospital.
Warrillan, Edward Sadler, L.S.A., Headcorn, of St. Bartholomew's Hospital.
White, Edward William Wood, M.B. Dub., Killiney Island, of the Dublin School.

Four candidates passed in Surgery, and when qualified in Medicine will be admitted Members of the College; and six having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for six months.

The following gentlemen were admitted on the 12th inst.:

Batson, William Lascelles, Guilford-street, W., student of St. Bartholomew's Hospital.
Buck, John Stirling, Streatham, of University College Hospital.
Cox, Robert Hippisley, Leicester, of the Bath and St. George's Hospitals.
Day, Walter Henry Horatio, Croydon, of Charing-cross Hospital.
Garrett, Henry Edward, Manchester, of Charing-cross Hospital.
Hall, Robert Dunsterville Grant, Clapham, of St. Thomas's Hospital.
Hartley, Robert Nightingale, Brixton-road, of the Leeds School.
Jolliffe, Walter John, Isle of Wight, of St. Bartholomew's Hospital.
Lory, William Manley, L.S.A., Exeter, of University College Hospital.
Mitchell, Charles Pitfield, Manchester, of the Manchester School.
Oldroyd, Joseph Hollinshead, Edward-street, N.W., of University College Hospital.
Phillipps, William Alfred, Sydenham, of Guy's Hospital.
Rowbotham, Henry Claude, Woolwich, of Charing-cross Hospital.
Storry, Frederick William, Howden, Yorks, student of the Leeds School.
Winskell, William Edwin, M.B. Toronto, Kelvin, Ontario, of the Toronto School.
Woods, John Francis, L.S.A., Leyton, Essex, of St. Bartholomew's Hospital.

Three gentlemen were approved in Surgery, and when qualified in Medicine will be admitted Members of the College; and eight candidates having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for six months.

The following gentlemen were admitted on the 13th inst.:

Bennett, Henry James Lee, L.R.C.P. Edin., Plymouth, student of St. George's Hospital.
Bradford, Arthur Somers, Chippenham, of St. Bartholomew's Hospital.
Brunt, John, L.R.C.P. Edin., Exeter, of St. Bartholomew's Hospital
Bury, Abraham Thomas, L.R.C.P. Edin., Sheen, Staffordshire, of St. Thomas's Hospital.
Collett, Robert William, L.R.C.P. Edin., Shepherd's-bush, of St. George's Hospital.
Howse, Francis Robert, Argyle-square, of University College Hospital.
Lunn, John Reuben, Hull, of St. Thomas's Hospital.
Norman, William Henry, Chiswick, of King's College Hospital.
Robinson, Stapylton Chapman Bates, Bruges, of St. Thomas's Hospital.
Womersley, Joshua King, L.S.A., Norwich, of Guy's Hospital.
Vinrace, John Hinks, Birmingham, of the Birmingham School.

Out of the fifty-six candidates examined, nine were approved in Surgery, and when qualified in Medicine will be admitted Members of the College; and twenty-two having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for six months. With this meeting the examinations for the Membership of the College for the present year were brought to a close. The half-yearly examination for the Fellowship will take place next week.

APOTHECARIES' HALL, LONDON.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, November 7:—

Garstang, Thomas Walter Harropp, Forest-hill, S.E.
Herschell, George Arieh, Basset-road, Notting-hill.
Jones, George Henry West, Eckington, Chesterfield.
Lathbury, Charles John, Duffield-road, Derby.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Atkey, William Thomas, University College.
Griffin, Henry Frederick, University College.
Parry, Robert, Guy's Hospital.
Waghorn, James, Charing-cross Hospital.

NAVAL, MILITARY, &c., APPOINTMENTS.

ADMIRALTY.—The undermentioned Staff-Surgeons have been promoted to the rank of Fleet Surgeon in her Majesty's Fleet—Richard Charles Pasley Lawrenson, Thomas George Wilson, Robert Humphrys.

BIRTHS.

CROSS.—On November 12, at 7, Stanhope-terrace, Regent's-park, the wife of John Cross, B.A., M.D. Cantab., of a daughter.

GRIBBON.—On October 6, at Mussoorie, N.W.P. India, the wife of Surgeon-Major G. C. Gribbon, M.B. Dub., A.M.D., and 25th Regiment, of a son.

HARRIS.—On November 11, at 23, Upper Berkeley-street, Portman-square, W., the wife of V. D. Harris, M.D. Lond., M.R.C.P., of a daughter.

HOOPER.—On November 2, at Newhall, Burton-on-Trent, the wife of Alfred Hooper, M.R.C.S., of a son.

LARKIN.—On November 11, at 44, Trinity-square, S.E., the wife of F. G. Larkin, M.R.C.S., of a son.

WORLEY.—On November 9, at Brooke Lodge, De Beauvoir-road, N., the wife of W. C. Worley, L.R.C.P., M.R.C.S., of a son.

MARRIAGES.

ARNAUD—HOBKIRK.—On October 17, at Charlottetown, Francis Henry Arnaud, of the Merchants' Bank of Halifax, to Rosa Marion, daughter of W. H. Hobkirk, M.D., F.R.C.S. Eng., of Charlottetown.

BUNNY—GREENE.—On November 9, at St. Pancras Church, London, Joseph Brice, only son of Joseph Bunny, M.D., of Newbury, Berks, to Sarah Lely Elizabeth Hamilton, only child of the late Rev. William Henry Greene, Rector of Steppingley, Beds.

DOW—EDMESTON.—On November 7, at St. Leonards-on-Sea, Henry Boothby Dow, M.D., of North House, Pembridge-square, W., to Lucy Hannah, daughter of James Edmeston, of Inverness-terrace, Hyde-park.

NIXON—LESLIE.—On November 6, at Alton, the Rev. H. E. Nixon, second son of William Nixon, late of Liverpool, to Maude Allardyce, youngest daughter of Louis Leslie, M.D., of Amery House, Alton.

ROBERTSON—IRVINE.—On November 6, at the parish church, Church town, Lancashire, Robert Robertson, M.D., Edin., of 11, Oxford-street, Liverpool, to Isabella Pearson, elder daughter of the late Dr. James Pearson Irvine, of Galgate, Lancaster.

RYAN—MONTEFIORE.—On November 12, at Kensington, Michael Ryan, M.D., F.R.C.S., of 87, Ladbroke-grove, Notting-hill, to Anu, eldest daughter of the late John Montefiore, of the island of Barbadoes, W.I.

DEATHS.

ARNOTT, MARY CAROLINE BERTHA, wife of James Arnott, A.M., M.D., at 8, St. Stephen's-crescent, Westbourne-park, on November 9, aged 74.

FLOWERS, WILLIAM FIELD, M.B. Oxon., only surviving son of the late Rev. Field Flowers, Vicar of Tealby and Legsby, at Southport, on November 6, aged 35.

KING, JESSIE LOUISA, younger daughter of Henry Staveley King, M.D., at 56, Redcliffe-road, South Kensington, on November 4, aged 21.

MACKINTOSH, JOHN JAMES, M.D., at Caistor, North Lincolnshire, on November 8, aged 58.

POWELL, WILLIAM MARK, M.R.C.S., L.R.C.P., etc., at 333, Wandsworth-road, on November 9, aged 63.

VOSE, JAMES RICHARD WHITE, M.D., F.R.C.P. Lond., J.P., at 5, Gambier-terrace, Liverpool, on November 7.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BRISTOL GENERAL HOSPITAL.—Physician's Assistant. Candidates must produce proof of a registered medical qualification, also satisfactory testimonials of ability and good moral conduct. Applications to the Secretary on or before December 7.

MANCHESTER ROYAL INFIRMARY.—Pathological Registrar. Candidates must be duly registered. Application to W. L. Sander, Secretary, on or before November 18.

METROPOLITAN FREE HOSPITAL, 81, COMMERCIAL-STREET, SPITALFIELDS.—Assistant House-Surgeon. Candidates must be qualified. Applications to be addressed to the Committee.

MUTFORD AND LOTHINGLAND INCORPORATION.—Medical Officer. Candidates must be registered under the Medical Act, 1858, and must be qualified by law to practise both medicine and surgery in England and Wales according to the Order of the Local Government Board. Testimonials to T. S. Allerton, Clerk, Lowestoft, on or before November 25.

ROYAL INFIRMARY FOR CHILDREN AND WOMEN, WATERLOO BRIDGE-ROAD.—Physician. Applications, with testimonials, to the Treasurer, not later than November 18.

YORK COUNTY HOSPITAL.—House-Surgeon. Candidates must be unmarried and reside in the Hospital. Testimonials to Robert Holtby, Secretary, 5, New-street, York, on or before November 23.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population in computed according to the census of 1871.

RESIGNATIONS.

Amersham Union.—Mr. H. French has resigned the Beaconsfield District; area 5340; population 1840; salary £43 per annum.

Bedwellty Union.—Mr. L. Redwood has resigned the Rhymney District; population 9382; salary £15 per annum.

St. George's Union.—The A District is vacant; salary £105 per annum.

APPOINTMENTS.

St. Austell Union.—Horace T. Newman, L.R.C.S. Ire., M.D. Dub., to the Third District.

Coventry Union.—Thomas Millerchip, L.R.C.P. Edin., L.F.P.&S. Glasg., to the Second District.

Doncaster Union.—James A. Cameron, M.D. and C.M. Univ. Edin., to the Bawtry District.

Dorking Union.—Thomas F. Hopcroft, M.R.C.S. Eng., L.R.C.P. Edin., to the Middle District and the Workhouse.

Newtown and Llanidloes Union.—Charles E. Monro, M.R.C.S., L.R.C.P. Edin., to the Llanllwchaiarn District.

WOMEN-PHARMACIENS.—In 1865, the daughter of a deceased *pharmacien* in Holland applied for authority to enter as a student of pharmacy in order to qualify herself to be of use in the *pharmacie* of her late father, which was carried on by a diplomated agent. Her demand was refused on the ground that the law regulating pharmacy confined its provisions to *pharmaciens* entitled to the pronoun *il*, and made no allusion to the *elle*. In 1866, however, a new law allowed women to present themselves for examination as *pharmaciens;* and in 1868 the lady in question obtained her regular diploma. She has had numerous imitators, for scarcely have eleven years passed when 100 ladies have entered as students in pharmacy, and in course of time have undergone the examinations necessary to enable them to hold a shop. Their examinations have been of a serious character, they having to show an acquaintance with the Dutch language, arithmetic, Latin, the translation of written prescriptions, and of the *Pharmacopœia Neerlandica*, a theoretical knowledge of medicinal substances, recognition of simples by their external characters, the origin of articles of the materia medica, with their scientific denominations and synonyms, and of dispensing prescriptions. Among equal numbers of candidates, twice the number of women candidates have succeeded, compared to men. Several of these *pharmacienes* are daughters of country doctors, or of *pharmaciens;* they are much sought for in the *pharmacies* of the large towns, especially Amsterdam, and are remarkable for their habits of order, cleanliness, and exactitude, rarely met with in the same degree among men.—*Journal de Pharmacie d'Anvers*, and *Union Méd.*, November 7.

PARIS MEDICAL STUDENTS, SESSION 1878-79.—The number of medical students of the Paris Faculty of Medicine during the scolar year 1877-78 was 5035. Of these, 627 either received their diplomas, died, or repaired to other faculties, leaving for the commencement of the scolar year 1878-79 the number of 4408 students. These are classified as follows:—1. Students of the first year, who have taken from one to four inscriptions, 676; 2. Those who have taken from four to eight inscriptions, 558; 3. Those who have taken from eight to twelve inscriptions, 530; 4. Those who have taken from twelve to sixteen inscriptions, 576; students who have not yet undergone any examination for the diploma, 595; students who have undergone one or more examinations for the diploma, 1493. This number of 4408 will be increased by the students now entering for the present scolar year, and which, according to the mean of former years, will amount to 730. —*Progrès Medical*, November 9.

KUMYS AS A SUMMER DRINK.—The sale of kumys in Chicago—for several years quite an industry—during this summer has been very large. It has been used extensively by the sick, often prescribed by practitioners as a beverage or medicine, and often procured by the patients for its pleasantness as a liquid food and drink. But it is not unlikely that the major part of that sold has been used by the well as a summer drink. It has been sold by the glass by the manufacturers (generally druggists), and nearly every drug-store has displayed its placard, "Kumys on draught." With a class, kumys-drinking is quite fashionable, taking the place of liquor-drinking. Many attempts have been made to make it domestically, but so far the only really fine samples have come from the hands of the manufacturers. It would be used still more extensively if its cost were less. Thirty or forty cents a quart is a selling price which puts it out of the reach of the masses for a regular diet.—*Boston Journal*, October 3.

ROYAL COLLEGE OF SURGEONS.—The following were the questions on Surgical Anatomy and the Principles and Practice of Surgery submitted to the candidates at the written examination on the 8th inst., when they were required to answer at least four (including one of the first two) out of the six questions, viz.:—1. Describe the operation for removal of one-half of the lower jaw, mentioning, in order, the structures divided. 2. Give the relative anatomy of the ulnar artery from its origin to the annular ligament of the wrist. Describe the operation of tying it in its upper third. 3. What are the usual displacements in fracture of the upper third of the femur? Describe their cause, and the best mode of treatment. 4. Give the pathology, symptoms, and treatment of benign fungus of the testicle. 5. What are the symptoms of phlyctenular ophthalmia? Mention the class of persons liable to it, and describe its treatment. 6. Describe the mode of formation of fistula in ano, and its treatment. The following were the questions on the Principles and Practice of Medicine submitted to those candidates on the following day who were not in possession of a medical licence, or had not passed any examination in medicine, viz.:—1. What are the causes, symptoms, consequences, and treatment of hæmorrhage from the stomach and bowels? Surgical injuries and piles to be excluded. 2. Define the terms tubular or bronchial breathing, bronchophony, pectoriloquy, ægophony, metallic tinkling, splashing, and *bruit de pot-fêlé*. Point out the circumstances under which these several phenomena occur; explain their modes of production; and specify their diagnostic indications. 3. Enumerate the officinal alkaloids, and their several preparations. State whence they are derived, what are their physiological and medicinal properties, and what the doses of the pharmacopœial preparations. Write in full a prescription for a mixture, with suitable directions, for a patient suffering from scarlatinal dropsy.

SPONTANEOUS FRACTURE OF THE ALVEOLAR PROCESS OF THE LOWER JAW.—Dr. Catel, of Saint Dizier, relates (*Union Méd.*, October 12), the case of a lady who, having been subject for several years to hysteric paroxysms, was seized on the night of July 3 with violent spasms of the lower jaw, producing violent and unconscious grinding of the teeth, which were described as fearful. The spasm recurred several times during the night, and in the morning the front teeth of the lower jaw were found to have become very movable. By the 30th the four incisors had fallen out, the gums were

very swollen and painful, and bleeding; pus issued from them, and the left canine and first small molar seemed about to fall. And, in fact, a few days after, the patient lost this last, and next day she removed the canine with a notable portion of the alveolus completely deprived of its periosteum. This, which had supported the incisors, canine, and first molar, measured about thirty-five millimetres in length and fifteen in height. No external violence whatever had been sustained by the jaw.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Tea and Coffee.—In the "Statistical Abstract for the United Kingdom, 1878," are given, amidst its variety of details, some interesting facts with respect to the consumption, in the United Kingdom, of tea and coffee. It appears that tea, as a beverage, increases steadily, while the demand for coffee remains stationary. In 1863 the imported quantity of tea retained for home consumption was 758,929 cwts., while in 1877 it was nearly double, the exact quantity being 1,340,311 cwts. On the other hand, coffee decreased during the same period from 292,528 cwts. to 288,268 cwts.—a large diminution when the increase of population is considered; moreover, it is shown that it does not arise from a larger admixture of chicory, for the consumption of that article remained almost as unprogressive as that of coffee.

Street Milk Buyers: a Caution.—The metropolitan magistrates had before them, last week, several prosecutions for selling adulterated milk. The fines imposed were respectively £5 and £10 each, with costs. In the case of a Camberwell milk-dealer, Mr. Marsden, the Vestry Clerk of that parish, stated that, notwithstanding all the exertions made, there was a good deal of adulteration of milk. When purchased at the place of business the milk was generally good, but when bought in the street it was adulterated.

Free Gas Cooking-Stoves, Leeds.—In a Bill promoted by the Leeds Town Council, in respect to acquiring the manorial and common rights respectively of Hunslet Moor and Woodhouse Ridge, the Corporation include also obtaining power to provide gas-stoves for cooking, with a view to let them out free of charge to all ratepayers who make application for them.

Bakehouses New Regulations.—Some new and stringent provisions are made by the Act of last session, 40 Vict., cap. 16, in addition to those contained in the Bakehouses Regulation Act, in relation to all bakehouses, except in places with a less population than 5000 inhabitants at the last census, the washing of the interiors where painted, and their lime-washing where unpainted, being required to be renewed every six months. A penalty of £1 for the first, and £5 for every subsequent, offence in the occupation of sleeping-places near bakehouses, if such sleeping-places are on the same level with the bakehouses, and form part of the same building, unless they are effectually separated from the bakehouses by a partition extending from the floor to the ceiling, and unless there be an external glazed window of at least nine superficial feet in area, of which at least four feet and a half are made open to ventilation.

Interested in Indian Statistics.—The population, in 1873, of the North-Western provinces was nearly 3,100,000, the average density to the square mile being 378. Excluding the wild forest tracts on the north, south, and south-west (where population hardly exceeds fifty to the square mile), the average density exceeds 500. That of the Benares district is nearly 800.

The Dustbin Nuisance.—Dr. Rogers, the Medical Officer of Health for the Limehouse District Board of Works, has, in his report, drawn the attention of the Board to the condition of the wharves within the district, used for the reception and loading into barges of street-sweepings and house-refuse. The report describes the character of the refuse, and refers to the turning over of the heterogeneous matter in the course of its conveyance to the barges in the contractor's yard being carried on in the neighbourhood of dwelling-houses, and consequently a danger to the public health. He condemns the present system of dustbins entirely, and urges a daily removal of the refuse of dwellings, by means of a system of covered receptacles, which could be placed at the doors of houses, and their contents emptied into a covered cart. The serious evils connected with the present plan would thus, he contends, be considerably reduced. The dustbin nuisance is a crying one, and some effectual means for improving the present arrangements for its disposal should, no doubt, be adopted.

An Irish Centenarian Magistrate.—Mr. Henry Baldwin Foott, of Carrigamora Castle, Co. Cork, has just died in his 101st year. He was born on September 11, 1778, two years after the declaration of American independence. His hundredth birthday was celebrated with great rejoicing last September, and a congratulatory address was presented to him by his brother magistrates, who also recorded in the books the fact of his having attained his hundredth year.

Antiquarian.—The following is a copy of the appointment of Dr. Solomon Bolger, Physician-in-Ordinary to Charles II.:—"These are to certifie that Dr. Solomon Bolger is sworn and admitted in the place and quality of Physician-in-Ordinary to his Majestie. By virtue of which place he is to enjoy all rights and priviledges thereto belonging. His person is not to be arrested or deteyned without my leave first had and obteyned; but be allways to be in readinesse to attend his Majestie's service according to his oath and duty. And all persons are required to forbear the infringing of the priviledges of his Majestie's household, as they will answere to the contrary at their perill.—Given under my hand and seale this 4 day of June, 1672, in the 24 year of his Majestie's reign.—St. Alban, Chamberlain of his Majestie's Household."

The City of Glasgow Bank Failure.—A medical practitioner, resident in the West-end of Glasgow, reports that since the stoppage of this bank two of his patients who are shareholders have lost their reason and have been sent to a lunatic asylum, while several others have been completely prostrated by disease induced by the effects of the calamity preying on their minds.

The Impurity of the Thames.—*A propos* of the present discussion on the pollution of the Thames, a memorandum lately published by Mr. Netten Radcliffe, one of the medical inspectors of the Local Government Board, on an outbreak of typhoid fever which occurred three years ago in the reformatory school-ship *Cornwall*, moored in the Thames off Purfleet, comes in opportunely, and may be read with interest and advantage. Mr. Radcliffe says—"The *Cornwall* is moored close to the shore, seven miles below the metropolitan sewage outfall at Barking, and five miles and a half below the sewage outfall at Crossness. On August 18, 1877, in company with Dr. Harry Leach, I witnessed from the river the flow of sewage into the stream. The day was peculiarly favourable for observation. The surface of the water was hardly disturbed, and then only at intervals by a gentle current of air from west-south-west, so that it was practicable to follow the movement of the sewage at the surface with the greatest precision. It was about two hours of ebb-tide when we reached the Barking outfall. Sewage was flowing thence in a broad black offensive stream, carrying much floating nastiness on the surface. The sewage hugged the near bank of the river until it reached the mouth of Barking Creek, when it was deflected towards the centre of the stream, spreading out fan-like at the same time. The sewage then flowed along mid-stream, the current rapidly breaking up and becoming dispersed; and a mile below the outfall, opposite the powder-magazine just above Crossness Point, it was entirely lost to sight, not even a trace of the floating matter being discoverable, although several casts backwards and forwards across the river at this part of its course were made in search of it. On approaching the Crossness outfall, three-quarters of a mile below the point where all trace of the sewage from the northern outfall was lost to the sight, the odour of sewage met the nostrils in advance, and the southern sewage stream carried upwards in part by an eddy was entered a little above the outfall. The sewage had the same aspect as that from the northern outfall. It hugged the southern bank in a broad, well-defined current for three-quarters of a mile, then opposite the Belvidere Guano Works it broke up into several branches and spread out towards mid-river; and a quarter of a mile below, opposite the powder-magazine there, all traces of sewage were lost to sight." The inspector added that "there is no evidence to show that the position of the *Cornwall* off Purfleet is more unhealthy than the position of any of the other school-ships on the Thames."

Open Spaces.—A park is about to be presented by the Duke of Sutherland to the inhabitants of Longton. It is situated near Trentham, and is known as Cockrade Wood—a great desideratum, as it will be the only public park in the Staffordshire Potteries.

Sewage Purification.—Some time ago it was found that sewage could be purified by pouring into it a small quantity of muriatic acid. The animalcules were all killed, and lay in a darkened mass at the bottom of the vessel, while "the supernatant water was changed from a deep green colour to be perfectly clear." Mr. Watson, in a communication to the Newcastle-on-Tyne Chemical Society, attributes the comparative absence of foulness in the Tyne to the effect of the weak hydrochloric acid which flows into the stream from the factories on the banks. It may also be remarked that the Tyne fisheries have been increasing in value at an amazing rate, "and that the salmon bred in the upper reaches of the river go back thither in the breeding season." These are facts which will have to be further verified, but that they have an important bearing on the subject of pollution of rivers and utilisation of sewage cannot be doubted.

Summer Catarrh.—In America a special association has been formed for the investigation of this affection. Though not recognised as a distinct disease prior to 1819, it seems to have become prevalent in England, and still more in the northern part of the United States.

G. A. W.—We believe Dr. P. H. Green has long been residing in France.

Dr. Harvey.—The College of Surgeons subscribed one hundred guineas to the Harvey Statue Fund.

Mr. Williams.—The Calendar of the College will give you the desired information. On reference to it we find that as much as £1380 6s. was paid in taxes, rates, and stamps (exclusive of postage) during the past collegiate year.

COMMUNICATIONS have been received from—
Mr. J. A. Bloxam, London; Mr. John Chatto, London; Dr. J. M. Bruce, London; Mr. W. Spencer Watson, London; Mr. B. R. Wheatley, London; Dr. Octavius Sturges, London; Dr. Matthews Duncan, London; Mr. D. Colquhoun, London; Dr. W. Allen Sturge, London; Dr. S. D. Clippingdale, London; Mr. T. M. Stone, London; Mr. George Brown, London; Dr. Douglas Powell, London; Messrs. Lindsay and Blakiston, Philadelphia; The Secretary of the Aërated Bread Company, London; Mr. W. A. Massingham, London; The Honorary Secretary of the Society of Medical Officers of Health, London; Town Clerk, Borough of Ryde; Dr. Carter, Liverpool; The Registrar of Apothecaries' Hall, London; Mr. E. L. Hussey, Oxford; Mr. R. J. Godlee, London; Dr. W. MacNeill Whistler, London; Dr. Herbert Tibbits, London; The Registrar-General, Edinburgh; Mr. S. Murphy, London; Mr. R. W. Parker, London; Mr. W. Fry, Battersea, S.W.; The Honorary Secretary of the Harveian Society; Mr. Ed. Bellamy, London; The Honorary Secretary of the Association of Surgeons Practising Dental Surgery; Dr. Edward Sparks, Mentone; The Secretary of the Society for the Encouragement of Arts, etc., London; Dr. J. W. Moore, Dublin; Dr. G. Herman, London; Mr. M. Becher, London; The Secretary of the Clinical Society, London; Dr. L. Druitt, Edinburgh; Mr. A. Morton, London; Messrs. F. Walton and Co., London; The Registrar of the University of London.

BOOKS AND PAMPHLETS RECEIVED—
Rickman John Godlee, M.S., F.R.C.S., An Atlas of Human Anatomy, part vii.—G. F. Bodington, M.D., Restraint in the Treatment of Insanity—Transactions of the Clinical Society of London, vol. xi.

PERIODICALS AND NEWSPAPERS RECEIVED—
Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Cincinnati Lancet and Clinic - Gazette Hebdomadaire—Practitioner—Anti-Vivisectionist - Archives of Dermatology—Boston Journal of Chemistry—Colonies and India—Paris Exhibition—Students' Journal and Hospital Gazette—Boston Journal of Chemistry—Night and Day—Canadian Journal of Medical Science.

APPOINTMENTS FOR THE WEEK.

November 16. *Saturday (this day).*
Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

18. *Monday.*
Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.
Medical Society of London, 8½ p.m. Mr. Owen, "On the Appreciation of Rigid Jackets in the Treatment of Antero-posterior Curvature of the Spine." Dr. Douglas Powell will exhibit a Schema of the Chest, designed to show the Mechanical Conditions present in Health and in some Diseases.

19. *Tuesday.*
Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.
Pathological Society, 8½ p.m. Mr. Gay—Gangrene of the Penis from Thrombosis. Dr. Lediard—1. Aortic Aneurism Rupturing Externally; 2. Abdominal Aneurism causing Death by Uræmia. Dr. Irvine—Dermoid Cyst of the Brain. Dr. Sam West—1. Specimen of an Unusual Form of Pneumonia; 2. Primary Cancer of Supra-renal Capsule, with Secondary Growth in the Lung. Dr. Goodhart—Lung containing Gummata and Tubercle. Dr. Pye-Smith—Specimen of the Disease of the Brain lately described as "Piedra." Dr. Alex. Morrison—Hæmorrhage into the Pons Varolii. Dr. Braidwood—Specimens from a Case of Unilateral Cancer.

20. *Wednesday.*
Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 1½ p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.
Association of Surgeons Practising Dental Surgery, 8½ p.m. Mr. Richard Davy. "Three Clinical Cases illustrating Disease of the Malar, Superior and Inferior Maxillary Bones."

21. *Thursday.*
Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.
Harveian Society, 8½ p.m. Dr. Farquharson, "On the Treatment of Incontinence of Urine." Dr. Morton, "On the Mortality referable to Alcohol."

22. *Friday.*
Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.
Clinical Society, 8½ p.m. Sir James Paget, "A Case in which Watery Fluid drops from a Nostril." Dr. Williams. "Bronchiectasis and Localised Empyema treated by Tapping." Dr. Whipham, "A Case of Perforation of the Appendix Cæci." Mr. Bryant, "A Case of Talipes Varus treated by the Removal of a Wedge of Bone from the Tarsus" (living specimen).
Queekett Microscopical Club, 8 p.m. Meeting.

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 9, 1878.

BIRTHS.

Births of Boys, 1339; Girls, 1268; Total, 2607.
Average of 10 corresponding years 1868-77, 2354·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	791	800	1590
Average of the ten years 1868-77	774·2	734·7	1508·9
Average corrected to increased population ...	...	...	1615
Deaths of people aged 80 and upwards ...	...	...	61

Note.—The births and deaths registered last week may be compared with the average numbers in the corresponding weeks of the ten years 1868-77 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	1	9	1	9	...	6	...	8
North ...	751729	2	1	14	3	6	...	11	...	7
Central ...	334369	...	...	3	1	2	1	6	1	1
East	639111	...	10	13	3	8	...	2	...	6
South	967692	7	6	21	3	8	2	6	1	4
Total	3254260	9	18	60	11	33	3	31	2	26

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·647 in.
Mean temperature	38·8°
Highest point of thermometer	46·2°
Lowest point of thermometer	30·7°
Mean dew-point temperature	34·2°
General direction of wind	N.N.W.
Whole amount of rain in the week	0·10 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, November 9, 1878, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1878.*	Persons to an Acre. (1878.)	Births Registered during the week ending Nov. 9.	Deaths Registered during the week ending Nov. 9.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3577304	47·5	2607	1590	46·2	30·7	38·8	3·78	0·10	0·25
Brighton	103923	44·1	42	41	47·0	33·0	38·6	3·67	0·54	1·37
Portsmouth ...	129461	28·9	98	54	...	...	...	...	...	...
Norwich	84620	11·3	44	22	47·0	34·8	40·2	4·55	1·56	3·96
Plymouth	73599	52·8	65	34	50·0	32·5	40·8	4·89	0·32	0·81
Bristol	206419	46·4	154	110	50·6	29·3	39·6	4·23	1·25	3·17
Wolverhampton ...	74240	21·9	45	31	46·2	29·3	36·9	2·72	1·15	2·92
Birmingham ...	383117	45·6	353	211	...	...	...	...	...	...
Leicester	121473	38·0	92	52	46·8	30·5	39·2	4·00	0·27	0·69
Nottingham ...	165267	16·6	116	68	48·4	29·2	38·7	3·72	0·27	0·69
Liverpool	532681	102·2	464	263	50·0	37·1	42·1	5·62	0·70	1·78
Manchester ...	360514	84·0	306	191	...	...	...	...	...	...
Salford	170251	32·9	144	87	...	...	...	...	...	...
Oldham	107366	23·0	94	77	...	...	...	...	...	...
Bradford	185088	25·6	131	93	46·0	31·8	39·2	4·00	0·68	1·73
Leeds	304948	14·1	247	141	48·0	33·0	40·5	4·72	0·53	1·35
Sheffield	289537	14·7	214	136	49·3	32·0	41·4	5·22	0·80	2·03
Hull	143139	39·4	111	76	46·0	29·0	39·1	3·95	1·53	3·89
Sunderland ...	112459	40·6	81	53	45·0	32·0	39·8	4·34	1·36	3·45
Newcastle-on-Tyne	144570	26·9	105	61	...	...	...	...	...	...
Edinburgh	222371	53·1	131	101	45·5	29·5	37·9	3·28	0·97	2·46
Glasgow	566940	94·0	359	270	48·0	31·0	40·0	4·44	0·37	0·94
Dublin	314666	31·3	200	152	51·5	27·7	41·5	5·28	0·67	1·70
Total of 23 Towns in United Kingdom	8373953	38·0	6203	3914	51·5	29·0	39·7	4·28	0·77	1·96

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·63 in. The highest reading was 30·06 in. at the beginning of the week, and the lowest 29·22 in. on Friday.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1878 by the addition of seven years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. Nottingham, Salford, and Oldham, however, form exceptions to this rule, as the estimates for these three towns have been revised with the aid of local information as to the rate of increase of inhabited houses. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

THE CAUSES AND COURSE OF DISEASES OF THE HEART,(a)

WITH SPECIAL REFERENCE TO PREVENTION AND TREATMENT.

By J. MILNER FOTHERGILL, M.D., M.R.C.P.,
Assistant-Physician to the City of London Hospital for Diseases of the Chest, Victoria-Park, and to the West London Hospital.

LECTURE III.

THE GOUTY HEART.—FATTY DEGENERATION.

(*Continued from page* 539.)

Treatment.—From what has been said about the cause and course of the gouty heart in its usually long career, it is evident that it and its outcomes are largely amenable to treatment. A great deal may be done to delay its course, and to keep off for long what cannot be remedied when once instituted—viz., heart failure. Indeed, it is well to divide the subject into two sections—the treatment of the hypertrophied stage; and the treatment of the later stage of heart failure from fatty degeneration of its muscular structure. It will be seen that the treatment of these two stages is essentially different in many respects, because it has to meet altered conditions. In the early stage we have to treat a gouty individual who is the subject of vascular complications, and the treatment must have special reference to his individual requirements. We have seen that it is the waste of his nitrogenised food which is causing the obstruction in the arterioles and raising the blood-pressure in his arteries; this, again, leads to a higher internal pressure upon the heart-walls, and this to hypertrophy of the left ventricle; and then, again, this maintains the high arterial tension, and causes atheroma of the arteries; while two distinct dangers are associated with this condition—apoplexy and angina pectoris. Both are due to the same cause, viz., sudden contraction of the arterioles, with a corresponding rise in the arterial tension; and then one of two things happens—either the hypertrophied ventricle bursts an atheromatous artery, or the heart itself becomes embarrassed, and can scarcely contract and empty itself in the face of the opposition offered by the high arterial tension. The permanent condition and the passing condition—the latter fraught with danger—are alike due to a high internal pressure within the arteries. It is obvious, then, that the treatment must be directed accordingly. The dietary should contain but a small proportion of albuminoid material—indeed, just so much as will meet the tissue requirements of the body, and no more. And that is much less than is usually imagined. This is demonstrated by the well-known history of the Abbé Cornaro, who took but twelve ounces of food (chiefly vegetable matter) and fourteen ounces of light wine daily for fifty-eight years, during which time he had excellent health, and his activity, mental and bodily, was greatly increased. Without supposing that every gouty person is an Abbé Cornaro, still it may be said of them that they usually assimilate all they eat, and therefore do not require a very liberal dietary; though they may, and commonly do, allow themselves liberal quantities of food, and that too of a generous nature. Every particle of nitrogenised material taken in excess of the tissue-needs is so much more waste matter to be dealt with—so much more added to the excrementitious matter which has to be got rid of, or which, if not got rid of, will do definite and intelligible mischief. We have abundance of evidence to show that. Not only does nitrogenised waste raise the blood-pressure in the arteries; but we know from the observations of the late Professor Parkes at Netley, that a strictly non-nitrogenised dietary notably lowers the blood-pressure. Consequently, if the gouty patient be placed upon a non-nitrogenised dietary, all these grave and serious consequences of persisting lithæmia will be delayed and kept off for years. If the patient will persist in a dietary rich in albuminoids, an impetus will be given to a long series of pathological changes as definite as they are grave. Even if albumen be present in the urine, its presence does not indicate a liberal supply of albuminoid food to meet the drain; indeed, often the reverse—the albuminuria is kept up by the food, and is benefited by a non-albuminoid dietary. But in the renal changes associated with the gouty heart, albumen is only fitfully present in the urine, usually absent for long periods together, and only present in small quantity, when present at all, until the last stage of heart failure is reached, and then it is persistently present from venous congestion, but even then not in all cases. The patient then should be put upon a dietary which should consist of farinaceous material, fruit, fat, and fish. Fish of course contains nitrogen like all other flesh, but a gouty person may eat a good meal of fish, and enjoy it, without getting any great excess of azotised material. Then he should take a good amount of vegetables of all kinds—in winter, potatoes, turnips, carrots, winter greens; in spring, spinach, but not much asparagus, for that vegetable contains a quantity of oxalates which tease a gouty system annoyingly. Consequently, rhubarb is to be avoided; and salads, which should form a portion of the daily dietary of the gouty all the year round, as far as possible, should never contain sorrel, the *Rumex acetosus*, on account of the oxalates present in it. Greens of all kinds, except those just mentioned, cooked and uncooked, should form a considerable portion of the dietary. A lobster salad is the typical food of the gouty man whose digestion is perfect. In those gouty people who are also dyspeptic, such food is inadmissible and the dietary is a limited one. But dyspepsia usually protects the system of the gouty, and in fact takes care of it. The gouty dyspeptic usually attains a good old age. In those whose hearts are dilated as well as hypertrophied, it is well to see that the food does not produce flatulence, which is not only uncomfortable, but is not without danger, as the elastic gases press upon the heart through the thin diaphragm, and impede its action, as well as to a certain extent opposing the filling of the chambers during diastole. So much for the dietary.

Next as to the medical treatment of the first stage of the gouty heart. The radical treatment must be the getting rid of the nitrogenised waste, which persists in the form of uric acid, by converting it into a soluble salt so that it may drain off in the urine. Potash, or lithia, and the acid phosphate of soda, all form uric acid into soluble salts. They may usually be given persistently without harm. Some persons are very susceptible to the depressant action of potash, which as a muscle-poison lowers the activity of the heart, and consequently cannot take it in any quantity. But most gouty persons are all the better in every way for the steady use of potash, with or without a little lithia, and can take it freely without inconvenience. It may be given with colchicum or buchu; buchu forming an excellent vehicle. Each dose should be taken about half an hour before a meal, and be washed down with a tumblerful of water. The water is a therapeutic agent of no mean value in these cases. It dilutes the potash and washes the tissues. The first dose ought to be taken on getting out of bed, so that the alkaline fluid may bathe the tissues before any food is taken. Where the heart is dilated and weak, or there is the peculiarity present of intolerance of potash from its depressant effects, it is well to add a little nux vomica or digitalis, or small doses of both, to the potash mixture. Very often a condition of palpitation, which is only aggravated by digitalis and iron, yields readily to potash and buchu. The digitalis heightens the already high arterial tension, and causes the heart to have a hammering action which is very unpleasant to the patient; the potash, by getting rid of the exciting agent, the uric acid, permits the circulation to quiet down to its normal point. The dyspepsia of gout yields also to a course of alkalies. Where there is great itching of the skin, it will be relieved by washing it twice daily with a warm and strong solution of bicarbonate of soda with a little potash. In conditions of anæmic or asthenic gout it is well to first give alkalies alone, and afterwards to combine them with iron, as the bicarbonate of potash with the ammonio-citrate of iron. Iron alone rarely suits these patients. Perfect depuration of the blood here improves its quality more efficiently than the administration of iron; and it is only after such depuration has been achieved that iron is assimilated properly and is useful.

Then we come to the use of agents which act directly upon the nerve-centres of the circulation, of which the most marked is undoubtedly digitalis. This potent remedy may be so used as to do harm as well as good. When the hyper-

(a) A course of Clinical Lectures delivered at the West London Hospital.

trophy is good, and the pulse firm and incompressible, then it is not indicated, and may be injurious. As long as perfect compensation is attained by hypertrophic growth, digitalis is not required. But it may be desirable to give it even with great hypertrophy, if, after all, that hypertrophy is insufficient for perfect compensation. The only rule that can be formulated is this one—the more the hypertrophy, the smaller the dose of digitalis should be; the more the dilatation, the larger the dose. It is more often indicated in the case of women than in men, because women less rarely have pure hypertrophy than men, and more frequently have a condition of obvious dilatation present. Whenever there is dilatation blended with hypertrophy, then digitalis is indicated; it may be added to the potash mixture with advantage. In the failure of hypertrophy, when dilatation is setting in from the walls becoming weakened by structural decay, then digitalis may be given with advantage, and will slow the downward progress even when it cannot be arrested. It should be given steadily away in moderate doses, without fear of any accumulative action. There is no more accumulation about digitalis than there is about strychnia, belladonna, mercury, or iron. If any of these agents be taken into the body in larger doses, or more quickly than it can escape out of it, an accumulation must take place. But any idea that digitalis lurks about the tissues until it gathers up and reaches a lethal or even dangerous point suddenly, that it is malicious by design, must be abandoned. It is well, however, to push it steadily in moderate doses, so that it is always present in the blood, but never in any great quantity at a time.

In many cases it is well to combine it with small doses of strychnia, and the two will be found to go well together, especially where there is any lung or bronchial complication present and any pulmonary dyspnœa. In those cases, which, however, belong rather to the later stage of the failing heart, where attacks of uræmic dyspnœa come on during the night, and which are apparently due to failure in the respiratory centre in deep sleep, and the patient wakens suddenly out of deep sleep in an attack of dyspnœa, the addition of strychnia to the digitalis is most useful. In some rare cases belladonna suits a patient where digitalis has disagreed, and may with advantage be substituted for it. It is by a combination of means that this first stage of the gouty heart is to be treated—a non-nitrogenised dietary, alkalies, fluids, and iron and digitalis in limited quantities. In addition to these, exercise and improved oxidation are useful adjuncts. Exercise does not tax the heart injuriously so long as its tissues are sound; neither does it provoke palpitation, as is the case with the muscularly feeble heart. The removal of waste by increased oxidation is a desirable matter. By such means the gouty heart may be long preserved and maintained, and the risks of apoplexy and angina avoided. As to the treatment of the apoplexy when it occurs, we cannot discuss the subject here; but as to angina, the inhalation of amyl during the attack is certainly indicated. Nitrite of amyl dilates the peripheral vessels, whose contraction is the starting-point of the attack of angina, and so lowers the blood-pressure in the arteries and relieves the heart. Angina is not very serious when the heart-textures are sound, but when they are decayed it is fraught with great and immediate danger of complete arrest in diastole. Recurring anginose attacks in comparatively young people often readily yield to a course of potash. I am inclined to think belladonna the remedy where angina is frequent, rather than digitalis, if the heart be weak or dilated.

But sooner or later the heart begins to fail, and then the aspect of the case alters materially. The renal characteristics yield to those of cardiac failure, which become the prominent features in the later stage of the gouty heart. The bulk of urine becomes markedly altered. The pale urine of light specific gravity, voided so copiously, gives way gradually to the scanty urine of high specific gravity, and laden with lithates—and often at last permanently albuminous, of heart failure. The aortic second sound is still distinct and accentuated, but the first sound and the apex-beat are much diminished, and there are the subjective indications of waning power in the heart. When this stage arrives the treatment undergoes a change. The question now becomes that of conserving the failing powers—indeed, keeping the patient alive. He has passed the risks of apoplexy to drift into the more certain and graver perils of heart failure from decay of its muscular walls. Angina is more dangerous now than before. The failure of the heart in diastole is the danger, which, first looming in the distance, becomes ever nearer and more distinct, until at last it is absolutely present, and life closes. It is a downhill fight all the way until the inevitable end is reached; but it does not follow that a fight may not be maintained up to the last. It is now necessary to give digitalis and strychnia steadily and persistently, for the rhythmically discharging centres which preside over the circulation and the respiration are in danger of failing, as fail they will at last. Exercise becomes impossible, and improved oxidation is only attainable by passive exercise in a carriage or a bath-chair. Walking becomes painful and distressing. I have a patient at the Victoria-park Chest Hospital who has shown this downward progress most vividly. He can no longer walk to the hospital, and his daughter comes for his medicine. He can now scarcely get out of his house, and, indeed, the wonder is that he has not died suddenly long since. For two years I have watched that heart gradually getting feebler and feebler, for "failing hypertrophy" was written upon his book when first seen in May, 1876.(b) The progress is not always alike. Where there is obvious dilatation there is dropsy, and the case closely resembles in its last stages the close of mitral disease. At other times failing power is the chief characteristic, and sudden death the common termination.

The food should consist of milk, beef-tea with a little cream in it, light milk puddings, a little chicken or fish—indeed, of such food and in such quantities as the enfeebled digestive powers can manage. Wine or spirit and water may be freely given in most cases, and forms a food that such patients can readily burn off. Quiet in bed or in an arm-chair, a comfortable temperature around them, a judicious nurse, and a few pleasant faces occasionally, but not to the extent of being fatiguing, is the least distressing method of meeting the inevitable end in these cases.

At times, however, under judicious treatment, the downward progress seems not only to be arrested for a time, but even a certain amount of improvement to be attained. The pulse becomes once more rhythmical and steady, the attacks of dyspnœa disappear, the œdema leaves the legs, the bulk of urine increases, and the patient feels better generally; but this is only for a time, for sooner or later the pathological changes advance to a point incompatible with further existence. It is not, however, any such palliation that is possible in the later stages that should engage the attention of the therapeutist in the long career of the gouty heart. It is rather the early stages, when prevention is feasible, that should interest him. Indeed, it is in the gouty heart even more than in the case of chronic valvulitis that our pathological knowledge and our acquaintance with morbid change should guide our practice. It is from such knowledge that we should proceed to map out our line of treatment and meet our evils; and the further ahead we can see them, the more likely we are to meet them successfully. From our experience of like cases in their later and final aspects must we look at a case in its earlier aspects. And by telling the patient what to do and how to live, to defer the morbid changes which are certain to arrive at last, and which cannot be staved off eventually; and so to add a number of useful years to many a valuable life.

It may not, however, be quite time wasted to make an allusion to the subject of fatty degeneration from the point of view of possible cure in certain cases. As mentioned before, it is not in cases where fatty necrosis is the end of a long history of pre-existing hypertrophy that any such result can be hoped for, but in those cases where there is a tendency in the tissues to split up and form fatty compounds. In such cases it is well to increase the oxidation processes, and to withdraw to a large extent the hydrocarbons from the food, and to give albuminoids instead. By such measures it seems possible to remove the fatty *débris*, and to lay down new tissue in its place. Some cases seem to bear out the view of repair being so achieved, and the plan is worth a trial. But where fatty degeneration is the end of a long-standing gouty heart—that is, in the great majority of cases—it is a pathological condition far removed from the influence of the therapeutic art.

In the dropsy of the gouty heart, tapping seems more useful than in pure cardiac dropsy.

(b) He is now dead. I am informed he was confined to bed, "laboured for breath, and at last his breath grew slower and slower as his eyes grew dim and glassy, and he died on April 27,"—nearly two years after he was first seen.

ORIGINAL COMMUNICATIONS.

ON YAWS AND SOME ALLIED MALADIES: "PARANGI" DISEASE OF CEYLON, ETC.

By GAVIN MILROY, M.D., F.R.C.P.

No. III.

THE circumstances which first drew my attention to the consideration of the "Parangi" disease of Ceylon, and which have continued to excite my interest in the subject, may deserve to be recorded, as bearing on the important question of the geography of diseases. In the autumn of 1871 the College of Physicians wrote to the Colonial Office, in reply to a request made by Lord Kimberley, then Secretary of State, for its opinion in respect of the possible risk of leprosy being ever propagated by vaccine lymph taken from children hereditarily tainted with that disease. This alarm had been suggested in a recent report of Dr. Bakewell, the Vaccinator-General of Trinidad, to the Governor of that colony who had of course forwarded it to Downing-street.

On receiving the answer of the College,(a) Lord Kimberley directed that a Circular Despatch, October 16, 1871, be sent to various colonies to ascertain the results of their medical experience, in regard of this alleged possibility of the transmission of leprous disease by vaccination. Ceylon was one of these colonies; and among the replies received from that island was one from Dr. Loos, colonial surgeon in Colombo, who, after stating that he had never met with any instance where there was "any, even the slightest, ground for supposing that leprosy has been derived from vaccination," goes on to say—"Opinions have been freely expressed in this country that the Parangi disease, endemic here, is capable of being propagated by vaccination, although it has not fallen within my experience that the disease has ever been communicated. As there is, however, a possibility of the disease (deemed contagious in this country) being so communicated, the vaccinators, who are unprofessional persons, are enjoined to select as vaccinifers children who are not only themselves healthy, but whose nearest relatives are free from the affection."

Having been abroad on my mission to the West Indies during the latter half of 1871 and the first half of the next year, I did not see any of the replies to the Circular Despatch until August, 1872. In my reply to the letter from the Colonial Office transmitting these replies, I expressed my entire ignorance of the endemic disease of Ceylon mentioned by Dr. Loos, and my desire for further information respecting it. It was in the summer of 1873 that I received a copy of Dr. Loos's printed report on the "Parangi disease," enclosed in a despatch of Governor Gregory. In my letter acknowledging the receipt of this interesting document I stated—"I have been much struck with the marked analogy, in various respects, of this Ceylon endemic with the disease of Yaws in the West Indies. Whatever throws light on the one will doubtless serve to elucidate the other."

In the following year (1874), at the request of Dr. Tilbury Fox, who was then engaged on the work prepared by him and Dr. Farquhar, "On Certain Endemic Skin and other Diseases in India and Hot Climates generally," I wrote a brief account of the "Parangi Disease," derived from the recent official reports upon the subject by Dr. Loos, and by Dr. Dunforth, the Assistant Colonial Surgeon, and I then took the opportunity of expressing my surmise that the disease might probably be found on further inquiry to be not confined, as hitherto suspected, to Ceylon alone among our Eastern possessions.

"Hitherto, as far as I know," I then remarked, "this form of indigenous cachexy has been only recognised and described in Ceylon; but I strongly suspect that the Parangi disease, or something much akin to it, will be found to exist in many other parts of our Indian Empire, as well as of the East generally. It certainly bears resemblance to some endemic forms of cachectic disease in the Western hemisphere." In the early part of 1875 I received from the Colonial Office copies of several documents relating to the subject. Among these was a letter of Dr. Loos to Governor Gregory, in which he admits that "there are many points of similarity [between the two maladies], and the description of yaws, as regards its progress and consequences, and the insanitary conditions under which it prevails, would apply in a very striking manner to the endemic disease in this country."

My first paper on "Yaws and some Allied Diseases" appeared in the *Medical Times and Gazette* of November 4, 1876, and the second one in that journal of February 17, 1877. In the latter was given a description of the "Coko disease" of Fiji, from the account of that endemic in the report of Dr. Macgregor, the Government Medical Officer of the new colony, a copy of which was sent to the College of Physicians by the Colonial Office, and wherein the Yaw character of the disease was distinctly recognised.

The latest communication from abroad, bearing on the subject, which I received only a few weeks ago, is the following extract from the recent printed report of Dr. Kynsey, the Principal Civil Medical Officer and Inspector of Hospitals in Ceylon, which appears to be a highly interesting and suggestive document:—

"In Appendix C, under the head of Diseases of the Cutaneous System, will be found a term used to designate a disease which has hitherto been supposed to be endemic in and peculiar to this colony. It has been in use by the 'wedaralas' or native quacks of the island since the time of the Portuguese; the word simply means 'foreign' and is evidently a corruption of 'ferengi.' The 'wedaralas' include under the term a vast number of different forms of ulceration, simple or specific, and many common skin diseases. By some it has been supposed to be syphilitic, by others a form of leprosy, and by a third a combination of the two.

"Cases to the number of 680 are included in the hospital returns of the colony; and on my inspections, wherever I have had an opportunity of studying the disease I have done so, and I am convinced that a great many totally distinct diseases are included under 'Parangi.' I have, however, not yet been able to make up my mind whether there is a disease in Ceylon which cannot be included under one of the names at present known to medical science or not.

"The head-quarters of the disease seem to be Mullaistiva, Vuvuniya, Vilankulam, Kurunégala, Puttalaw, Chilaw, and the southern coast from Galle to Tangalla.

"I have identified the following diseases returned as 'Parangi'—1. Lupus and various forms of lupoid ulcerations; 2. Rodent ulcer; 3. Syphilitic ulcerations, attacking the hard and soft palates and nose; 4. Cases of hereditary syphilis; 5. Scrofulous ulceration; and 6. The most curious fact in connexion with my inquiries—I have, I believe, recognised the disease, known as yaws in the West Indies, as existing in Ceylon. I was led to this latter discovery by reading the very able Report by Dr. Gavin Milroy on Leprosy and Yaws in the West Indies, that gentleman's reply to the colonial surgeon Dr. Loos, forwarded through the Colonial Office, and his contributions on the same subject to the *Medical Times and Gazette*.

"I will merely add one remark in conclusion: that although in the yaws of Ceylon characteristic elevated rupial-like crusts are well marked, I have up to this failed to find the raspberry-like fungus appearance beneath. After healing, the very dark stains on the dark skin are invariably found. It will be interesting to ascertain if the peculiar scars, cicatrices, contractions of joints, and deformities, so frequently seen in our hospitals in certain districts of the island, are due to this curious disease, hitherto considered to be unknown in this island.

"It will also be strange if the disease is confined to Ceylon, and unknown on the continent of India.

"I have been unable hitherto to trace the connexion between the yaw eruption and its after-results, but I have interested several of my officers in the inquiry, and have no doubt I shall be able to report more fully on a future occasion.

"I may add that, as far as I have been able to ascertain, there seems to be no connexion between the disease which I consider yaws and syphilis."

In respect of these interesting remarks of Dr. Kynsey, I would observe that, although he (and Dr. Loos also, I believe) has hitherto failed to discover the *frambœsoid* fungus in any of the cases of the "Parangi" in Ceylon examined by him, the

(a) The letter of the College will be found in my "Report on Leprosy and Yaws in the West Indies," page 85.

absence of this symptom is by no means unfrequent in many of the old and neglected instances of yaws in the West Indies, when the disease had passed from its earliest stages, and had lapsed into the form of aggravated cachexia, with diverse morbid sequelæ in the integuments and deeper tissues. This was the case with most of the chronic examples which I met with in Dominica, and such as are described in my Report (page 53). It is also to be remembered that the *frambœsoid* appearance of the cutaneous disorder in its early stages is by no means uniformly the same. Dr. Imray of Dominica, in his valuable memoir, contained in my Report (pages 72 to 83), thus describes it:—"The ordinary yaw excrescence is not unlike a piece of cotton-wick, a quarter of an inch (more or less) in diameter, dipped in a dirty yellow fluid, and stuck on the skin in a dirty, scabby, brownish setting, and projecting to a greater or less extent. This comparison is not so elegant as that of the strawberry, but I believe it to be more appropriate to the loathsome eruption, and more exact. It is true that there are sometimes red spots or streaks on the yellowish surface of the yaw fungus; but this appearance, instead of being general, I have only found exceptional."

What Dr. Kynsey says as to the unlikelihood of the Parangi disease being "confined to Ceylon, and unknown on the continent of India," the same thought occurred to my mind, and I had accordingly drawn the attention, at the beginning of the present year, of my friend Dr. Cunningham, the Sanitary Commissioner with the Government of India, to this very point, in connexion with the large official investigation of leprosy now being carried on, under his superintendence, throughout the peninsula, and which promises most valuable additions to our knowledge of that disease, and other forms of cachectic malady, among the numerous and widespread populations of that immense region.

One other remark of Dr. Kynsey calls for notice. He remarks that, "as far as I have been able to ascertain, there seems to be no connexion between the disease which I consider yaws and syphilis." This entirely accords with the conclusion to which I came from my personal observations in regard of the genuine yaws in the West Indies, viz., that it is essentially and altogether distinct from syphilis—contrary to the opinion of Dr. Copland and many other writers, English and French—although it may certainly in some cases be associated and co-existent with this disease; and then the twofold morbid influences will most seriously aggravate and intensify the deterioration of the general health.

The rightful determination of this question has, of course, most important bearings on the practical *treatment of yaws*. An immense amount of mischief has unquestionably arisen from the belief that it is of syphilitic origin, and that mercurial preparations must be the proper remedy for its cure and removal. Unfortunately, this belief—which must have been primarily due to medical opinion, and for which, therefore, the latter must be held responsible—has become generally accepted among the uneducated inhabitants of the West India colonies; and hence all the popular nostrums, which are sold in the shops of chemists and other traders, for the cure of yaws consist mainly of this most pernicious drug when indiscriminately resorted to. As to the proper mode of treating the disease, the remarks of Dr. Bowerbank, of Jamaica, as given in my Report (pages 60, 61), appear to me to be most judicious.

"In the primary stage the needed treatment is of the simplest description; the patient should be kept within doors in a well-aired room, suitably clothed, have light nourishing food, a daily warm bath, and some simple vegetable tea, as of sarsaparilla, lime leaves, or lemon grass. Exposure to wet and cold must be avoided until the eruption is fairly developed, so as not to run the risk of its being repelled or driven in. When the yaw tubercles or excrescences are large and full, the skin must be kept clean by daily washing; but no undue friction or handling of the excrescences must be used. When they are flabby and unhealthy, a more nourishing and stimulating diet is required; and the internal use of sulphur, guaiacum, and camphor is beneficial. Mercury is often used to hasten the dispersion of yaws, but it is always to be very carefully given, and a much safer and quite as effectual remedy is the iodide of potassium. This may be given in any stage. As unwholesome and innutritious food most seriously aggravates the course and progress of the disease, and the want of personal and domestic cleanliness has a like injurious effect, too much attention cannot be paid to the diet and to general hygiene."

Dr. Bowerbank adds the following instructive observations:—"Of all diseases with which I am acquainted, I know none so easily and so seriously affected by external circumstances and injudicious treatment as yaws. During the earlier stages the eruption is very liable to be repelled or 'driven in,' as by exposure to cold with insufficient clothing, exposure to night air, or injudicious bathing in the sea or in fresh water, excessive purging, the accession of the different exanthemata or of other acute diseases, the abuse and too early use of mercury.

"In persons predisposed to leprosy, scrofula, syphilis, etc., when attacked by yaws, its course is often irregular and protracted; in fact, the system appears unable to cast off the disease; efforts are made and repeated at long intervals, but sometimes unsuccessfully, till at last the latent disease becomes roused into action, and a most destructive ulcerative process takes place, crippling and deforming the body, and at last destroying life."

The history of the two cases, one in Madeira and the other in this country, recorded in my second paper (*Medical Times and Gazette*, February 17, 1877), however imperfect in the details, is significant in respect of the treatment of the disease. In the first case the patient recovered, after the discontinuance of mercury, under "the use of suitable food and the exhibition of the mildest medicines"; while, in the second, the health gave way, and the patient sank, in consequence, as I believe, of the protracted and inordinate administration of mercurials.

The general result of my observations in the West Indies is given in my Report, page 63, in these words:—"From all the evidence that has been now adduced we may fairly infer that, although there yet remains much respecting the origin and attributes of yaws requiring more accurate investigation than has yet been applied to the subject, everywhere it is fostered, if not engendered, amid poverty and its ordinary accompaniments of squalor and semi-starvation. Proofs of this were given me alike in Berbice, Dominica, and Jamaica. Yaws is thus obviously another member of that multiform brood of evil known by the family name of '*mal de misêre*.'"

As to the part which contagion plays in respect of the origin and spread of the disease, this is still ambiguous. I would earnestly suggest to Dr. Kynsey to have his attention esspecially drawn to this point in regard of the Parangi disease.

Before closing this article I would invite the notice of the reader to some instructive and very pertinent remarks of Dr. Tilbury Fox on subjects somewhat kindred to what I have been considering in the previous pages:—

"We have long been of opinion that several forms of ulcerating furunculoid diseases were the outcome of a cachexia, induced by insanitary influences attached to certain unhealthy climes." . . . "Before leaving the subject of Delhi sore and its allies, we desire to add a few special observations relative to the general question of endemic cachexia. The statements and facts recorded in the preceding section go to show that in many parts of the world, and emphatically so in hot and unhealthy climates, the nutrition of the body becomes seriously depraved under the influence of various combinations of defective hygiene, bad feeding, malarial and other poisonings, great alternations of temperature and humidity; and certain diseases of the skin, of a more or less ulcerative type, are considered to be developed in consequence. Now, while such endemic diseases exist, it is but natural to regard them as peculiar to the localities in which they are observed, and as being induced by causes specially at work therein. But the time has arrived for a fuller recognition of the fact that many of these endemic or indigenous cachectic diseases bear the closest resemblance to each other in their main features, and fall together very naturally into a common group or class of endemic or indigenous cachexiæ; and, moreover, that many of them, supposedly distinct, are in reality one and the same thing, but are known, however, under different designations. These remarks apply particularly to Delhi boil, Moultan sore, Aleppo evil, Biskra bouton, Yemen and Aden ulcers,—also to the 'Parangi disease of Ceylon.'" . . . "Dr. Geber, of Vienna, at Hebra's suggestion, made a long stay at Aleppo for the purpose of studying the Aleppo evil, and he concludes that there is no such disease in reality as

'Aleppo evil.' The many cases of the disease which he saw from time to time were either syphilitic, lupoid, furuncular, or eczematous."(b)

These observations of Dr. Geber accord in a striking manner with those of Dr. Kynsey in respect of the diverse forms of disease which are grouped together under one general term in Ceylon, viz., "Parangi."

Richmond, S.W

HARVEY AND THE SPANISH ANATOMISTS.

By GEORGE GASKOIN,

Knight Commander of the Royal Order of Isabela la Catolica, etc.; Surgeon to the British Hospital for Diseases of the Skin.

(*Concluded from page* 410.)

OMITTING much that is of minor account, I pass on to consider the grounds of the award which some have made to Francisco la Reyna, the farrier of Zamora, of being the first who described the systemic circulation. As to the validity of such pretensions the Spanish writers are not agreed. Morejon and Sámano declare for him; Chinchilla is averse to his claims. The work of this veterinary must have enjoyed a certain popularity, since it went through several editions, the earliest of which mention is made being that of A.D. 1552, now no longer to be found. The opinion has certainly been hazarded that La Reyna was living in the century previous, but this remains doubtful.

I shall endeavour to place before the reader as clear a rendering of his text as is possible. "If you are asked," says La Reyna, "how it is, when one bars the vein of a horse, whether it be in the hind or fore legs, one sees the blood come out of the lower end of the broken vein, and not at all from the upper end—how does that happen? The answer you will have to give is this. There are certain veins called capital veins, and these proceed from the liver, as the arteries from the heart. These capital veins are distributed in the limbs in manner following—that is to say, on the outside of the limbs in ramifications and miseraics (smaller vessels); and these last extend even down to the structure of the hoofs. From that point they bend round, these miseraics, and turn to pour their contents into the capital veins which go by the folds of the limbs to the internal parts of the body: in such sort that the veins on the outside have the duty of bringing the blood downwards, while the veins of the deeper parts have the office of conveying it in an upward direction. Thus the blood is *carried all of a round just like a wheel in all the limbs and the veins.* It is thus seen that some of them perform the part of bringing nourishment to the external regions, and others of bringing nourishment to the inward and most central parts, even to that great emporium of the body, the heart, which all the other members obey. And thus you will shape your reply."

Further on in the folio there is found as follows:—"'Please tell us, master, where is the seat of the blood.' I answer you that the proper seat of the blood is in 'the heart, and in the liver, and the veins and the arteries. The blood is situate in these.'" Such, as truly as I can render, is the text of La Reyna; and it hangs fairly well together, notwithstanding some slight difficulties and variations in the several editions. Those of A.D. 1564 and A.D. 1647 furnish the text which I have taken from Chinchilla. This writer disowns La Reyna; his most favourable interpretation is that the veterinary, of whom, biographically, there is nothing known, had dipped into the works of Montaña of Monserrat, and especially availing himself of that passage where this author has treated of obstructions in the veins, has conveyed the inner meaning of it with some degree of amplication, however awkwardly, into his book of farriery. Anyway, the passage is remarkable, and for clearness and boldness of expression, as connected with the subject, I do not know that it has elsewhere a parallel, whatever imperfection may attach to it; and the imperfection is plainly seen.

I am far from hoping to exhaust in these papers the subject on which I have undertaken to write. I purpose to make them suggestive, rather than expect to make them complete. Referring to my programme, I now proceed to consider what was in the sixteenth century the popular idea about the flow of the blood. Was the idea or suggestion of the circle so novel or so opposed to the general notion that it could scarce be accepted by the crowd? Was there at any time a strong prepossession to be contended with—I mean, of course, among the unlearned? I apprehend this was not so much the case as is generally taught and believed.

Now, it is very certain that the Spanish physicians, and especially those of the Hebrew persuasion, insisted, from the earliest date, on the very considerable difference existing between the arterial and venous blood. On the other hand, if we take Averrhoes as one of the last, if not the last, among the Arabians, we see in his "Summary" or "Colliget," especially in the eighth chapter, that there is much to promote the idea of a general or systemic circulation; for not only does he insist on the above distinction, but also on the difference between the containing vessels, and, further, on the relation of the vessel to its contents. In true Hippocratic phrase, he dwells on the *consensus unus, conspiratio una, et omnia consentientia* with which all combine for certain physiological ends. He remarks on the origin of the arteries as they proceed from the heart, and their very minute or capillary distribution to all parts of the body—"*Arteriæ quæ portant sanguinem à corde et ramificatæ sunt per totum corpus ad ferendum rem ipsam.*" And again he says—"*Manifestum est de anatomiâ, quod multæ arteriæ à corde mittuntur ad cerebrum.*" The *rem ipsam* is indisputably the one thing needful—the arterial blood.

We shall find Spanish authors in the latter end of the fifteenth century who may assist us further in forming some opinion on the subject. One such was the good Valencian Bishop Christopolitano Jaime Perez of Valencia, of the Order of St. Augustine, who wrote in Latin a much-esteemed exposition on the Psalms of David, published A.D. 1484. In his gloss on the 103rd Psalm, at the verse *terminum fecisti*, enforcing his theme, he says—"For as there are veins of larger size (*capitales*) through which there flows a large quantity of blood, and there are also veins of slender size (*miseraicas*) through which there flows a smaller amount of blood," etc. And he resumes—"Now, we find that water always travels circularly, one half portion flowing on the surface, and another half portion or circle sinking underground in the earth's bowels. For the water that constitutes the depths of the ocean has also some time before gone twisting and twining in the general paths and *veins* of the earth. It forces its way in the mountains and meads, and glides insensibly to the ocean. And so it is that in this current of the water there is thus described a circuit or circle. It follows that as to their formal parts the seas neither accumulate nor decrease, because just so much water as goes into them by rivers, so much they part with again; and it is once more hidden in the earth, and there it finds a passage in certain *visceral veins*, and with opportunity it emerges to form once more some spring or fountain that nourishes the mountains and the fields. In this way the circular motion is always maintained; and no doubt it was of this King Solomon spake when he says that all rivers run into the sea, and yet the sea is no way surcharged, for they come back again to places from whence they departed." Soon after he resumes—"Because the founts be hid under the hills, and other waters are displayed above ground, half seen and half not seen, there is thus maintained a certain equilibrium; and this would seem to be what the wise man speaks of when he says, concerning God—'He weighs the fountains of the waters in His hand.'" The whole gloss, in fine, is a comparison of the human with aqueous circulation. Now I ask, Would it have been possible for this preacher to have illustrated his text by facts that were wholly opposed to common belief, or even strange to common perception? But as a clergyman well acquainted with the doctrines of Aquinas, he could scarce be ignorant that this great doctor had pronounced the action of the heart to be of the character of circular motion; for in his work on the Motion of the Heart that great theologian had expressed himself as follows:—"And thus one may see the motion of the heart in the animal is even as the motion of the heavens in the kosmos; for the motion of the heavens is circular and continuous, and the motion of the heart being the foundation (*principium*) of all motion that is in the animal," etc. "In one respect, indeed, one might say not circular, as being compounded of passage and pulse; and it is a motion, indeed, that is always going on in the animal, except in so

(b) "On certain Endemic Skin and other Diseases in India and Hot Climates generally." By Tilbury Fox, M.D., and T. Farquhar, M.D. 1876. Pages 18 and 21.

far as is necessary to make the pause between the stroke and the stream, in which sense ouly it differs from circular motion. The two movements, indeed, may appear contradictory; but forming as they do a compound motion, in which each takes a part or share, to that degree only they do depart from the simplest kind of circular movements, which is, however, therein excellently imitated, being, indeed, *ab eodem in idem.*"(a)

I have been anxious to avoid all those commonplace objections to the originality of Harvey's discovery, which, drawn from antiquity, are found in the medical literature of most European countries, but of course they are taken account of by the Spaniards, and find a place in their works. There is, however, one book which contains many suggestions as to the subject before us, which I should wish to mention, since it is a well-known work and a great favourite, being to a certain extent, originally, I believe, a reproduction of some writing by Isidore of Seville, a famous encyclopædist of the seventh century: it equally represents the opinions of Constantinus, the great physician of the eleventh century. The title of this work is "Las Propiedades de Todas las Cosas." It was first published in Castilian in the year 1494. This volume is a great mine of wealth for the history of medicine; and from it may be drawn many hints as concerning the circulation; they consist for the most part of expansions of Aristotelian science, and Spanish physicians have largely availed themselves of these.

Constantinus is very particular as to the subtle and peuetrating character of the arterial blood. He also uses the term "capillary" as applied to the minute vessels. The heart, the liver, and the brain, he says, are neighbours and allies. He also admires the cunning with which the vessels assist one another. Isidore speaks of the heart as a centre or medium point. The veins are so called because they are passages (*vias*). There is no part of the body that is not bathed and nourished with the blood. The very word *sanguis* is of Greek derivation. It nourishes, strengthens, sustains, and prolongs life, whereas sensation only seems to afford proof that life is still subsisting.

In my earnestness to declare the state of science among the Spaniards, I fear I may have risked the imputation of indifference to the fame of Harvey. He has, however, no more sincere admirer than myself. I hope the time will arrive when all Europe will be of one mind concerning him.

High Temperature in Yellow Fever.—Dr. Mercier reports in the *New Orleans Med. Jour.* for September a case of yellow fever, in which the temperature in the axilla reached 111° fifteen minutes before death. Five thermometers were tried, the latest a test one, with the same result. —*New York Med. Jour.*, October.

Medical Victims of the Yellow Fever.—Certainly it is a spectacle as touching as it is honourable which our colleagues, the marine medical officers, present in the presence of the scourge which is now prevailing in our colony at Senegal. Eighteen physicians and pharmaciens have died of yellow fever at Gorée or St. Louis. These eighteen victims already known, and whose number will, alas, soon be increased—these valiant soldiers dying on the field of battle of the epidemic, have been immediately replaced by colleagues, who, at their own request, and without waiting for any requisition, have exposed themselves to the contagion. In place of the Minister of Marine having any difficulty in finding candidates for the duty, he has only the embarrassment of choosing among them. It is not a requisition but a selection that has to be made; for, where all are so valiant and courageous, it is desirable that there should be sent to this dangerous epidemic theatre only the strongest and most robust, and those who will offer the greatest resistance to the disease, at least in appearance—for it is most difficult to indicate the organic conditions which act as preventives against this scourge. In Louisiana, where the yellow fever has made, and still makes, such ravages, it is said that more than a hundred medical practitioners have forfeited their lives to their devotion to their duties.—*Union Méd.*, November 16.

(a) St. Thomas Aquinas, "De Motu Cordis ad Mag. Philippum." Opusc. xxxv., tome xvii. Venet., 1593; fol. The work is nearly devoid of medical and pathological interes, being confined to inquiry into the cause of the heart's movement.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

LONDON HOSPITAL.

TETANUS-LIKE SEIZURES WITH DOULBE OPTIC NEURITIS—NO AUTOPSY.

(Under the care of Dr. HUGHLINGS-JACKSON.)

The following case may be read in connexion with Dr. Hughlings-Jackson's remarks published in our Hospital Reports for October 26, 1878. In our number for November 2 is a letter from Dr. Ross, expressiug his opinion that the paroxysms of tetanus are owing to a cerebellar cortical discharge. The facts he states are very important.

A little boy, three years old, was admitted under the care of Dr. Hughlings-Jackson, February 13, 1878, for symptoms believed to depend on tumour of the middle lobe of the cerebellum. As autopsy was not permitted by the boy's friends, it can only be said that such symptoms as he had have been found with tumour of the part named. He had double optic neuritis. There was nothing to point to any defect of sight; he was too young and too ill for his sight to be tested; the nurses observed no defect of sight. Hence the need for routine use of the ophthalmoscope. Optic neuritis, however, points to nothing more than to an intracranial adventitious product of some kind. Of this it is not decisive evidence, but it is the best evidence to be had. Nor does it point to position. Since the corpora quadrigemina are close upon the middle lobe, they might be squeezed by a tumour there placed, but it remains that tumour anywhere in the encephalon may cause optic neuritis. He had on admission one localising symptom—his head was constantly drawn back. Of course this is seen in some cases of meningitis involving a wider area than the middle lobe of the cerebellum. It is not said that it is more thau a localising symptom; it is supposed that, along with optic neuritis, it was evidence of *tumour* of the middle lobe. And if it be denied that this fixed position of the head points to disease of the cerebellum, or to disease in any part under the tentorium, it is nevertheless correct to call it "a localising symptom." A local muscular abnormality, if dependent on change in the central nervous system at all, of necessity implies change in some *part* of the central nervous system: we may be sure so far, even if we do not know what part it is which is so changed. The chronic course of the case (thirteen weeks) was some evidence against meningitis. A further thing which Dr. Hughlings-Jackson believes to point to disease of the middle lobe of the cerebellum was the occurrence of tetanus-like seizures. By "tetanus-like" is not meant the tetany of Trousseau, but resembling ordinary surgical tetanus. He does not think such seizures point necessarily to *tumour* of that part (to secondary changes in grey matter induced by the tumour), although he thinks they did in this case. There was the history of the child having had a "fit," which by the description was tetanus-like, but no great importance could be attached to the vague account given. As there was no autopsy, it cau only be said that tetanus-like seizures occurred in a child who had double optic neuritis, and whose head had been drawn back for some weeks. One thing to be urged is, that when we are told a child has had a "fit," we ought to make inquiries to ascertain whether it was of the "epileptic" or of the "tetanus" type. It was considered probable that tetanus-like fits would occur, and the nurse was told to be very prompt in seuding for the House-Physician.

The following extracts from Dr. Hughlings-Jackson's case-book give Mr. Greenwood's (then House-Physician) account of the tetanus-like seizures occurring during the last eight days of the boy's life:—

April 15.—The child had three fits this morning, in one of which nurse reports that both eyes were widely open, the eyes were moved from side to side, his head was drawn backwards and a general stiffening of both arms and legs was noticed. The child was thought to be unconscious, and remained in this state for about ten minutes; slight twitching of both eyelids was observed.

18th.—Child lies in much the same condition; he has had two more fits during the night, of a similar character to those of the 15th; he does not seem to know his friends, and will

only drink a little milk. As I was leaving the ward he had another fit: the head was thrown back and turned to the right side, the eyes were wide open and seemed quite fixed, the spinal column was strongly extended, and there was marked rigidity of all his limbs, there being a strong hyper-extension, with the exception of the wrists, which were firmly flexed. After about a minute the spasm seemed to relax, and the child flexed his left leg and moved his eyelids; it was then seen that the arms could be flexed. After a short interval the spasm returned, and this time the muscles of the spine were more involved, the spinal column being bent back so that the child only touched the bed with his occiput and heels.

19th.—Not much changed; night-nurse reports one fit which lasted about ten minutes. The child lies with his head drawn somewhat back; there is no rigidity of limbs; he seems to be partly conscious, showing signs of disapprobation when his medicine is given, or on being moved.

20th.—He has had two fits since morning, similar to those previously described. The nurse reports that the spine was extremely bent backwards, though not so much as in the first fits. The symptoms were in every other way the same. The duration of each was five minutes. He takes nearly all the milk and brandy ordered; he has also had a few crumbs of sponge-cake. He lies indifferently on either side; is now very emaciated. Passes his motions into the bed, and does not respond to the voices of those he knows. Temperature 99·6°. Evening: He has had several more fits. He had just come out of one when I came into the ward; neither his arms nor legs were then rigid, but his head was markedly drawn back, *i.e.*, the spine arched backwards. His grandmother, who has seen him in several of the fits that have occurred lately, says they are of the same kind as the one he had at home previous to admission.

21st.—Has just had a fit. Was lying on his right side, with his back and head strongly arched backwards. Both arms are rigid. He has just had some slight spasmodic movements of his fingers, in which he seemed to be constantly opposing his thumb to the other fingers, as if to pick up something. His legs are not rigid; the nurse says that his legs have been somewhat convulsed in some fits that occurred earlier in the morning. His lips are not at all blue, and respiration is not interfered with.

22nd.—He has passed a much better night, no fits having occurred since yesterday evening. He lies on his left side, his back not nearly so arched, neither is his head drawn back; he notices nobody.

23rd.—This morning patient was in another fit when I came into the ward (hyper-extension). All his limbs were in a state of rigidity; the spine was bent back in an extreme manner; his breathing seemed a little more interfered with than when I saw him before, being quicker and more irregular. It was noticeable that the fingers of both hands twitched a little, otherwise the convulsions were all of a tonic nature. The rigidity of the upper part of the body was more marked than in the lower, as I found that every few seconds the legs could be flexed, but quickly became rigid again, as if from a fresh spasm. The rigidity of the arms and back remained throughout the seizure. The child's general condition this morning is one of extreme feebleness; his pulse is very weak, 88; and the temperature fell 2° (101° to 99° Fahr.) last night. He does not seem to recognise anyone, but in his worst fits the pupils act to light, and he closes his eyes firmly on placing the fingers on either cornea. Evening: Patient died at 8 p.m. No more fits had occurred since those last-mentioned. Just before death the nurse describes the child to have made a peculiar sobbing noise, but is quite sure there was no spasm of any kind.

CHARING-CROSS HOSPITAL.

CLINICAL TEACHING—REMARKS ON HERNIA AND DISEASES SIMULATING IT.

By Mr. HENRY HANCOCK.

On October 30, Mr. Hancock gave his third lecture on his experiences of hernia and diseases simulating it. He began by considering cases of rectal obstruction; and first he remarked that, with reference to true organic stricture of the rectum, the disease was an extremely rare one. He had been at it now for a good many years, but could not recollect three cases, although he had seen many cases of spurious stricture from local irritation or from irritation referred from distant places to the rectum. The late Sir Anthony White was the first who called his attention to this point, and the importance of it was, that when he was a student some practitioners seemed to consider everybody had stricture of the rectum. There was a man in Bath, who, if a patient came to him complaining of a pain in his little finger, passed the rectal bougie. If he had a case of heartburn, of sick headache, of hysteria, it was all one—the rectal bougie was required. He was an exceedingly plausible man. There was an old gentleman who had several daughters at school at Bath, and he was perfectly horrified to find that they had all been treated with the rectal bougie, and went to expostulate with the surgeon; but the result was that he was talked over, and a rectal bougie was passed on him. There was another scoundrel in London, and to his treatment Mr. Hancock distinctly traced the insanity and death of a very charming girl. He told these stories that the gentlemen present might have it impressed on their memories that the bougie treatment was both filthy and unnecessary. Spasmodic stricture, as he had said, was frequently met with. A wound in the intestine might produce it. A fistula in ano might cause an almost impermeable stricture. In such a case the plan was not to introduce a bougie, but to pay attention to the fistula.

In cancer of the rectum there was an organic stricture of the very worst form. How should it be treated? It should not, at any rate, be interfered with mechanically. It was very desirable, under these circumstances, to get evacuations without mechanical means; and the question was, how to do it. He was sent for once to see a pork-butcher at Richmond, and found him suffering from all the symptoms of strangulated hernia, only not so violent as was usual in that disease. He was told he had malignant disease of the rectum, and on examination found this to be the case, and that there was obstruction to the passage of the evacuations. He thought if he could only liquefy the contents of the rectum he would relieve the patient. He recollected the use of liquor potassæ, and ordered a drachm in a cup of hot tea to be taken night and morning—especially he begged that no aperient medicine should be given, the exhibition of purgatives in obstruction being the very worst treatment. He saw the patient again in two days, and found him a great deal better; his motions were liquid, and were passed without pain. And so the man's life was prolonged for some months. In another case he was called to an old lady whom he found just as bad as she could be. She was apparently in the last stage of scirrhus, and the motions could not be passed. He gave her liquor potassæ at night, and ordered also a drachm of Epsom salts and ten grains of magnesia in peppermint-water in the morning. This last mixture, Mr. Hancock said, would stop the sickness of women that ordinary remedies would not touch. In the case he mentioned he heard no more of the patient for six or seven years, when he met her looking stout and well. She said she had taken his medicine night and morning continually, that her motions were constantly liquid, and that she was perfectly comfortable.

He would give a little bit of advice: it was this. In cases of obstinate constipation, never give aperients without first being satisfied as to the absence of hernia. He remembered a case of a young lady (not under his own care) who had suffered for many years from neglect of her bowels, often not being relieved for two weeks at a time. At last she had vomiting, pain, not much tympanites, but evidences of irritation, anxiety of countenance, etc. Her medical attendant, knowing her history, gave a quantity of aperients; but in vain,—the symptoms increased. At length a second opinion was called in. This gentleman immediately examined for hernia, found a femoral rupture, and performed an operation for its relief; but the operation was too late—the gut had mortified, and the patient sank and died. In another case, Mr. Hancock was called to see a lady of fifty years of age suffering from all the symptoms of strangulated hernia. There was history of long-continued constipation at various periods, and here there seemed to be an attack more serious than usual. He first inquired of the practitioner in attendance if there was any abdominal hernia, but was told there was none. However, Mr. Hancock made a fresh examination (patient lying on her back in the usual manner), but detected nothing. Recollecting then the attachments of the fascia lata of the

thigh, and the formation of the femoral ring—that the latter is not really a ring, but a canal,—he altered patient's position. He had her shoulders raised and her head bent forwards to relax the abdominal muscles, and the thighs flexed on the pelvis, and one knee placed over the thigh of the opposite side, so relaxing the femoral canal. Then by introducing his finger into the canal he felt a little round nodule of gut about half an inch from the orifice. He operated, relieved the stricture, and returned the gut. Everything was doing well at first; but what followed was the reason for the caution he had given against the use of purgatives in such cases, and why he insisted that opium should be given in cases of irritation caused by obstruction. This patient's bowels, when the constriction was removed, immediately began to act. She had taken calomel and colocynth, castor oil, croton oil—in fact, nearly all the purgatives of the Pharmacopœia,—and she had had injections; and the accumulated result of all these was too much for her; nothing could stop the diarrhœa, and it continued until she died of absolute exhaustion.

Mr. Hancock then spoke of those cases of strangulated hernia which were of an ordinary character, and described the mode of application of the taxis, explaining the term lest some gentlemen might fall into the mistake that a very assiduous house-surgeon once did. This gentleman wanted to know what he should do with a case of hernia he had just admitted. Mr. Hancock advised him to use the taxis. He thought no more of the matter until he found the poor fellow some half-hour later in a state of great distress, declaring that he had searched the whole hospital for it, and couldn't find the taxis! One point Mr. Hancock wished to call attention to, in addition to the ordinary directions for reducing the gut, was the advisability of first pulling the gut down before attempting to return it. The reason was, that where there was a constriction there was sure to be a swollen condition of the bowel on each side of it. By pulling down the gut, the affected part was rendered somewhat funnel-shaped, and so could more easily be reduced. Another practical point he called attention to was of medico-legal importance. It was with reference to the length of time a hernia had existed. And he would cite a case in point. A man who had his life insured died some six months afterwards with a strangulated hernia. His friends said the hernia was a recent one: the insurance company's officials said it was of old standing. A post-mortem examination was made, and the surgeon who made it was able to prove that the rupture was of old standing, from the fact that the internal and external abdominal rings were approximated so as almost entirely to obliterate the inguinal canal. This could only have resulted from the long-continued pressure caused by a large scrotal hernia.

On November 6, Mr. Hancock made some further remarks on hernia. In dividing the stricture it sometimes happened that an abnormal branch of an artery might be cut, and much then depended on the coolness and resource of the surgeon. He knew of one case where such an accident happened, and the operator, losing his presence of mind, closed the external wound and had the patient put to bed. The result was that the artery kept pumping blood into the cavity of the pelvis, and the patient died. In a similar case which he once had, he found that by passing his finger into the wound he was able to control the bleeding by the pressure of his finger and thumb—one inside the abdomen, the other outside. He then passed a strong curved needle through all the tissues, round the artery and out again, and so fixed the bleeding point; and this was a course of procedure which was quite successful and which he advised should be followed. Mr. Hancock then proceeded to give instructions as to the mode of operation for the relief of strangulated hernia. He laid special stress on the necessity which existed for the surgeon keeping his finger-tips in delicate and serviceable order by the due preservation of the finger-nails. He himself had never used a director to examine a stricture, but always used the index-finger of the left land. Here the nail was most useful, as it also was in lithotomy as a guide to the knife towards the grove in the staff. When the sac was reached, it had always been Mr. Hancock's custom to open it. His reason for this was, that there might be adhesions within the sac itself, causing obstruction of the gut; and if the sac were not opened there was always a chance of returning such a mass *en bloc* without relief of symptoms. He recommended that it should always be borne in mind, in manipulation, that it was a man's gut that was being handled, and that every possible tenderness should be observed; and also it should be remembered that there may be ulceration in the wall of the gut next the lumen which might show no indication externally of its presence. In noticing how the intestine returns it is important to see that it falls well back into the abdomen, showing that there is no adhesion anteriorly. He remembered one case where, after pulling down the gut as far as it would come, he found on passing his finger well into the wound an adventitious band constricting the intestine; this he divided. There was immediate relief, and the case did well. Mr. Hancock next spoke of those cases where part of the gut prescnted the ashen-grey spots of mortification, and where an artificial anus had to be established. In such cases was it possible to prevent the death of the patient? This depended upon the part of the gut affected. If it were the large intestine, death need not result; if it were the ilium, the patient would still have a chance; but if it were high up in the small intestine, death was sure to occur from starvation. He did not know a more beautiful process than that by which nature cured an artificial anus. At first the gut was open, and lay external to the abdomen. In from seven to fourteen days you found, perhaps, that patient had passed some flatus by the natural passage, and so it was evident the intestines were inclined to resume their normal functions. Then the opening of the artificial anus became less prominent. In a week or more there was some oozing of fæces per anum; the gut at the seat of the wound became more constricted, and was receding. And so it would go on, the gut receding from the wall of the abdomen until there was only a long narrow tube connecting them; and coincident with this the fæces would pass by their natural channel more and more, until a complete cure was effected.

In some cases of hernia there was a little nodule of intestine with a large mass of omentum in the sac. In several cases he had separated the omentum from the intestine, and then he found the omental peritoneum brittle and friable like rice-paper. In these cases he returned the omentum, and patients died of peritonitis; so the next case he had, he cut off about five or six ounces of omentum, by way of experiment. To his delight, the patient got quite well; and since then he had two ways of dealing with omentum. The first was to snip it off if it was greyish and not glistening and healthy. The second was, if healthy, to leave it in the canal as a kind of natural truss to prevent the descent of the intestine; and this plan had worked well.

Chloral in Migraine.—Dr. Seure strongly recommends the administration of chloral in an enema on the occurrence of the paroxysms of migraine, having found it almost infallible and exempt from the disadvantages attendant on other modes of giving this substance, and far preferable to the employment of morphia, quinine, etc., for the same purpose. He gives, according to the sex or robustness of the patient, from one and a half to three grammes in a glass of tepid water, the effect of the chloral being rendered still more prompt by the addition of a tablespoonful of brandy. If a sense of burning in the rectum is excited, this may be prevented by adding the yolk of an egg or substituting tepid milk for the water. When, as in some persons, there is difficulty in retaining the enema, the quantity of the liquid may be diminished, and a drop or two of laudanum added.—*Bull. de Thérap.*, October 30.

Transposition of Viscera.—Dr. Schrank, on being consulted for bronchial catarrh by a young woman aged eighteen, well formed and of healthy appearance, found on examination her thorax normal and well proportioned. The beats of the heart, however, were felt feebly on the right side, and the heart-sounds from percussion extended over the same space on this side as they ought to occupy on the left. A full clear sound, heard where the heart's pulsations should be, was transformed at the fourth intercostal space into a dull sound, which extended two fingers' breadth below the edge of the thorax. This dulness corresponded to that which should be produced by the liver; and on the right side, where this ought to be heard, a clear sound was produced by percussion. The spleen was perceived on the right and was not enlarged. The aorta could be plainly felt through the thin abdominal wall coursing along the right side of the spinal column. Thus in this case the heart, spleen, and aorta abdominalis were on the right side, the liver being on the left.—*Allg. Wien. Med. Zeit.*, October 22.

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Medical Times and Gazette.

SATURDAY, NOVEMBER 23, 1878.

QUININE - RASH.

It is well known that certain medicines, when internally administered, especially in individuals with a particular predisposition, may give rise to eruptions on the skin of various kinds, most frequently of an inflammatory nature, or else with the character of a simple fugitive hyperæmia, though, as in the case of the eruptions excited by bromide and iodide of potassium, there may be pustulation. These eruptions, in addition to their unpleasantness, are liable to be mistaken for the eruptions of actual disease, and thus those which follow the use of bromide and iodide of potassium have been diagnosed as syphilides or varicella, copaiba-rash as measles or the early stage of small-pox, and belladonna-rash as scarlet fever. It has lately been discovered that a drug which is in extensive daily use—viz., quinine—may in certain cases (which, however, are probably somewhat rare) produce an eruption closely resembling in many of the symptoms an attack of scarlet fever. In proof of this, Professor Henry Köbner, of Breslau, reported in the *Berliner Klinische Wochenschrift* the following remarkable case, to which he was called in consultation on November 19, 1876:—A sister in a convent at Meran was ordered quinine on November 7 by her medical man in the course of an attack of bronchitis—an affection to which she was subject. Two hours after taking it she had a severe rigor, which was followed by a feeling of suffocation and by severe headache, nausea, and vomiting. About four hours after taking the medicine—namely, at midnight—she had a second shorter rigor, immediately followed by an annoying sensation of burning, which began in the head, and quickly spread down over the whole body. The next morning the patient was very feverish, and was covered with an eruption which burnt and itched, while at the same time she complained of difficulty in swallowing, and of a feeling of dryness in the throat. When Professor Köbner saw her, he found the general eruption of an even dark-red tint, which covered the whole body even to the hairy scalp and the hands and feet. It disappeared on pressure for the moment. There was slight swelling of the face and eyelids, especially the lower. The conjunctivæ were injected, and the mucous membrane of the nose was dry. The flexor surface of the lower third of both thighs was normal, but on the extensor side there were a number of slightly raised dark-red isolated papules of the size of a pea, with healthy skin between them. The pulse was 108, rather full. The temperature of the skin was raised to the touch (the thermometer was not used); the breathing was quiet. The tongue was moist and thickly coated except at the tip; the posterior wall of the pharynx was dark-red and covered with numerous dilated bloodvessels and a little mucus; but the palate, tonsils, and all the rest of the mucous membrane of the mouth, were normal. The urine was tolerably abundant, reddish, clear, and free from albumen or any sediment. Bowels confined. Owing to the appearance of the face and neighbouring parts, and to the fact that the patient had had similar attacks before, Professor Köbner's first idea was that this might be an *erysipelas migrans;* but this was soon abandoned, owing to the rapidity with which the eruption had invaded the whole body, to the absence of a sharp border anywhere, and to the relatively slight fever and general depression present when compared with the extent of the eruption. His second thought was that it was scarlet fever, to which the eruption had a striking external resemblance, not only in its colour, but also in its distribution. The symptoms which preceded its outbreak were also in favour of the latter disease, and, although the origin of the infection could not be traced, yet it was quite possible that one of the other sisters, whose duties brought them into contact with the sick, might accidentally have introduced the disease into the convent. Against scarlet fever, however, there were the following facts, which seemed to absolutely negative the possibility of its existence:—1. This was the third attack within about five months. 2. The tongue did not present its usual appearance in scarlet fever, nor was there any inflammation of the soft palate, the palatal arches, or tonsils, whereas the posterior wall of the pharynx was *alone* affected, which is never the case in scarlet fever. 3. The frequency of the pulse was too slight for scarlet fever at its acme. 4. The redness had involved the whole surface of the skin too rapidly, and the incubative stage had been too short, the first symptoms of the disease having only preceded the outbreak of the eruption by about two hours; 5. The appearance of fine folds over the papules on the thigh suggested the idea that the rash was beginning to fade; and lastly, The papules on the thigh were found not to be connected with the hair bulbs as in papular scarlet fever affecting that region, nor to have the form of wheals such as are not uncommon in scarlet fever; on the contrary, they closely resembled part of a polymorphous erythema at the commencement of involution. For these reasons, and from the recollection of some somewhat similar but slighter cases of eruption following the use of drugs, Professor Köbner gave as his diagnosis *erythema exsudativum universale ex usu quiniæ.* The patient was ordered a purgative, which greatly relieved her, the fever rapidly disappeared, the pulse fell to 80, the eruption became paler, and fine scales became visible upon the face. On November 12, when Professor Köbner saw her again, her whole face appeared as if powdered white from the number of tiny scales which covered it. On the scalp there were also abundant scales. The eruption had completely disappeared from the trunk and limbs; but there were no scales as yet on those parts,

though they appeared afterwards. In other respects the patient was also much improved. On further inquiry it appeared that on June 16, 1876, the patient had had a similar, but much more severe, attack, which was regarded as severe scarlet fever, and in which the general eruption lasted eight days. The temperature rose as high as 39·8° C., and the pulse to 124. There was delirium, and on the ninth day copious desquamation, exactly resembling that of scarlet fever, set in and lasted several weeks, large flakes of epidermis being detached from the hands and feet. Here the eruption followed a dose of 0·225 gramme quinine given for a bronchitic attack, and the whole quantity of quinine taken during the illness was 1·275 grammes, or scarcely twenty grains. On September 9, the unsuspecting practitioner, who had attended her before, being called in for a fresh attack of bronchitis, ordered her some more quinine with a little digitalis. She took only two pills, each containing 0·075 gramme quinine, when the eruption again appeared, and ran its course with desquamation as before, only in a much shorter period and milder form. Although in each case the quinine had been given in combination either with digitalis or Dover's powder, it alone had been given in all the three attacks; and in each case the violence of the outbreak, as well as its duration, had been proportional to the amount taken; besides which, the most careful inquiries among the medical men in Meran failed to elicit the fact that any sample of quinine obtained from the chemist who had supplied it to the above patient had ever been known to produce similar effects in other cases.

Although it is certainly rare for quinine to produce the train of symptoms which occurred in Professor Köbner's patient, yet similar cases have been recorded, and no doubt many others have been misinterpreted. Professor Köbner in his lecture refers to a medical man at Breslau who had suffered from repeated attacks of what he supposed to be erysipelas of the face and scrotum, and who at last discovered that they were all caused by quinine. After taking a single dose of one gramme for facial neuralgia he had a rigor, followed by fever and delirium, and by symptoms of pulmonary congestion, which led to the application of cupping-glasses to his back. The rash lasted four days, and there was abundant desquamation; nor was he able to resume his practice for three weeks. Similar cases (all in women) have been reported in our contemporary, the *British Medical Journal*, October 9, November 13, 1869; January 8 and 29, 1870, by Messrs. Skinner, Hemming, Lightfoot, and Garraway, and by v. Heusinger of Marburg (*Berliner Klinische Wochenschrift*, June 18, 1877). The rash was nearly always general, but in one or two instances was confined to the face, and the desquamation lasted in one case for three months.

The clinical importance of the quinine-rash is due to its great resemblance to that of scarlet fever—a resemblance which has struck all its observers and imposed on some.

Besides those points which were referred to above, and on which Professor Köbner relied in making his diagnosis, there are two or three others which have considerable value. Thus, the swelling of the face and arms, which sometimes occurs quite early in the attack, deserves attention; and the use of the thermometer for twenty-four hours will exhibit very different fluctuations of temperature from those of scarlet fever. If the case is seen early enough, and the urine can be examined within a period not exceeding thirty-six, or still better twelve, hours after the attack begins, quinine may be detected in it, either by Briguet's solution, modified by Binz (iodine two parts, iodide of potassium one part, water forty parts), which will detect from one-forty-thousandth to one-fifty-thousandth part of quinine; or by Kerner's fluorescence reaction (described in Neubauer and Vogel's *Anleitung zur Hamanalyse*, vii., Auflage, 1876), which consists in adding a concentrated solution of nitrate of mercury to about thirty to fifty cubic centimetres of urine until no further precipitate occurs, filtering and washing the precipitate. If quinine be present in any quantity, the wash-water will fluoresce in ordinary daylight; but if the amount be very small, a special instrument is needed to see it.

Quinine is not the only drug which can produce an eruption, such as the patient at Meran and the others we have mentioned suffered from. In one of the latter cases (Skinner's) 0·0004 gramme strychnia (an alkaloid which, like quinine, passes unaltered into the urine) gave rise to a precisely similar eruption to that which at three previous periods had resulted from the use of quinine. Chloral hydrate, which, as is well known, sometimes occasions an erythematous or urticarious rash, in others, as in an instance mentioned by Professor Köbner, has produced a general scarlatinous erythema which terminated in protracted desquamation of large epidermic lamellæ. There seems reason also to believe, from two cases reported by Traube, that digitalis can produce precisely similar symptoms, although Traube himself did not consider the fact as completely proved. The digitalis-rash differs from the foregoing, and from that caused by all other drugs which are at present known to produce an eruption, in the following points:—1. In both cases it appeared several days (in one three, and in the other four) after the digitalis had been discontinued; and 2. The feverish symptoms do not necessarily run parallel with the development of the eruption, but the latter may diminish and disappear while the temperature continues to rise.

As to the *rationale* of the action of quinine in the above cases, Professor Köbner believes that it is due to a true intoxication or poisoning, and not merely to a reflex dilatation of the cutaneous bloodvessels, induced by a stimulus from the gastric mucous membrane. He recalls the fact that an erythema is an occasional incident in belladonna-poisoning, and points out that an incubative period of about two hours preceded the rigor in all the cases. A peculiar sensitiveness on the part of the individual undoubtedly plays a part in the production of these peculiar symptoms, for doses which ordinarily exert no perceptible effect except that of an antipyretic or roborant here gave rise to violent illness. Professor Köbner believes that the erythema and subsequent desquamation are due, not to a simple vascular dilatation in the skin of nervous origin, but to a direct irritant action of the drug, through the blood, upon the tissues of the skin. It is very unlikely that drugs with such different effects on the nervous centres as quinine, strychnia, chloral, and perhaps digitalis, should all produce the same effect through vasomotor agency. Further, he shows that the prolonged use of chloral may be followed by petechiæ, and even by gangrene of the skin, probably from the local perversion of nutrition which it excites, and still further clinches the argument far beyond by mentioning a case in which a copious general eczema was excited not only by external irritants, such as mercurial ointment or solar heat, but by a large dose of quinine taken by the patient during an attack of intermittent fever.

We have entered at some length into the details of these medicinal eruptions, and into Professor Köbner's remarks on them, to draw the attention of practitioners to them. We cannot help thinking that a number of so-called anomalous examples of skin disease may be explained by reference to such agencies, and that the key to some cases of so-called "exsudative dermatitis" or "pityriasis rubra," and possibly of others which have been described as "erysipelas," will be found here. "Recurrent scarlet fever" must henceforth be carefully examined, to see whether it is not explicable by the specific poison of quinine.

TEMPERANCE AND ABSTINENCE.

THERE is no question more interminable than that of Alcohol, its use and abuse. Again and again it has cropped out on the surface of things, and there are not wanting signs of the possibility of yet another renewal of the discussion as to the proper use of alcohol in health and disease. No one, it is said, would argue for intemperance; but the word is not absolute—its meaning is merely relative, and what would be moderation in one man or under one set of conditions, would be intemperance in another under it may be the same conditions, certainly under different conditions. Nor should it be forgotten that abstinence is as truly intemperance as is the improper use of alcohol; for, though the word be not often used in this sense, temperance strictly means moderation. We are led to make these remarks by the appearance in the *Contemporary Review* of what might be called a trilogy, or series of three essays, on the alcohol question. One, from the pen of Sir James Paget, treats of the contrast of temperance with abstinence; the second, by Dr. Lauder Brunton, is on the action of alcohol; and the third, by Dr. Bernays, argues that the moderate use of alcohol is true temperance.

It will, perhaps, be well for us on the present occasion to direct our attention to the first only of these essays, knowing that it is the ripe expression of abundant experience, couched in that felicitous language its distinguished author knows so well how to use. He begins by assuming that there is no need now to write such arguments against intemperance as would be required if it were defended by any reasonable sober person. But here, as already indicated, again we are met by the intangibility of the thing discussed. The temperance of one man would be intemperance in another. For some men a glass of wine would amount to intemperance, if by that we are to imply that he has taken more than is good for him; whilst, on the other hand, there is many a veteran diner-out who habitually needs to correct his self-indulgence, but who would be shocked should anyone apply to him the title of 'intemperate." About abstinence there can, apparently, be no such doubt. But it seems to us that a man (and there are many such) who deliberately abstains from taking that which is calculated to do him good, to increase his strength and vigour, and to give him that sense of well-being which a small quantity of alcohol often bestows—a sense, moreover, which is reflected on all around him—the man who deliberately rejects such goods as the gods provide him—may be abstinent, but he is not temperate. It is quite true that we can easily understand the mental position asserted in a certain proportion of these cases; but in some it amounts to sheer obstinacy, neither more nor less—an obstinacy often developed in more than one direction. Thus we can easily understand abstinence from alcohol in any shape or form as an article of a religious creed being adhered to as rigorously as, under other conditions, certain kinds of meat are rejected. Such a position is perfectly intelligible. So, too, we recognise the ground of action in that other group who, on the broader ground of Pauline doctrine, say, "I will not drink wine lest my brother should offend." But when we come to deal with the large, energetic, and bigoted body who pretend to found their opposition to the use of alcohol on so-called physiological grounds, we are, as Sir James shows, and most reasonable men think, in a position to cope with them.

The plan of argument adopted in the essay now before us reminds us greatly of that of Bishop Butler in his "Analogy of Religion," but it seems to us that the strength of the arguments used is not so imperfectly balanced as in the case of that famous prototype. Those as well acquainted as they ought to be with Bishop Butler's great work will remember how comparatively feeble are his direct arguments in favour of a future state; how sweeping those against an opposite belief. But in Sir James Paget's essay the arguments for moderation are at least equally strong as those against the intemperance of abstinence.

The writer begins his argument with the fundamental proposition that we have no absolute means of deciding between the relative merits of moderation and abstinence. "We have no statistics, and are not within the reach of any." The so-called statistics forthcoming for the determination of such a question are absolutely without value, and so we are reduced to a lower class of argument, which, though less mathematically founded, may by overwhelming mass afford a conclusion which to all intents and purposes is unassailable. First the writer says, "As for the opinions of the medical profession, they are, by a vast majority, in favour of moderation." No one has had better opportunities of knowing this than Sir James Paget, and his opinion may be considered conclusive. True, there are exceptions to the general rule, but if we put out of the way those who do not like alcohol, those with whom it does not agree, and that very objectionable set who take an opportunity of parading their virtues at every dinner-table, it must be accepted that the great majority of our profession are that class hateful to some fanatics, "moderate drinkers." Next, says Sir James Paget, we have against the moderate use of alcohol "some deductions from physiological observations." But he adds, some of these are really such, that if in place of alcohol we were to read common salt, they would equally apply. Undoubtedly this is the case; and common salt is as surely a poison as is alcohol, only it is not quite so often fatal. Nor need we tell our readers that tea, when used improperly, is followed by ill effects, not so serious perhaps, but quite as frequent as those of alcohol itself. Moreover, as Sir James Paget says, "till we have experience large and clear we must not regard the facts of physiology concerning alcohol as more than reasonable suggestions, facts, or opinions, to be received with all respect, but to be practically tested before they can be regarded as practically useful or as decisive of the question here discussed." Again the writer says, "the beliefs of reasonable people are doubtless by a large majority favourable to moderation rather than abstinence, and this should not be regarded as of no weight in the discussion." From all these points the writer argues that "we fail to get any clear evidence that there is mischief in moderation."

Next comes an important and, as we believe, a highly logical passage in reply to the objection that the use of alcohol in any shape or form is not "natural." The essayist remarks, "Our natural state is that in which we live." Had this doctrine been fully thought over and acted upon by our fanatics, we should have had much less nonsense talked, and probably more good done. But, in dealing with this natural and non-natural taste for alcohol, it seems to us that the writer has missed a point which scores well in the argument. For we cannot overlook the universal tendency to the use of alcoholic liquors or substitutes for them. Everywhere, we believe all over the world, wherever anything of a fermentisible nature is to be found, be it mare's milk, or the juice of the palm, there we find alcohol used in some shape or form, and always looked upon as something to be most highly desired. Nay, more—where, as among the Siberian Koraks, alcohol is not to be found, we find an intoxicating fungus taking its place. And is not the Mohammedan's coffee but a similar substitute? So much for "nature."

Turning to another part of his argument, Sir James Paget says, not only is the presumption not opposed to moderation, but it is distinctly in its favour; and to prove this point he has had recourse to a comparison between the east and the west, between those who do not use alcohol and those who do. He finds that the balance is distinctly in favour of the

western races, not perhaps as regards longevity, but as regards "working powers, whether bodily or mental." And here comes a passage we cannot forbear to quote, it seems so full of a wisdom too often neglected. "Longevity," says he, "is not the only or the best test of the valuc of things on which we live. It may be only a long old age or a long course of years of idleness or dulness, useless alike to the individual and the race. That which is most to be desired is a natural power and will for good working, good thinking, and a long duration of the period of life fittest for these; and," he adds, "facts show that these are more nearly attained by the peoples who drink alcohol than by those who do not."

Again, comparing the north with the south, he finds that ascertained facts with regard to these establish a similar view. The northerners, the alcohol-drinkers, are "better men in force of body and mind than are the heirs of the abstainers." Next he argues, we, being the heirs of many generations of alcohol-drinkers, ought by this time, if the habit were so evil, to show signs of a degeneration which he denies to be the case. "If, then," says he, "healthy families are born after thirty generations of habitual drinkers of alcohol, how can we fairly charge its moderate use with doing mischief?"

Finally he urges, granted that the excessive use of alcohol is mischievous, it by no means follows as a matter of necessity that small quantities will have similar effects. Take the case of quinine or of arsenic, where large quantities have totally different effects from smaller doses.

We have followed the eloquent writer through the course of his arguments as closely as we have been able, and our space will permit. We only regret we have not had it in our power to do so more thoroughly and efficiently, but if we have said enough to induce our readers to turn to the original we shall be well satisfied.

One more quotation, and we have done. Sir James Paget ends as we began: "What is this moderation? How may we define it? Let those who thus ask try to define to the satisfaction of any ten persons what, under all circumstances, and to all peoples, is moderation in bread, or the wearing of jewels, in hunting, or the language of controversy." Moderation and excess in either direction, temperance and intemperance, are but relative terms not always understood alike, and, if understood, certainly not acted upon.

THE SALE OF POISONS.

Suicide by taking poison seems to be a very easy matter in England. Quite recently (October 2) the *Times* reported an inquest, where it was proved that the deceased had obtained half-grain morphia pills from a chemist without a medical man's prescription. On October 11 the *Times* reported a suicide by laudanum, sixpennyworth of which was bought at the request of a lodger by his landlady, and drunk by him. Again, on October 19 the same journal announced a suicide at Preston by hydrocyanic acid poisoning.

Persons ignorant of the law may naturally ask, How is it possible to procure enough opium to destroy life without causing suspicion? There is not the least difficulty. By the Amended Pharmacy Act, 31 and 32 Vict., c. 121, poisonous medicines are arranged in a schedule in two parts. Part 1 contains the preparations of arsenic, of hydrocyanic acid, strychnia, aconite, tartar emetic, corrosive sublimate, cantharides, savin, and ergot of rye. Part 2 embraces oxalic acid, chloroform, the preparations of belladonna, oil of almonds (if not deprived of its hydrocyanic acid), opium and morphia and their preparations, and, by a recent enactment, chloral. Now, the poisons in Part 1 can legally be sold only if the buyer is known to the seller, or introduced by some person known to the seller, and the sale must be registered in a book, with the date of sale, the purchaser's name and address, the name and quantity of the article sold, and the purpose for which it is wanted. The poisons in Part 2 can be sold to anyone in any quantity, provided the bottle or box containing them has a "poison" label conspicuously attached to it. Thus it practically depends on the druggist whether a man shall get as much opium or chloral as he likes to ask for, or not; and even if one druggist refuses him he can go to another, or he can buy pennyworths of laudanum at a number of different druggists until he has accumulated the necessary quantity. As no amount of poison labels are likely to deter a suicide, the restriction offered by Schedule A, Part 2, of the Pharmacy Act, comes to very little after all. Whether Part 1 of the same schedule is really much more effective seems to us also doubtful. A man has just poisoned himself with hydrocyanic acid. Where did he get it? And where do the dog-poisoners who have been of late so active in our western counties get their strychnia and other powerful poisons? Is the Act a dead letter, and are its provisions really carried out?

One alteration, it seems to us, is at any rate needed in the existing law—namely, the transfer of the preparations of opium, belladonna, and chloral to Part 1 of Schedule A. There could even be nothing but good attained by getting rid of Part 2 altogether. The public ought also to be protected against itself by allowing medical prescriptions containing powerful sedatives to be dispensed only *once*, unless re-signed and re-dated by the doctor in attendance, and by making the use of such prescriptions by anyone but the patient for whom they were ordered punishable by fine.

THE WEEK.

TOPICS OF THE DAY.

As we were obliged last week to express an opinion that under a recent decision the Food and Drugs Act of 1875 was becoming a dead letter, it is with great pleasure that we find the whole of the London magistrates are not inclined to adopt the view taken by Sir James Ingham. The Vestry Clerk of Camberwell applied to Mr. Chance with a view of eliciting his opinion on the subject in the interests of "the Vestry, the public, and those tradesmen who sold *bonâ fide* articles." Mr. Chance considered the application a very proper one, and explained that he had had an interview with Sir James Ingham on the subject, and had overruled a similar objection taken by Mr. Mayo in that (the Lambeth) Court, as he (Mr. Chance) considered it made the Act all nonsense. If any person paid the price of pure milk, and was served with water, it was sufficient to show that the purchaser was prejudiced; and he intended to hold this opinion in all cases brought before him until overruled by a decision in a superior court against it. It would be an insult to common sense to suppose that it was ever intended that the public should be supplied with milk and water for months, and the person supplying such a compound should ride off without a conviction. At Marylebone Police-court, also, Mr. De Rutzen, in giving judgment in a case of milk adulteration when the article had been purchased by the sanitary inspector for analysis, quoted a case heard before Justices Mellor and Lush which is opposed to the decision of the Lord Chief Justice in the whisky case. In this case (Sandys *v.* Markham) the charge was for selling adulterated mustard, and in answer to the defence—that the purchaser, having purchased for purposes of analysis, was not prejudiced—Mr. Justice Lush remarked, "Surely if the purchaser do not get pure mustard, as he is entitled to, prejudice must be presumed!" This Mr. De Rutzen considered a very strong case,

and until it was decided otherwise he should continue to act upon the law as it stood. As notices of appeal from these decisions have been given, it is to be hoped, for the satisfaction of the country and the public, that the higher courts will finally determine for once and all what really is the correct interpretation of the Food and Drugs Act.

It is a privilege of the members of our legislative body to call for information on almost every conceivable subject, and while, of course, no one has any right to question their object, it is little known at what a heavy cost—for time is money—such information is supplied. These returns, however, when furnished, are bound to be made public; and one which has been compiled at the instance of Mr. Birley has just been issued, showing "the number of deaths by drowning in the inland waters of Wales and England during 1877, distinguishing men, women, and children." The total number of deaths from this cause was 2662. Of this number of persons 1423 perished in rivers or running waters, 637 in canals, and 602 in lakes or ponds.

At a meeting, last week, of the Plumstead District Board of Works, the present condition of the river Thames was again a subject of discussion, and Mr. Kimber moved—"That in the opinion of this Board the works requisite for preventing as far as practicable the sewage of the metropolis from passing into the Thames within the metropolis have not yet been executed, and that sewage found in the river, both above and below the outfalls, shows that the pollution still goes on, and that it is desirable that the sewage should be deodorised or utilised on waste lands, or made saleable, as originally contemplated by Parliament." On this being seconded, the chairman said that all the members of the Board agreed in thinking the condition of the river needed improvement, but he thought it undesirable to pass such a resolution when the matter was being taken up by the Metropolitan Board. The resolution was, however, put to the meeting and not carried. The question between the Metropolitan Board and the Thames Conservators is one of vast importance; and such grave issues are involved that it is evident no steps can be taken without weighty consideration. It is stated that recently several members of the Board proceeded down the river to investigate for themselves the state of the water at certain points, at certain states of the tide. Although rumour has it that one of the party, for a wager, drank a tumbler of water drawn fresh from the stream just over the spot where the *Princess Alice* went down, without experiencing any ill effects, the weight of evidence will eventually be found to be so overpowering that the Board will be compelled to take some action. London increases, not only every year, but every month of the year, and with it the responsibility of providing for the disposal of an ever-increasing quantity of sewage. And this, unfortunately, is not one of those questions which can be left alone to settle itself.

A meeting of the Cambridge Improvement Commission was held last week, to consider Sir John Bazalgette's report on the best means to be adopted for the prevention of discharge of the sewage of Cambridge into the river Cam. Sir John recommends the construction of intercepting sewers, and the final deposit of the sewage upon land below Chesterton. A committee was appointed to consider the advisability of the adoption of the report.

A decree was issued in Chancery, last week, for the administration of the estate of the late Dr. Fraser, of Hampstead. The will was in some points very peculiar; and one clause was to the effect that he had bequeathed £10,000 to the Edinburgh University, for the purpose of founding bursaries connected with the medical profession, but had revoked it on learning that in its medical schools the horrible and atrocious practice of vivisection prevailed; and he had then transferred the bequest to the Scottish Society for the Prevention of Cruelty to Animals. The senseless outcry against vivisection has thus deprived the University of a handsome foundation, and the circumstance will gratify that sentimental portion of the public that is just now airing itself on the subject in one or two weekly publications specially dedicated to "the cause."

Mr. Harry Leach, Medical Officer of Health for the Port of London, last week read a paper at the meeting of the Society of Medical Officers of Health, Adam-street, Adelphi, on "Port Sanitary Work." The address, which consisted mainly of a review of different enactments affecting the subject, showed that, beyond certain piecemeal items of legislation, nothing had been done until recently for the purpose of insuring the comparative cleanliness of a vessel regarded in the light of a dwelling-place. If the inspection of ships were commenced at Gravesend, a much larger staff would be required. The sanitary authorities, under the existing state of things, were obliged to be content with grappling with cases of infection as soon as possible after the vessels had reached their moorings; and thus they were very naturally dependent on extraneous aid, such as that of the Customs, the Thames Police, Dock and Conservancy authorities, and others connected with the port business, from all of whom they received valuable assistance. Fumigation, Mr. Leach pointed out, was often required as a precautionary measure. Port sanitary authorities should also be especially careful about the ventilation and cleanliness of ships, for the means of ventilation were generally most unsatisfactory, and sailors were still a peculiar race, careless and improvident to a great degree. Another point, to which attention should be directed, was the required increase in the number of floating hospitals. Such institutions, he maintained, should be established at Gravesend, for the reception of immigrants and boys who were suffering from infectious maladies on board school-ships. At the conclusion of the paper, Dr. Tidy, Mr. Radcliffe, and the chairman congratulated the lecturer on the success of his work in connexion with sanitary matters at the port of London.

The Metropolitan Asylums Board have adopted the report of a committee recommending that the tender to erect the proposed new adult asylum at Darenth for £60,000 be accepted. The returns showed that during the preceding fortnight small-pox, which a month or so ago had begun to diminish, had again increased. At Deptford Asylum 60 small-pox patients had been received; 17 had died, 21 had been discharged, leaving 109 under treatment, as against 87 the week before. At Hampstead there were only 12 under treatment, and at Fulham only 9. At the latter place 3 out of 6 patients received were unvaccinated children; and the Board directed that the attention of the Guardians of Chelsea should be drawn to this circumstance.

A meeting of the Council of the Hospital Sunday Fund was held on Monday last at the Mansion House, to determine the draft of this year's report, and to order the same for publication. The report stated that the actual amount collected in June last was £24,904 19s. 6d., as compared with £26,082 19s. 1d. received last year. The falling off in the proceeds of 1878 is set down to financial and commercial depression, and is not expected to be permanent. The amount recommended to be distributed was £24,460, and it is proposed that any additional payments to the Fund after this date be allowed to accumulate in aid of next year's fund. In reference to the removal of the offices of the Fund from the Mansion House, the Lord Mayor said it might be imagined that he was very unfavourably disposed towards the Fund. This was by no means the case, as no one in that

room felt a stronger interest in the movement than himself. He must express an opinion, however, that the Mansion House was not the place where any fund should have a permanent office. Some one must bear the brunt in removing a fund which had been located at the Mansion House for five or six years, and he had resolved to take that step. If he allowed such an office he could not with justice refuse the same privilege to any other charity, and he had referred the matter to the General Purposes Committee of the Corporation, who were unanimously of opinion that no charity should have a permanent office there. In reply to questions, the Lord Mayor said he should still allow the Fund to hold the whole of their meetings at the Mansion House, and the General Purposes Committee of the Fund were empowered to search for other offices.

The case of Sir Rowland Hill and others *v.* the Managers of the Metropolitan Asylums District has been commenced in the Exchequer Division at Westminster before Mr. Baron Pollock and a special jury. The object of the plaintiffs will be to prove that the Hampstead Small-pox Hospital is a nuisance. As the case is still proceeding, we shall defer any account of it till it is concluded.

OBSTETRICAL SOCIETY OF DUBLIN.

The inaugural meeting of the forty-first annual session of this Society took place on Saturday evening, November 16, in the Hall of the College of Physicians. There was a numerous gathering of members and visitors. The chair was occupied by the outgoing President, Dr. Thomas Darby, of Bray. Dr. William Roe, the Honorary Secretary, read the report of the Council for the past session, which was adopted. The President then delivered a valedictory address, in which he reviewed the work of the session of 1877-78, and referred in terms of sympathy to the recent death through a melancholy accident of Dr. John James Adams, of Kingstown. In vacating the chair, he had to thank the Society for the honour they had conferred on him in electing him during two successive years to the proud position of President of so important and useful a society. The ballot for officers to serve in the session of 1878-79 was announced to have resulted as follows:—*President:* Edward B. Sinclair, M.D. *Vice-Presidents:* J. R. Kirkpatrick, M.B., and Fleetwood Churchill, F.K.Q.C.P. *Treasurer:* J. J. Cranny, M.B. *Secretary:* William Roe, M.D. *Council:* Lombe Atthill, M.D.; John Denham, M.D.; George Johnston, M.D.; George H. Kidd, M.D.; Alfred H. McClintock, M.D. The incoming President, Dr. Sinclair, having taken the chair, gave a short address, in which he alluded to the founding of a maternity and of a training institution for midwives in connexion with Sir P. Dun's Hospital, and to the granting of degrees in the obstetric art by the University of Dublin. The Army Midwives' School had since 1869 furnished the British Army with nearly 400 well-trained and well-educated midwives. Dr. George Johnston then communicated an exhaustive clinical report on the use of the forceps in the Rotunda Lying-in Hospital during the seven years of his mastership of that institution, from 1868 to 1875 inclusive. The discussion on this paper was postponed to the next meeting, and the Society adjourned.

THE ANNUAL REPORT ON ST. MARYLEBONE PARISH.

The annual report on the health of the parish of Marylebone for the year 1877, by Dr. John Whitmore, the Medical Officer of Health for the district, has recently been published. In addition to this annual report, Dr. Whitmore issues a monthly statement of the health of his parish, so that much of the information now summarised has already been presented to our readers at different times. It may be mentioned, however, that the death-rate for the year under notice—viz., 21·92 per 1000 of the population—was the lowest that has occurred in the parish since the year 1856, when the Metropolis Local Management Act first came into operation. The average annual deaths during the past twenty-two years amounted to 3837; those of the past year (3491) are therefore 346 below the average. The sanitary work of the parish is extensive, as may be gathered from the fact that for one item only—construction of new sewers—the sum of £33,589 has been expended in the years 1875-76-77, and another £700, has yet to be spent in the completion of these undertakings. The sewerage of the parish, Dr. Whitmore explains, had got into a disgraceful and dangerous condition, and in some of the finest streets and squares the sewers were little better than elongated cesspools, containing deposits of sewage matter to the depth of several inches. It would evidently have been highly dangerous to have delayed any longer the outlay required to remove such a state of things. A certain area in the parish has been marked out to be dealt with under the Artisans' and Labourers' Dwellings Improvement Act, and the scheme having been approved by Parliament, it only remains for the Board of Works to carry out the details.

ARTIFICIAL HEART-DISEASE.

We take the following from an abstract in the *Centralblatt Med. Wiss.*, No. 37, 1878, of a thesis by Dr. Rosenbach, of Breslau, in which he describes the results of experimental lesions of the valves of the heart, and discusses the light they throw on the clinical side of the subject. The aortic valves were rendered incompetent, and the segments of the mitral and tricuspid valves, as well as the musculi papillares and chordæ tendineæ, torn and divided by a special method described in the original paper. Neither severe lacerations of the valves, nor considerable obstruction to the circulation, caused by introducing bougies, and small bags which could be inflated to any extent with air, had any influence on the arterial pressure. Hence the author concludes that immediate compensation must take place, dependent, he believes, on a reserve of latent force (*Reservekräfte*) in the heart-muscle itself. This reserve is sufficient to enable the heart to overcome impediments to the circulation until hypertrophy has developed. Dr. Rosenbach describes the first step towards hypertrophy as "primary dilatation" of the particular ventricle or auricle during diastole. Such dilatation gradually becomes permanent, and then the hypertrophy succeeds. In answer to the question, When and under what circumstances can endocarditis be produced? Rosenbach found that mere lesions of the endothelium gave rise to deposits of fibrine free from bacteria, while injuries to the valves (if we rightly understand the abstract) were followed by deposits on their surface containing micrococci. Some of the latter cases perfectly represented ulcerative endocarditis, and were even attended with embolism and hæmorrhages, and with the presence of bacteria in the impacted emboli. Lastly, it was found that the heart's orifices could be artificially narrowed to a large extent without producing a murmur, but that lesion of the ventricular valves or their chordæ tendineæ always caused a systolic murmur, which was absent if only simple deposits of fibrine occurred on the valves. Injury to the aortic valves produced the same symptoms as ordinarily attend aortic incompetence. Fibrinous deposits on the defective valves may to a certain extent compensate for their incompetence. These are the main points of a somewhat novel research.

THE ACTION OF COFFEE.

Professor Binz has found (*Arch. für Exp. Path.*, ix.) that caffein, the alkaloid of coffee, has an opposite action on the temperature of the body to that of quinine. A dog's tempera-

ture was raised almost 1° Cent. in an hour by 0·7 gramme; while in another case 0·5 gramme raised it 1·4, without causing poisonous symptoms in either instance. Very large doses not only raised the temperature, but caused death by convulsions; but the latter could be averted by artificial respiration. Moderate doses of caffein raise the blood-pressure, the effect being the same whether the pneumogastric nerves are divided or not. Professor Binz has also examined the effect of cafeoon, the name given by Boutron and Frémy to the volatile products developed in the coffee-bean by roasting, and he finds that it acts, like caffein in moderate doses, as a stimulant to the brain, the heart, the respiration, and the heat-producing apparatus. He agrees with Hoppe-Seyler and Volt, that an ordinary infusion of coffee slightly increases rather than diminishes tissue-change. In any case, the influence it exerts in this direction is very trifling. The potassium salts contained in coffee are probably of no physiological importance.

THE HEALTH OF BIRMINGHAM.

The quarterly health reports of the Borough of Birmingham for the periods ended March 30 and June 29 last contain no features of special interest. The number of deaths registered in the former period was high—viz., 2592, equivalent to an annual death-rate of 27·06 per 1000 of the population. Dr. Alfred Hill considers the increased death-rate must be ascribed chiefly to the high mortality from scarlet fever and whooping-cough, more especially the latter, the deaths from which alone represent a death-rate of 2·2 per 1000. The fatality from diseases of the respiratory organs was also much higher. Taking note of these facts, it is not surprising to find that the death-rate exceeds that for the similar period of the years 1875, 1876, and 1877. The report for the latter of the two periods under notice records a more satisfactory result, as the death-rate had then fallen to 21·35 per 1000, as against 25·06 in the corresponding period of the previous year. The average age at death in the first of these two quarters was twenty-four years and two months; and in the latter twenty-five years and four months. Dr. Alfred Hill has during the foregoing period analysed no less a number than 264 samples of water taken from wells in the neighbourhood; the majority of these were found to be so dangerously contaminated with sewage impurities that immediate steps had to be taken for closing all the wells.

THE EPIDEMIC OF SMALL-POX IN IRISH TOWNS.

Since the latter part of July small-pox has been fatally prevalent in Galway—forty-two deaths from this disease having occurred among a population of 19,000 in the seventeen weeks ending November 9. So wide-spread was the outbreak that the matter was brought under the notice of Dr. Brodie, one of the inspectors of the Local Government for Ireland. At a recent meeting of the Board of Guardians of the Galway Union, Dr. Brodie said he felt bound to bring under notice a state of affairs which demanded public attention. Passing by Suckeen the day before, he went into a cabin about twelve feet by ten, and there were lying on the floor in a couch of straw three persons in small-pox, suffocated almost by smoke, which, to use a common expression, was so thick that you could cut it. This he considered an almost unparalleled state of affairs. Dr. Browne, Surgeon to the Galway Infirmary, more than corroborated Dr. Brodie's statement, and said that to his own knowledge a girl named Kelly was attacked with small-pox at Water-lane—a filthy locality—which proved fatal, and what was the result? That on Wednesday night last a public wake was held there, against all law and order, and to the danger of the public. The next day the funeral passed through the town in the middle of the day, with the people carrying the coffin on their shoulders. Galway is not alone in this sad state of sanitary neglect or mismanagement. At Kilbeggan, in the Co. Westmeath, a severe epidemic of small-pox is also prevalent. On November 13 an inquiry was held by Dr. Brodie, when some grave charges were preferred against the medical officer of the district by the Dispensary Committee. Pending the decision of the Local Government Board on these charges, we refrain from comment on the matter.

EXECUTIVE COMMITTEE OF THE GENERAL MEDICAL COUNCIL.

It will be remembered that during the late session of the Medical Council their solicitor, Mr. Ouvry, was requested to obtain the opinion of counsel on the interpretation of Clause 6 of Section 11 of the Dentists Act, a doubt having been raised as to whether, under that clause, the Medical Council are entitled to register in a separate column the qualifications in medicine and surgery under the Medical Act (1858), held by registered dentists, or only higher qualifications in dentistry. At a meeting of the Executive Committee, held on the 8th inst., they were informed that Mr. Charles Bowen had been consulted on the point in question, and that his opinion is as follows:—"I am of opinion that Section 11, Clause 6, only gives the Council power to register higher qualifications in dentistry. The knowledge referred to in that clause appears to me to be confined to knowledge in dentistry." At a meeting of the Executive, held on the 9th inst., the Registrar informed them that he, up to that date, "registered *completely* 1418 dentists, all of whom had duly satisfied the conditions for registration laid down in the Dentists Act, making in all, including those applicants whose claims are awaiting the more formal Acts connected with completing their registration—such as sending diplomas, properly filling up their registration-papers, and the like—a total of about 1450." Of that total 120 are Licentiates in Dentistry of the Royal College of Surgeons of England. Of the 1298 who claimed to be registered on the ground that they were "*bonâ fide* engaged in the practice of dentistry at the date of the passing of the Act," 854 declared that they had been practising dentistry separately, and 444 in conjunction with the practice of medicine, surgery, or pharmacy. At each of these two meetings the Executive Committee had under consideration the constitution of the Medical Council.

ITALIA IRREDENTA.

Have our readers noted, in the *Times* report of the attempt to assassinate the King of Italy, in which Signor Cairoli was wounded, what was done to the wounded man? The wound was slight, it was said—superficial, but had bled much. The man was put to bed, and "ice and leeches applied." Who would not be taken ill in the sunny South of Italy! It was thus they killed Cavour. But we fear that Italian medicine is not yet wholly redeemed from the evils which ages of bigotry and oppression have produced.

PAYING PATIENTS IN PUBLIC HOSPITALS.

At a General Court of the Governors of St. Thomas's Hospital, held on the afternoon of Wednesday last, it was proposed by the Treasurer, Mr. Alderman Stone, that certain wards should be devoted to the reception of paying patients. He calculated that two guineas a week might be charged for ordinary patients, and for a certain limited number of difficult cases three or four guineas. In this way, as the block to be assigned for such cases would hold sixty-one or sixty-three patients, he calculates that an annual sum of upwards of £7000 would be realised, for he is quite sure there will be a rush of such patients. The expenses would only amount to £4000 odd, so that the Hospital would make a good profit. There are some parts of this story which are pitiable in the extreme, but in the meantime we refrain from further referring to them. The motion was carried unanimously.

ABSTRACT OF THE

INAUGURAL ADDRESS DELIVERED BEFORE THE EPIDEMIOLOGICAL SOCIETY.

By SURGEON-GENERAL Dr. JOHN MURRAY.

On this occasion Dr. Murray returned to an old and useful plan—that, namely, of reviewing the chief outbreaks of epidemic disease occurring during a given period. He began by giving an account of the most important epidemic diseases of India, and stated that in consequence of the time required for collecting the necessary details over so extensive a country, the official reports of the Sanitary Commissioners of the different provinces, with the exception of two, comprehend only the early part of 1877. In India cholera was quiescent in 1874. At this time there were only a few cases in Eastern Bengal; in the Western districts, where famine was reported, the disease was less prevalent than in the previous or subsequent years. With the exception of the eastern portion of Bengal the deaths from cholera were only 7872 in the whole of India, while in 1875 they amounted to 384,421, and in 1876 to nearly half a million. In 1877 cholera was prevalent in the famine districts of Madras, this being probably due to the concentration of large numbers of starving people in the famine camps. A valuable report of Dr. Townshend, Sanitary Commissioner of the Central Provinces, confirmed Dr. Murray's experience that the diffusion of this disease over the country is dependent on human intercourse. The epidemic of 1875-76 was generally diffused over the whole of India with slight exceptions; the disease was in its ordinary form. Quarantine regulations are found impracticable in an open commercial country, but were employed successfully in the gaols. The advantage of removal of troops from infected localities was clearly proved. The influence of season on cholera was shown in tables which accompanied the address. On October 31 a cyclone drove the sea over the coast of Chittagong, destroying 50,000 lives, and this was followed by cholera which carried off 82,000 people. Famine was very severe, and cholera very fatal, in the Madras Presidency during the later part of 1876 and in 1877. In 1876 the mortality from this disease was 160,486, and in the first four months of 1877 it reached 288,981. There has been a marked increase of mortality from fever in India during the last four years. A severe attack of plague visited Kumaon in 1876. This disease has not become acclimatised, although it has several times been imported on the western coast from the Red Sea. Plague has been very fatal and contagious, and showed all the characteristics seen in the plague in Egypt, and in the plague at Palee in 1836. The peculiarity observed in Kumaon was the late appearance of buboes, and, in some cases, black vomiting and yellowness of skin. The plague which prevailed in 1876 on the lower course of the Euphrates is not reported as continuing there in 1877. It appeared in the north at the Persian town of Resht, near the south-west corner of the Caspian Sea, in March, and proved fatal in 4000 cases. The disease had not appeared in that city since 1832. There are reports of slight attacks round the southern end of the Caspian Sea, at Astrabad, and among the nomadic tribes of Herat. At Tiflis, in Armenia, a fatal form of fever occurred among the Russian troops and also among Turkish soldiers; and the same disease is reported to have been imported to the Russian troops on the Danube: it occurred mostly in hospitals and stationary camps, and was contagious; accurate information concerning it is still wanting. Yellow fever has prevailed with great violence during the present year; it broke out in June, in New Orleans, soon after the arrival of the steamer *Emily B.*, London. Early in July cases were reported by the Board of Health, and the epidemic spread rapidly along the course of the Mississippi. In August it appeared in Grenada, and next in Memphis. One-third of the population left the latter city; many of the refugees were attacked, and the disease spread to the surrounding country. Soon after Memphis, Vicksburg was attacked. By the latest accounts the epidemic appears to be subsiding as the cold season advances. The mortality from small-pox in India during the two years under consideration was nearly 200,000, while in the two previous years it was nearly half a million. During 1875-76 only two deaths resulted from this disease among 120,000 European troops. This immunity is clearly due to vaccination. Small-pox is never entirely absent from India, but is quiescent during the rainy season, slightly prevalent during the cold season, and attains its maximum in May and June. Before our possession of India, inoculation was practised by the natives. The operation was confined to the cold season, as erysipelas was likely to follow at other times. Experience teaches that a similar result attends vaccination when performed in the hot and rainy seasons, even when every precaution is taken. Operations in the plains are therefore suspended from April to October; they are, however, continued in the hills, and a supply of lymph is thus maintained. In Assam, Dr. Renzy reports that small pox is endemic; the indigenous population suffer very severely, but the coolie population of the tea-gardens are entirely exempt, as vaccination is compulsory on them. Accompanying tables indicated the progressive diminution of the rate of mortality from small-pox in the Punjaub. In the three Presidencies the number of vaccination operations during the two years 1875 and 1876 amounted to 3,729,275, of which 3,390,097 were successful.

COLLEGIATE MEETINGS.

In reply to the Memorial recently presented to the Council of the Royal College of Surgeons by certain Fellows of the College, requesting a meeting at the College, the President, Mr. J. Simon, and the Vice-Presidents, Mr. L. Holden and Mr. J. E. Erichsen, have submitted the following Report, which was adopted at the last meeting of the Council:—

Report by the President and Vice-Presidents, on the Memorial recently referred to them, which asks for a Meeting of Fellows.

The Memorial which the Council, on the 17th ult., received from certain Fellows of the College, and referred to the President and Vice-Presidents for consideration and report, adverts to a printed address which Mr. Quain some months ago circulated generally among the Fellows advocating that the Fellows should once a year meet for the discussion of matters of professional interest, and should, between such meeting-times, be represented for certain professional purposes by a standing committee of their number; and the request of the memorialists is, that the Council should now convene within the College a general meeting of Fellows, for the purpose of considering Mr. Quain's suggestions, and of taking such action on them as may be deemed desirable.

The President and Vice-Presidents have read Mr. Quain's address with the consideration which they think eminently due to it, both as regards its subject-matter, and as regards the professional rank and character of its author: they presume that all their fellow-councillors have done the same: and they daresay that among those readers, personally considered, many, perhaps all, may so far sympathise with the general sentiment of the address as to wish they could see their way to take part in giving effect to it. The President and Vice-Presidents, however, are not prepared to say that, in their opinion, the Council (as such) could properly take the formal step which the memorialists desire, to have Mr. Quain's suggestions discussed in a public meeting of Fellows to be held within the College; and they think it the more necessary to submit to the Council the doubts which they entertain on this point, as they foresee that the requested action, if taken, might seem to say that the Council would, if requested, be ready to take further official action in the matter of Mr. Quain's suggestions.

The President and Vice-Presidents do not find in the College records any precedent for such a meeting of Fellows as is now proposed. No College meetings (other than for lectures, and orations, and elections) have, it is believed, ever been convened by the President or Council, except the three, not exclusively of Fellows, but generally of all members of the Corporation, which were convened in the earlier half of the year 1870; and though the President and Vice-Presidents would think it foreign to their present business to discuss those meetings in detail, yet, remembering that as individual members of Council in 1869 and 1870 they were warmly for the principle of the meetings, they now feel bound, in quoting the precedent, to record also their personal admission, that the experience of those meetings made them aware of practical difficulties which they had, perhaps, hardly

enough foreseen in the matter, and that, in their opinion, much consideration would be requisite before the President or Council could again incur the responsibility which the convening of such general meetings involves. Though the College records do not give any precedent for such a meeting of Fellows as is now proposed, the Council Minutes of the period to which reference has been made record a distinct vote of the Council on the question, whether it would be well for the College formally to convene annual meetings of Fellows. It appears, namely, that on February 10, 1870, Mr. Quain moved in the Council—"That it is expedient that the Council convene a meeting of the Fellows annually on the day appointed for the election of members of the Council, for the purpose of discussing such subjects as shall be notified in the paper summoning the meeting:" and that on the following May 13 (the matter having in the meantime been referred to a committee which was considering the whole subject of College meetings) a negative to Mr. Quain's motion was moved; whereupon the Council, accepting this negative, voted—"That it is not expedient that the Council should convene a meeting of Fellows on the day of election of members of Council."

The positive law with regard to College meetings is understood by the President and Vice-Presidents to permit that either the President or the Council may, if seeing fit, convene the Members of the College for any business which concerns the Corporation in general, or convene exclusively the Fellows of the College for any business which is exclusively theirs; but the fact being, that the Members at large have in law no corporate responsibilities assigned to them, nor the Fellows any exclusive responsibility beyond that of their electoral function, the framers of the College by-laws seem not to have contemplated any holding of meetings within the College except for lectures and orations, and, in the case of Fellows, for the election of members of Council; and apparently no meeting can be held within the College except under the conditions which govern those cases. That is to say—first, the meeting must have been convened by the President or Council; and, secondly, the President or Council convening it must have defined the particular business or matter in respect of which it is convened; and, thirdly, the President or one of the Vice-Presidents, or some other member of the Council, must preside at the meeting, and act in control and direction of it; and, fourthly, unless the business of the meeting be by right exclusively for Fellows, the meeting must have been convened without distinction of class, and must be open indifferently to all members of the Corporation.

The President and Vice-Presidents, on their above-stated understanding of the law, doubt whether the Council could in strict lawfulness convene a meeting of Fellows to consider the suggestions of Mr. Quain's address; for the summons to any such meeting would, it seems, have to imply that the suggestions concern the Fellows in their functional relations to the College: whereas, as Mr. Quain himself very pointedly explains, his "proposal is wholly independent of the Charter and of the duties imposed by it on the Council and on the Fellows," and his "subject is not within the province of the Council."

Further, and quite apart from any narrowly legal view of the case, the President and Vice-Presidents are of opinion that, if the Fellows of the College should wish, as Mr. Quain suggests, to graft on their present legal status a certain social organisation for purposes not within purview of the Charter and by-laws of the College, it would be inexpedient as regards the College, and probably at the same time inconvenient to the Fellows themselves, that the voluntary organisation should in any formal way be identified with the official machinery of the College. The forms and sanctions under which College meetings have of necessity to be held could not, without embarrassment to both parties, be extended to meetings which would be of unofficial and ultra-legal intention. Meetings of the latter sort may rightly be of far larger scope than meetings which are within rule of special charters, and needless endeavours to make them move in the same lines may breed discord instead of harmony. To fellows who might wish to meet for the wider purposes, it would probably be a disappointment to find that, if they were assembled within the walls of the College, they could not, in the present state of the law, enjoy the same freedom of discussion and conduct as in meetings held elsewhere at their own discretion. And to the College at large any ultra-legal meeting of Fellows within its walls would bring with it this serious inconvenience, that, though the meeting could not in fact give legal validity to its proceedings, yet, since under the by-laws it must be presided over by the executive of the College, it could hardly seem so unofficial and unauthoritative as not to give to the College government at least an appearance of duality.

In a different point of view, if allusion may be permitted to a fact which is not formally within cognisance of the Council, the President and Vice-Presidents would appeal to the knowledge which every member of the Council informally has of the annual dinner, which, ever since the institution of the fellowship, the Fellows of the College have, by voluntary agreement and organisation among themselves, arranged for the day in July when elections to the Council take place, —for it seems to the President and Vice-Presidents that, if there be much demand among the Fellows for such an annual debate-meeting as Mr. Quain suggests, probably the unofficial organisation under which the festive meeting is held would be ready and able to subserve the two purposes at the one opportunity; so that, on the same day with the dinner, and on an equally unofficial basis, there might be an afternoon meeting of Fellows for such general and free debate as the College could not at present formally invite.

Mr. Quain's address does not itself anywhere state whether the annual meetings which he proposes are meant by him to be held within the College, and consequently to be convened and presided over by the College executive; but this question could not fail to be raised in any preliminary meeting of Fellows which should be held with intention of giving effect to his suggestions; and if the views of the Council, as to the answer which any such question ought at present to receive, are substantially those which the President and Vice-Presidents have here expressed, it would hardly be appropriate, and might probably cause misapprehension, if the convening of Fellows, "for the purpose of considering Mr. Quain's suggestions," were an authoritative act of the Council.

Accordingly, as regards the memorial to which the present memorandum refers, the President and Vice-Presidents recommend to the Council to say to the memorialists that, not as implying any opinion on the merits of the matter in question, but from considerations which relate to the Charter and by-laws of the College, the Council does not feel itself at liberty to convene a meeting of Fellows to discuss the suggestions to which the memorial refers.

November 5, 1878.

EXAMINATIONS AT OXFORD.—The final examination for the degree of Bachelor of Medicine will commence in the medical department of the Museum on Monday, December 2, at 10 a.m.—T. K. Chambers, D.M.; J. Andrew, D.M.; T. P. Teale, M.A., B.M. The first examination for the same degree will commence at the same place on Monday, December 16, at 10 a.m.—George Rolleston, D.M.; J. A. Dale, M.A.; A. G. V. Harcourt, M.A. The examination in Preventive Medicine and Public Health will commence in the Sanitary Laboratory of the Museum on Monday, December 9, at 10 a.m.—G. Rolleston, D.M.; W. Farr, D.M., D.C.L.; D. Galton, D.C.L.; W. F. Donkin, M.A.

LIGATURE OF THE LINGUAL ARTERY IN REMOVAL OF THE TONGUE.—Dr. Shrady, Surgeon to the Presbyterian Hospital, New York, having narrated a case in which this had been executed, terminates his paper with the following propositions:—1. In cancer of the tongue, whenever it is possible, the disease should be removed through the mouth. 2. Ligation of the lingual artery is a very necessary preliminary. 3. The ligation should be performed near the origin of the vessel, as by that means the whole of the blood-supply of one side of the tongue is completely cut off. 4. The ligation of the artery, even in that situation, is less difficult than the severing the vessel in the wound during the operation, and when there is free hæmorrhage deep in the mouth. 5. The distance between the external carotid and the points of ligature is sufficient for the formation of a firm clot and the prevention of secondary hæmorrhage. 6. The use of the scissors and the knife places the wound in a condition more favourable for rapid healing than when the écraseur or any variety of caustic is used. 7. Ligature of the lingual may have a tendency to retard the return of the disease.—*New York Med. Record*, September 14.

MEDICAL ENDOWMENTS AT OXFORD.

We are indebted to our contemporary, *Nature*, for the following details of existing endowments assigned by founders for the study of medicine, and of human anatomy and physiology as bearing on medicine, in the University of Oxford. The paper will be read with much interest, and greater surprise, in these days, when "the higher education" in everything is so much talked of, if not aspired to.

"I. The Regius Professorship of Medicine, as at present constituted, is worth about £500 a year. The items are: (1) from the Queen's exchequer, £35; (2) as Master of Ewelme Almshouse, £250; (3) as Aldrichian Professor of Medicine, £126; (4) examination and graduation fees, £70 to £100.

"II. Lord Lichfield's Clinical Professorship, which is not united with the Regius Professorship, is worth £200 a year.

"Dr. H. W. Acland holds both the Regius and the Clinical Professorships: no instruction is given by Dr. Acland in either capacity.

"III. The Linacre Professorship of Physiology and Anatomy has absorbed the old foundations for the encouragement of human anatomy, namely, the Tomlinsian Prælectorship and the Aldrichian Professorship. It is worth £800 a year, the sum which Merton College pays in place of the original endowment entrusted to it by Thomas Linacre, founder of the College of Physicians, and once a lecturer on medicine n Oxford. The Linacre Professor is engaged in teaching Comparative Anatomy to candidates for the B.A. degree.

"IV. A separate Demonstratorship of Anatomy, worth £200 a year, also still exists, and was intended by the Commissioners of 1852 to provide for the teaching of human anatomy, as designed by Tomlins and Aldrich. The gentleman who holds this post is Curator of the Museum of Comparative Anatomy, and does not teach Human Anatomy.

"V. The beautiful old Physic Garden founded by Earl Danby in 1622 is another heirloom of the Medical Faculty of Oxford. The chair of Botany was endowed by Dr. Sherard, and the College of Physicians of London elect the Professor. By special provision, the clergy are excluded from this professorship, and *preference is to be given to a medical graduate*. The chair is now worth, with later additions, about £400 a year.

"VI. Lastly, a very important trust fund is administered by the governing body of Christ Church, the bulk of which was left by Dr. Matthew Lee in 1755 to provide for anatomical teaching in relation to medicine *exclusively*, Dr. Lee's expression of his intentions is very clear and precise. He assigns, in his will, £100 a year as the salary of a reader in anatomy; £50 for expenses of two bodies and dissection; £30 to a reader in mathematics and physics, and the remainder to be given in annual prizes of £10 to scholars from Westminster School. The trust is now worth £3400 annually. It is spoken of in the return made by Christ Church to the Commissioners of 1874 as 'Dr. Lee's Benefaction for Senior Students in Natural Science.' This is not quite accurate: firstly, because Dr. Lee designed the major portion of his benefaction for students in anatomy as bearing on medicine, and not for natural science generally; and, secondly, because Christ Church uses nearly half of Dr. Lee's trust-money to pay classical scholars from Westminster School, whilst the remainder is used to support a most efficient chemical laboratory, and to pay, in part, the salaries of the accomplished chemist, zoologist, and physicist, who are styled 'Lee's Readers.' No part of Dr. Lee's bequest is now assigned to medical studies, though it should be stated that the present application of Dr. Lee's fund has obtained Parliamentary sanction."

To such of our readers as are members of the British Medical Association, the above paper will probably tell little or nothing that they have not heard before, as the *Journal* of that Association contained during the first months of the present year many articles and letters upon the "Lost Medical School" of Oxford. But the information conveyed by the paper is put in a very convenient and concise form, and the strange and startling story it tells of the way in which some of the medical endowments at Oxford are disused, and some are misused or misappropriated, cannot well be too often repeated. And doubtless many medical men have yet to learn, to their astonishment, that handsomely-paid sinecures still exist in the medical profession. We need hardly say that our only object in noticing the matter now is to help the efforts that have been, and still are being, made to restore the Oxford Medical School; and not to reflect on the present professors. The decay and starving-out of the School has been a process of slow and gradual growth. Reference to the Blue-book, containing the report and evidence of the University Commission, 1852, will show, we believe, that the Regius Professor of Medicine of that day, Dr. Kidd, stated that "on the subject of medicine he had never been called on to lecture"; partly because it had, for some sixty years, been the custom for the medical students of Oxford to go to London or other schools for instruction in the theory and practice of medicine, and partly because while in Oxford they preferred attending the lectures of Lord Lichfield's Clinical Professor at the Radcliffe Infirmary. Since that time the Clinical Professorship has been annexed to the Regius Professorship, and, like it, has become a sinecure. Nothing that we can say can add to the force and significance of the statement above quoted; but we may point to the happy contrast afforded by the efforts made in the sister University of Cambridge for the formation of a living and active School of Medicine. The School of Anatomy and Physiology there is said to be constantly increasing in usefulness. Original research is carried on by several students; and the elementary and advanced classes for practical work are attended by seventy students. The anatomical classes are also attended by increasing numbers of students. Under such men as Michael Foster, Humphry, and Creighton, the teaching is earnest and real. Trinity College is founding a Professorship of Physiology, with a stipend of £500 a year; and the Master and Fellows of Gonville and Caius College have recently considerably enlarged the chemical laboratory of the College, and have added a small but very serviceable lecture-room, with a private laboratory for the Prælector.

The inhabitants of the town of Crewe have just presented to the Mayor and Corporation of that borough a full life-size oil painting of Alderman James Atkinson, J.P., M.R.C.S., he having been elected the first Mayor, and filled the civic chair two years successively.

Enormous Hypertrophy of the Breasts.—A young girl, who had not yet menstruated, found, after taking a cold bath, just as the menses seemed about to appear, her breasts so rapidly increased in size that she was obliged to leave service in consequence; and so large did they become that she could not appear in public. Iodine, after a five or six months' trial, only suspended their further enlargement. She was presented before the Académie des Sciences de Montpellier, being then aged fifteen years and a half. The breasts were then supported on her thighs, and their weight had curved the spine and displaced the scapulæ. The circumference of the right breast was 94 centimetres, and that of the left 1 metre 5 centimetres, the pedicle of the former measuring 67, and of the latter 69 centimetres. They descended 8 centimetres below the umbilicus on the right, and 13 centimetres on the left side. Of the flattened nipples only vestiges remained. The majority of those present at the Academy advised removal, but to this the patient would not consent. The hypertrophy remained stationary for eight years, when, in spite of her infirmity, the patient found a husband. After her marriage the breasts began to diminish sensibly in size, but she was unable to suckle either of her three children, as her enormous breasts did not yield any milk, although they became turgescent during pregnancy. She is now thirty-two years of age, and is again pregnant, and has lost the appearance of deformity which she had heretofore—seeming, when suitably dressed, only like a woman with very large breasts. The present measurements are—the circumference of the right breast 27 centimetres, of the left 33 centimetres; the pedicle of the right 32 centimetres, and of the left 34 centimetres. The breasts still descend almost to the navel, they having altogether diminished in size by one-half. When she is not pregnant, these organs—then still less voluminous—seem to consist of an immense mass of wrinkled and flaccid skin, traversed by enormous varicose or dilated bloodvessels—the mammary glands themselves being almost completely atrophied.—*Rev. Méd.*, November 11.

FROM ABROAD.

Chloroform in Natural Labour.

Professor Courty of Montpellier has recently contributed to the *Gazette Hebdomadaire* (October 25 and November 8) an interesting paper upon "The Employment of Anæsthetics during Natural Labour." It seems to be founded upon an address which he delivered at the International Congress of the Medical Sciences held at Geneva last September, which was occasioned by a paper upon the subject read by Dr. Piachaud, warmly approving of the practice. While agreeing with Dr. Piachaud in his conclusions upon the subject, Prof. Courty took occasion to regret the slight extent to which the practice of giving chloroform during labour prevailed in France. And, indeed, it is a matter of surprise, after the safety of the practice and its great advantages have been demonstrated for so long a period in this country, so far from having been introduced into France, it has been met with what may be called a violent opposition on the part of accoucheurs—even those in high position. But we cannot but feel surprised that Prof. Courty, in the paper which we are about to notice, having for its main object the making known the utility of chloroform and the futility of the objections which have been advanced to its employment, makes no allusion whatever to the efforts which have been already made in the same direction by Dr. Charles Campbell, formerly Chef de Clinique of Prof. Paul Dubois, and for many years past one of the most distinguished accoucheurs of the French metropolis. Yet surely his authority in the matter is of far higher import than that of Prof. Courty, who states that he is only in possession of forty cases of his own whereon to base his recommendations. Dr. Campbell was enabled in his first publication upon the subject in Prof. Gubler's *Journal de Thérapeutique*, in 1874, to refer to more than 900 cases in which he had employed chloroform in natural labour; and in his memoir presented to the Congress at Geneva, and since published separately in 1877, he states that he has now administered it in 1052 out of 1657 labours, without the production of hæmorrhage or other accident, and without delaying the progress of delivery. The truth of his statements has not been denied, but still the practice which they inculcate has been violently opposed by Profs. Pajot, Depaul, and others, chiefly in consequence of, it would seem, their having confounded the moderate amount of anæsthesia (*demi-anesthésie*, or *anesthésie obstétricale*) employed by Dr. Campbell with surgical anæsthesia which he would reserve for obstetrical operations. However, we do not doubt that the practice will eventually triumph over the opposition which always awaits every innovation in France that is not of Gallic origin.

In the meantime, we may advert to Prof. Courty's own observations. He states that although for a long time past he has not practised midwifery, yet he has often found himself compelled to comply with the wishes of patients who, having formerly undergone treatment for uterine or peri-uterine disease, and become subsequently pregnant, and attend them in their confinements in order to allay their fears. In regard to these cases, two things have to be observed. First, that none of them were primiparæ, so that it is possible that less chloroform may have sufficed for them. On the other hand, all these patients had been before the subjects of more or less dangerous puerperal accidents; so that the opportunities were exceptionally good for judging of the efficacy and utility of obstetrical anæsthesia, since it was known beforehand that all these patients had had bad times on former occasions, several of them having been on the point of dying from hæmorrhage or other accidents. They were therefore in relatively unfavourable conditions when compared with those of ordinary lying-in women. In all these patients, more than forty in number, chloroform was employed, and in none of them did it give rise to any serious inconvenience, or cause regret for its having been used.

1. Speaking from the experience which he has derived from observation of these cases, Prof. Courty observes, first, with regard to the period at which the chloroform should be given, that although this should not be considered as arrived so long as the pains are moderate and regular and all seems progressing without excessive suffering or exhaustion, yet it should not be laid down as a rule that we must wait until the expulsive period has arrived, and the torture of its accompanying pains has to be prevented. When the pains become too strong or irregular, when the patient becomes excited or exhausted by their violence, continuousness, frequent return, irregularity of their course, or the diversity and multiplicity of their seat, their neuralgic character, and want of effective power, chloroform should be administered: and it is marvellous to observe how, after a few aspirations, without loss of consciousness, or even complete loss of sensibility, the pains assume their proper intermittent character with equal periods of repose, the contractions become regular, and the labour re-acquires its normal course. The first advantage of chloroform, therefore, is its relief of excessive, irregular, and enervating pains, without impeding contraction, a sensation even of slight pain being still sometimes perceived. The inhalation is repeated or not in proportion to this amount of sensation, and the patient may be thus watched and kept in a state of half-somnolence for hours, the labour still progressing, and expulsion taking place almost unconsciously. The benefit which accrues from this suppression of pain by the diminution of subsequent reaction has not been sufficiently adverted to.

2. A second advantage is the cessation of muscular contractions, which are themselves the consequences of painful sensations having the double character of reflex motions and synergetic actions. Some of these contractions form a direct obstacle to parturition, as in perineal resistance. A portion of uterine effort is necessarily expended in overcoming this resistance; and when this is obviated, so much is gained, the uterine contraction being then employed solely in furthering the progress of the presentation. The duration of the labour is diminished by so much; and in all these cases it was found as a fact that the preceding labours had been very much longer. As regards the other contractions that are suppressed, of the muscles of the abdomen, the diaphragm, and other muscles which, participating in the effort, are brought into play when the patient exerts all her force in aid of the action of the uterus, the advantage of their suppression may not seem so evident. Prof. Courty, while admitting their immediate direct efficacy in aid of the expulsive action of the uterus, operating in this way as they do in micturition and defæcation, yet believes that the service they render is often a very questionable one, giving rise frequently to accidents to which too little attention has been paid. Moreover, he does not believe that the duration of labour is really abridged by these voluntary contractions, inasmuch as proportionate perineal resistance remains. By suppressing both the abdominal and the perineal muscular contractions, the uterus is allowed to pursue its work without obstruction and without disorder, its contractions then taking on a regularity in every way favourable to the accomplishment of its function. The energetic and regulated action of the uterus can be readily felt, and may almost be seen. This has been so markedly the case in all the cases that have come under Dr. Courty's notice, that he is quite at a loss to comprehend the fears of some accoucheurs, and still less the observations which they have reported of the suppression of uterine contractibility under the influence of chloroform employed in suitable doses.

3. As a consequence of the suppression of pain and the diminution of the duration of labour, "traumatism" is necessarily also diminished. When we consider the amount of this which is produced in a prolonged labour by the pressure, contusions, lacerations, intestinal effusions, etc., which occur, influencing so many organs, we can only be surprised that we do not oftener meet with ovaritis, metritis, perimetritis, peritonitis, vesical fistulæ, and the various other puerperal accidents, which may be regarded as the natural results of such a traumatism. The chances of such accidents are greatly diminished by obstetric anæsthesia, and in no one of his cases has Prof. Courty met with any one of them.

4. Another advantage, which is opposed to the assertions of some accoucheurs, has been the result of Prof. Courty's observation, viz., the absence of hæmorrhage, and that with regard to some of his patients who in former confinements had suffered from it. This may be due to the fact that none of the cases have been primiparæ, and that he has never had to carry chloroformisation very far. The labours having been very short, and the womb having had to continue its

contractions for a relatively less time than ordinary, and not having to overcome perineal resistance, has not suffered subsequently from inertia, the ordinary cause of hæmorrhage.

"In employing chloroform for lying-in women I observe the same precautions as in all my operations. In place of having her chloroformed by an assistant, so as to produce both insensibility and muscular resolution, assimilating her to a corpse, as I have sometimes seen done in England on patients about to be operated upon (which I may say, in passing, explains to me the incomparably greater frequency of deaths from chloroform in that country compared with our own), I cause her to breathe the chloroform by little whiffs, and mixed at first with plenty of air, making her count aloud, in order to cause her to respire regularly, and at the same time render me an account of the condition of the nervous centres. I suspend the anæsthesia when the pains have been rendered tolerable, resuming it and suspending it again according to the necessity. I have thus, without any danger, been able to prolong anæsthesia in women in labour from one hour to eight and even ten hours, and have consumed in a day, in small whiffs, 120, and perhaps even 150, grammes of chloroform. I say 'perhaps,' for it is difficult to dose it when the most simple and least frightening mode of administration is employed, viz., by a sponge placed in a curved napkin. Thus used, so little fear does it excite, so easy is it employed, and so well tolerated by most patients, that they familiarise themselves with it to the risk of converting it into an abuse if not carefully watched."

REVIEWS.

Comparaison des Effets de Divers Traitements dans l'Hystérie, précédée d'une Esquisse Historique sur la Metallo-thérapie. Par Oscar Jennings, Docteur en Médecine de Paris, Membre du Collége-Royal des Chirurgiens de Londres. Paris, 1878.

This work is an inaugural thesis for the degree of Doctor in Medicine of Paris. The system of obliging every student to write and sustain a thesis before his diploma is delivered to him, when carried out as thoroughly as it is in Paris, is one which we greatly admire. In most of our English and Scotch universities (the University of London being a notable exception) a thesis is required from the candidates for the doctorate, or at some earlier period of the curriculum. These, however, are rarely printed, and are almost unknown outside the little circle which is immediately concerned with them, and exert little or no influence on the advance of medical science. In Paris, on the other hand, the thesis is a reality, and a great deal of labour is bestowed upon it even by the less ambitious student; it is printed and published, and, if of considerable merit, advertised and sold like any other work; and in the course of the year many valuable contributions to science are produced. Where it does nothing else, the thesis collects into a convenient form all that has been written on a given subject, and it thus affords valuable aid in bibliographical research; but where the thesis is the work of one of the better students—of one who has been collecting materials during the four years of his *internât*, aided by the suggestions of the physicians or surgeons under whom he has served—it is much more than this: it is an original essay on some new point which it is sought to establish by means of a series of carefully reported cases.

The thesis before us comes within the first of these groups. It displays a large amount of bibliographical research without the addition of much new material. Unfortunately, the subject chosen by the author is one which is not much aided by reference to previous work. The whole question of hysterical anæsthesia and of its treatment has so recently come within the cognisance of science, and all that has been written and said about it until within the last few years is so mixed up with the marvellous and so imperfectly reported, that little or no help in the explanation of the phenomena can be expected by reference to it. It is, in our estimation, quite open to question, moreover, whether it is of any use for the present to go on manufacturing hypotheses to serve as an explanation. For the last eighteen months or two years many of the most able physicians and physiologists, both in France and in England, have written upon the subject, with the result that we are exactly where we were at the beginning of that period—a great number of explanations having been offered, not one of which fits entirely with the facts, or is sufficiently probable to carry conviction into the minds of unbiassed observers. Whilst recognising the extreme interest of the subject, we are strongly of opinion that the time has arrived when speculation should cease; when we should be ready to acknowledge that our knowledge is as yet far too rudimentary to allow us to make an induction. We must be content to work steadily on in the acquisition of new facts, whether physiological or pathological, relating to the structure and functions of the nervous system; and we may rest assured that, if the work be honestly and thoroughly done, we shall eventually arrive at a logical explanation of all that is now puzzling us.

There is nothing in the thesis before us which will help us in any way. There is a great amount of information—some of it, however, only remotely connected with the subject—gathered from many sources, ancient and modern; but this is for the most part curious rather than scientific. The reports of cases are very few in number, and have all been previously published—some of them over and over again. A great deal of space is devoted to the expression of the author's opinion that the cause is to be found by reference to the imagination; but we fear that a mere opinion, even if it were expressed by a thoroughly competent observer, would carry but little weight if unsupported by proofs. This thesis is a fair example of the bibliographical essay; but now that he has his full degree, we hope the author will devote his attention to gathering new facts, and will be content for the present to leave theories to take care of themselves.

FOREIGN AND COLONIAL CORRESPONDENCE.

AMERICA.

Philadelphia.

Meeting of the American Gynæcological Society—Decline of the Birth-rate in New England—Efforts to Popularise the Metric System—The Mantle of Burke and Hare.

I briefly alluded in my last letter to the recent meeting of the American Gynæcological Society at Philadelphia. It would scarcely be an act of justice to such an association of the first gynæcologists of this country to pass over their labours so lightly, for they reflect in their papers and discussions the advanced sentiments and views of the day, and are worthy of a more extended chronicle. By the death of Dr. Peaslee, Dr. Goodell, of this city, first Vice-President, became the presiding officer of the Society. Professor Goodell is well known at home and abroad for his varied contributions to the medical literature of this specialty, and is highly esteemed as a clinical teacher and practitioner. Without entering into a minute report of the proceedings, brief allusion may be made to some of the subjects which elicited the most animated discussion. There seemed to be a tendency to make the forceps the *pièce de résistance* of the session. Certainly whenever an opportunity offered, even when the paper under discussion appeared to be only indirectly suggestive of that mode of mechanical assistance in delivery, the current seemed to set that way almost impulsively, and the forceps received its tributes of respect or criticism from a score of learned and ingenious obstetricians. Dr. T. A. Emmet, of New York, read an excellent paper showing the necessity for early delivery, as demonstrated by the analysis of 161 cases of vesico-vaginal fistula. In it he took the ground that this variety of fistula is generally due rather to delay in the second stage of labour than in the use of instruments. The accident was due also to a full bladder, and most of the cases cited were in the charge of midwives, and not among the better classes. In seventy of the cases it was nearly two weeks before the slough occurred, and in fifty others the introduction of the forceps was attended with the escape of urine. He thought the loss of tissue was proportionate to the duration rather than the violence of the pressure. He advocated the application of the forceps as soon as the head remains stationary and does not recede after a pain, that being the moment of danger when delivery should be speedily accomplished. Of the 161 cases reported, 146 were cured, and nine improved; so far as

known, only one died, and that from another disease. As Dr. Emmet incidentally alluded in his tables to the details of treatment under different modes of delivery, such as the forceps, ergot, craniotomy, version, etc., the discussion naturally enough turned to the forceps, especially as he had declared that in all his experience, which is well known to be vast, he had never seen a case of vesico-vaginal fistula occur from its use. Dr. Albert H. Smith, of Philadelphia, corroborated this statement by reciting the fact that of 11,000 cases treated by the Lying-in Charity of that city, where it was the rule to apply the forceps early, only one case of vesico-vaginal fistula had occurred. His view was that instrumental interference was necessary when pressure became continuous. The experience of Dr. Fordyce Barker of New York, Dr. J. P. White of Buffalo, and others, was that the dangers of the forceps had been grossly overestimated, and the regret was expressed that in some cases they had not resorted to their employment. Dr. Barker thought they should be applied as soon as the head ceased to advance, the uterine contractions remaining in force, rather than when the head ceased to recede. Dr. Storer, of Boston, was opposed to their indiscriminate use, and had not seen a case of laceration of the perineum where the forceps had not been employed. All the participators in the discussion insisted on the propriety of resorting to the use of the catheter before applying the forceps, especially as labour would then often advance rapidly. The forceps loomed up again at the last day's session, on the presentation of a paper by Dr. A. H. Smith on Pendulum Leverage of the Forceps, in which he asserted that pendulum movements are in direct violation of the teachings of nature, are absolutely useless as far as aiding traction is concerned, increase friction by augmenting the mutual pressure of the head and pelvic walls, injure the pelvic tissues, waste force, etc. The discussion on this paper became so general, and the views expressed so various, that I should be compelled to give a more minute report than my space allows should I attempt to indicate their scope or character. The sentiment, however, seemed to be generally favourable to the practice of at least a slight lever or pendulum movement, at certain stages of labour more particularly, rather than by the use of direct traction. In a discussion on Post-partum Hæmorrhage, suggested by the papers of Dr. H. P. C. Wilson of Baltimore, advocating the use of the hand as a curette, and of Dr. R. A. F. Penrose, advocating vinegar as *the* remedy for this condition, that liquid being introduced into the uterine cavity on muslin or linen rags saturated with it, the various causes of post-partum hæmorrhage were fully considered. Dr. White used acetic acid as a styptic, mopping the uterus with it by means of absorbent cotton wound on a probe. Dr. Gaillard Thomas, of New York, thought the safe practitioner should not rely on any one remedy—he should try to detect the cause; and in many cases any irritant applied to the inside of the uterus would answer the purpose; dilute alcohol or hot water were preferable to the dangerous iron sulphate. Others advocated the use of hot water at 110° simultaneously with the turning out of the clots; of dilute tincture of iodine; of permanganate of potassium; of ether subcutaneously injected: of external manipulation with one hand over the abdomen while the other was inserted into the uterine cavity, the hand being allowed to remain until expelled by the uterus, and extreme care being used that laceration or other injury did not result from it. Dr. Goodell, President, gave an interesting address on the Relations of Neurasthenia to the Diseases of Women, or, as it was plainly expressed, "of nervetire to womb-ills." He thought that the tendency of gynæcologists was to give too much credit to the uterus and its appendages as a cause of disorders of women. Many affections of the reproductive organs were only local expressions of general neuroses. Patients were benefited in such cases by general, not by local treatment. Rest, generous diet, improvement of nutrition, sleep, freedom from pain, were the means of cure indicated. He cited cases in which ninety-nine out of a hundred medical men would ascribe the symptoms to uterine origin, and yet these recovered without local treatment. The nerve-centres were at fault in such cases. Many other subjects were offered for discussion, and the gynæcological field ably surveyed. The annual volume of *Transactions* issued by this Society is a beautiful contribution to the literature of the day, valuable in its records of experience and skill, a memento of the labour and practical active sympathy of some of the most earnest men of the medical profession in the alleviation of human suffering.

Questions of sanitary science are receiving so large a share of attention at the present time that a passing reference may be made to some peculiarities of American social life which may not be familiar to every English or American physician. Dr. Nathan Allen, of Lowell, Massachusetts, a member of the American Medical Association, who has displayed much careful observation in this direction, and in the discussion of questions in which medicine blends with social science, has published a number of papers embodying some important statements. From his own statistics and those of other observers it seems to be well established that in this country there has been of late years a remarkable diminution in the size of families among the native inhabitants. From a careful examination of the history of many towns in Massachusetts it has been found that the average number of children to each family has been gradually diminishing through several successive generations; commencing in some places with eight or nine to each family, and now numbering only three or four. It was stated some time since in a prominent medical journal of that city that medical men in New York found an average of not more than three children in a family. Among the higher classes very few families had more than five children, very many had but one child, and altogether too many had none at all. He has also shown conclusively that the physical improvement of the American people has been retarded by undue development of the intellectual faculties. Excess of development of any part of the system has been shown to be hostile to fertility. As was remarked recently in the columns of the *New York Medical Journal*, this would seem to be clearly shown by the growing disinclination among young married women to assume the duties of maternity; and such disinclination, if widespread, of course tends to undermine the foundation of the married and maternal relation. Dr. Allen has also shown that the birth-rate of a people depended very much upon a particular type of organisation, and hence there must be a certain physical standard which determines the law of population. Statistics are adduced which prove that the decline in the birth-rate of New Englanders, which corresponds to that of France, is so decided that the birth-rate of that stock of people is now only about one-half that of the Irish, English, German, and French-Canadian.

A systematic effort to popularise the Metric System in medicine is now being made by the Metric Bureau, as it is called—a society having its head-quarters in Boston. The Marine Hospital Service is required, by a circular issued by its Surgeon-General last May, under the approval of the Secretary of the Treasury, to make use of it hereafter for all official, medical, and pharmaceutical purposes, it having been already adopted by that Service for the purveying of medical supplies. This Metric Bureau is sending out through the country a variety of small cards and circulars containing all needful information as to this system, and has even prepared what it calls "wooden missionaries," in the shape of rules or decimetres jointed together into ten-fold pocket meter rules, made of common wood, to be supplied to schools, one to each scholar, at a few cents each. They have contracted for a million of these rules, and the Bureau claims that if in this way it succeeds in its plan of putting a meter in the pocket of every child in our schools, sufficient interest will be developed to carry the introduction of the system into effect at an early day. If it were possible to give these away, instead of selling them, the sanguine expectations of this metric organisation would be more likely to be fully realised.

A singular criminal case has recently interested the medical profession as well as the general public. A woman in Connecticut being arrested for murder, Prof. Sanford, of Yale College, testified that she visited his office for the purpose of making negotiations for the sale of human bodies, stating that she had one ready for delivery to him at twenty-five dollars—the body of a man killed in a drunken brawl and thrown over the fence into her yard; that she had barrelled up the body herself, and, anticipating its purchase by the doctor, had directed it with his name on it. Previous to this date, however, she had called at the doctor's office accompanied by another woman. They had been told that there was a medical college in New Haven, where subjects were sometimes purchased. Mrs. Alexander, the one now on trial, said she wished to sell her body, and her friend wished

to do the same; that her life had been full of trouble. The doctor of course refused her request, and advised her to return to her home. She then asked him if the College authorities would not advance her some money if she gave an agreement in writing that after her death her body should be delivered to the College; to which the doctor responded negatively in most decided terms. She then inquired of him if she had not the right to dispose of her own body; and that if a body could be procured to promote medical science, and the civil authorities gave permission, whether the College would not pay her a consideration. The doctor stated that it was not unusual for the College to pay for a subject, as it was quite a common thing to purchase subjects for the dissecting-room. She said she could procure two or three bodies whenever they were wanted. The doctor gave these women some good advice, and they left him; but not long afterwards he received a letter from Mrs. Alexander, asking him to give her the address of some resurrectionist, that she wished a man to help her, and that she could get three bodies at once for the College. To this Dr. Sanford replied that he could not comply with her request, that they had no dealings with such people, that robbing of graves was against the law of the State, and that he would not violate the law himself or assist others to do so. Such are some of the revelations in this case developed at a coroner's investigation, which will be more fully brought out when it passes into the jurisdiction of the court. It is supposed that she has either planned or accomplished the murder of one or more persons, especially as one or two mysterious disappearances have taken place in her vicinity.

PROVINCIAL CORRESPONDENCE.

LIVERPOOL.

November 9.

Hospital Sunday—College for Higher Education—Death of Dr. Vose—Increase in the Staff of the Royal Southern Hospital.

Hospital Sunday has become such an important institution in many large towns of the United Kingdom that anything relating to it cannot fail to be of interest. The Mayor of Liverpool, A. B. Forwood, Esq., has made practical suggestions, characterised by great ability and boldness, for improving the financial position of the medical charities, when at various times he has in his official capacity presided over their annual meetings. To some of these suggestions, such as those for an association of the different institutions for certain common ends, and for a systematic canvass of the 30,000 householders whose position was such as would imply an ability on their part to contribute to such institutions, etc., I have previously directed attention. At the annual meeting of the Hospital Sunday Committee and supporters, on the 5th inst., he again manifested his great interest in the medical charities by the recital in his address of certain startling facts which it must have cost him no little labour to collect. Thus, having obtained the reports of fifteen of the medical charities which receive a subsidy from the Hospital Sunday Fund, he had found that no less than 258,200 separate cases had been relieved by them during the single year, or about one in two of the entire population, on the supposition that the same individual was treated for only one illness during the year. But even if a very liberal allowance be made for cases where patients applied for the treatment of two or more illnesses within the twelve months, these figures must be regarded as of very serious import, and must surely, as the Mayor remarked, point to the necessity of a more rigorous inquiry than is at present instituted into the circumstances of those to whom relief seems to be so indiscriminately granted. He did not think it possible, he observed, to find more than 50,000 persons whose circumstances were so poor as legitimately to entitle them to be the recipients of charity, and it followed that the 200,000 in addition who had received aid would, if pressed, have found some means of payment for services rendered to them, and must have been losers in self-respect and independence from having failed to do so. In contrast to the large number thus aided, only 4800 had received medical assistance from the parish of Liverpool during the same period of time. With the exception of 1874, the collections made last year on Hospital Sunday and Saturday were the largest since the institution has been established. It reached £10,044 3s. 1d., whereas in 1874 the sum was £11,185 8s. 9d. In the words of the eighth annual report, "the movement may be presumed to have attained a steady and regular pace," and to afford to the participating charities an income of about £10,000 a year.

Some six months ago I gave an account of preliminary steps that had been taken towards the establishment in Liverpool of a college for higher education, corresponding with similar institutions recently founded in several large towns. At the meeting held on May 25 a resolution was passed authorising a committee to draw up a scheme and submit it to a future town's-meeting. This meeting was held in the Council Chamber of the Town Hall, under the presidency of the Mayor, on the 6th inst. It was large and influential, and its hearty and unanimous adoption of the scheme submitted to it is in itself a guarantee of its not very distant fulfilment. According to the scheme it is provided that at the commencement there shall be a staff of seven professors and two lecturers allotted as follows:—Professorships—Mathematics and Experimental Physics; Classical Literature and History; Engineering, Practical Mechanics, and Steam; Logic, Mental and Moral Philosophy, and Political Economy; Modern Literature and History; Chemistry; Natural History (including Botany, Zoology, and Geology). Lectureships—Jurisprudence and Law; Physiology. For the foundation of the above professorships and lectureships it is considered that a minimum sum of £75,000 will be required; each professor having a stipend of £300 per annum and a proportion of class fees, and each lecturer £150 per annum. Three gentlemen wrote offering £1000 each, and a letter was read from the Earl of Derby, in which he expressed his "entire sympathy" with the movement, and his readiness "to give practical support to it when the time comes." A large and thoroughly representative committee was then formed, with full power to receive subscriptions and do all other things necessary for carrying the scheme into execution.

Within two days of this meeting one of the best known and most universally respected of the members of the above committee died. I allude to Dr. Vose, for a long time the acknowledged head of the medical profession of Liverpool, and whose death, after only a few days' illness, is felt to be an irreparable loss to that profession and the town.

The Royal Southern Hospital, whose work has been largely growing for years past, has recently added to its staff a third honorary physician. The gentleman elected to the post is Dr. W. Williams.

Hofrath Prof. Skoda.—This distinguished teacher and *savant* has so much improved in health that he rides or walks out daily, and has been able to pay a visit to his former pupil and assistant, Prof. v. Schrötter, who has been dangerously ill from perityphlitis, but who is now convalescent. At a recent visit which Prof. Skoda paid to the Vienna Medical Society, of which he is Honorary President, in answer to the warm greetings which he received, he replied, "I greatly thank you, gentlemen, for the honourable reception which you have accorded to me. I can do no more for the Society, and I only come hither to listen to the progress of our science."—*Allg. Wien. Med. Zeit.*, October 29.

Election of College Examiners.—There will be a meeting of the Committee on Examinations in Anatomy and Physiology at the College of Surgeons, on Monday next, to receive the nominations from members of the Council of eligible candidates from the list of Fellows of the College to seats at the Board of Examiners. At present we have only heard of the following gentlemen, all of whom are Fellows by examination (their names appear in the order of seniority as such), viz.:—1. Mr. Francis Mason, St. Thomas's Hospital; December 11, 1862. 2. Mr. W. Morrant Baker, St. Bartholomew's Hospital; November 25, 1864. 3. Mr. John Langton, St. Bartholomew's Hospital; June 8, 1865. 4. Mr. Edward Bellamy, Charing-cross Hospital; June 13, 1867. 5. Mr. H. G. Howse, Guy's Hospital; June 11, 1868. 6. Mr. Edmund Owen, St. Mary's Hospital; December 12, 1872. 7. Mr. Jeremiah McCarthy, London Hospital; June 19, 1873. No doubt others will be added before the day of election; and where all are so good it will be a difficult matter to make a selection.

GENERAL CORRESPONDENCE.

THE ENGLISH TROOPS IN CYPRUS.

[To the Editor of the Medical Times and Gazette.]

Sir,—Will you permit me to make a few remarks upon a letter which appeared the other day in the *Times*. The writer says, "As an inhabitant of Cyprus, I think I may trace as the principal source of evil the way of living of the English soldiers in Cyprus." Now, I am not going to defend the British soldier for his way of living, because he has nothing whatever to do with it. He eats the rations which are provided for him, and does not order his own dinner. What I want to do is to stand up for the "British stomach," which I hold to be an organ not to be treated lightly, nor played upon by an inhabitant of Cyprus.

I have read, in bygone years, a wild sketch of a country called "Skitzland," where the inhabitants never really dined; when they were hungry, they merely unbuttoned their waistcoats, took out their stomachs, and sent them to the nearest cook-shop to be filled at so much a head; and so long as they were filled, the inhabitants of Skitzland were content. This may be philosophy, but it is not dining. Dr. Johnson was also a philosopher, and he loved to dine. He observed on one occasion that "A dinner lubricates business." All Englishmen as a rule will, I am sure, agree with Dr. Johnson, because they know and feel as he did, that "a stomach" is not a mere bag, or a digestive apparatus, but *a stomach*—an organ of fine feelings, sweet emotions, tender associations, and cherished predilections.

Soldiers are but men, after all. Here and there is a hero who will eat his boots as soon as look at them, sprinkle his sandwiches with gunpowder instead of salt, and sniff the smoke-wreath from his pistol-barrel in preference to lavender-water or eau-de-cologne. Of such stuff we make our generals; but I plead only for the rank and file, with the ordinary supply of British stomachs. I know the men will in time of danger live on the smell of an oil-rag, and do their duty; but can we expect them to tamper with their appetites for the chance of avoiding disease? I shall say rather, Can we expect the Commissariat to alter the rations of the troops in order to acclimatise the men?

The Cypriot diet, I believe, consists largely of olives, maize, bringals, chilies, grapes, and mulberries, and I will suppose that the Commissariat have issued tenders for enormous quantities of these delicious vegetable productions, also that the doctors have formed a diet table, and that the gallant linesmen are about to sit down to "a mulberry feast" on the proper day devoted to that nutritious article of food. I will suppose all this; but my imagination cannot picture the soldiers thriving upon it.

Is it to be assumed that a flesh-eater can convert himself into a vegetarian at the call of the bugle, and yet suffer no ill effects? Is it all the same to a healthy appetite whether it is offered beef and plum-pudding, or pumpkins and bringals? Is it the same thing to the liver? and does the whole alimentary canal treat with sublime indifference all that passes through it? I don't deny that by degrees the British stomach may be tamed, and become Cypriotic or acclimatised; but who on earth would dream of making such experiments on soldiers? When are the trials to cease, and how long are they to last? The gallant 200th Foot may be "broken in" to grapes and chilies to-day at Cyprus, but in a year's time they may be in Moscow, with stomachs all unprepared for Russian diet; and when they have got accustomed to "caviare," they may be called on suddenly to live on fish at Vancouver's Island. It is all very well in foreign climates to imitate the customs of the natives *which will fit in with English habits*, but of all things in the world it is most ridiculous to ask Englishmen to throw all their own culinary institutions overboard, and become foreigners, whenever they go abroad. England has something to teach as well as much to learn, and probably the diet scale of many people results principally from their never having been able to procure better articles of food. When Captain Cook reached New Zealand, the natives had no food but fish, fern-root, and occasionally human flesh. Cook taught them better, for he gave them pigs and poultry. Does anyone suppose it would have been right for the great discoverer and his crew to have adopted a native dietary? Certainly no cook would say so, nor would I,

Your Roving Correspondent.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, November 12.

Charles West, M.D., President, in the Chair.

A Case of Morphœa.

Mr. George Gaskoin gave the history of a case of morphœa which exhibited in no ordinary proportions and in multiplied manifestations the *morphœa alba tuberosa* as described by Wilson, the *dartre de graisse* of Retz. Equally prominent were certain black maculæ which lay somewhat apart from the former, and were, it seemed, in no direct relation to it. They were generally orbicular where they had not coalesced, and were bounded by a sharp outline. There were none of smaller dimensions. Leucoderma was also present in a few areæ, with another contour from that of the tuberous morphœa. The complaint affected the head and trunk and upper portion of the limbs. It was a symmetric. It occurred in a young female and had existed many years. The origin of the complaint was probably traumatic. It was altogether an indigenous case.

The President inquired whether this black maculation was common in leprosy. He had not seen it in the Leper Hospital at Bergen.

Mr. Gaskoin said that the form leprosy took was not the same in all countries.

Dr. Thin would be glad to hear more of the case hereafter. It seemed to him probable that two rare diseases, morphœa and leucoderma, were here associated. His experience of leprosy in the East would hardly lead him to bear out the diagnosis of leprosy here.

Mr. Gaskoin said that in the disease referred to the white coloration did not follow the darkening, but *vice versâ*.

The Skin in Tinea Tonsurans.

Dr. Frederick Taylor read a paper on the condition of the skin in tinea tonsurans. The subject of the disease died of tubercle of the cerebellum after a long illness, and the ringworm was only partially treated. A portion of the scalp was hardened in alcohol and chromic acid, and sections were stained in logwood and picrocarmina. The results of the examination were as follows:—Numerous hairs were affected by the fungus, some in an early stage, others in an advanced stage. In the former the hair retained its form, and had within it simply a varying number of mycelium-threads running parallel to its length. In the later stage the hair was obscured by a crowd of spores closely packed in the follicle; in the middle of these the outline of the hair was seen, but its substance seemed to be completely destroyed or replaced by mycelium-threads running in a longitudinal direction. In a downward direction the fungus did not reach beyond the upper end of the bulb of the hair. The hair papillæ were never invaded. Laterally, the spread of the fungus was limited by the inner root-sheath, with which in advanced stages the spores were in contact. The integrity of this sheath was maintained, even where the follicle was choked with spores. The outer root-sheath never showed any trace of fungus; nor did the follicle-walls, subcutaneous tissue, cutis, and mucous layer of the epidermis. So much of the horny layer of the epidermis as remained in these specimens showed no fungus even in the immediate neighbourhood of diseased hairs. The diseased hairs were not twisted or broken as in Dr. Thin's specimens (paper read before the Society, March 26, 1878), nor were any but the merest traces of inflammatory action present. From these results it appeared that the fungus invades the hair proper and advances in its substance down towards the bulb; that it never advances far into the bulb or attacks such tissues as the root-sheaths; that its growth in the follicle is determined by the supply of hair from the papilla, the freshly formed soft cells resisting its action until in their turn they assume the characteristics of the proper hair-substance; that should the papilla fail to form new hair-cells, the fungus must shortly

starve. With reference to treatment, epilation cannot insure the extraction of the fungus, as the hair will give way in the shaft, leaving mycelium-threads near the bulb ready to advance on the new cells as they become hair. On the other hand, the natural fall of the hairs, or the same fall could it be artificially induced, would, by separating the hair at the papilla, effectually turn out the whole disease, re-infection of the new hair being prevented by the contraction of the follicle-walls around the retreating stump.

Dr. Thin thought Dr. Taylor was probably correct as to the cause of the twisting of the shaft of the hair. His specimen was taken from a young and vigorous horse, instead of from an enfeebled child. The chief evidence of inflammation in these cases was derived from the presence of leucocytes; and the use of chromic acid rather than of bichromate of potash seemed to render these less easily recognised.

Dr. Taylor said the skin did not present the ordinary appearances of inflammation. No doubt the methods of staining exercised a certain influence on the appearances observable, but he had used both logwood and carmine here with nearly the same results.

The Nature of Iodide-of-Potassium Eruption.

Dr. George Thin read a paper giving the results of a microscopical examination of a portion of skin which was the seat of a bullous eruption occuring in a patient who had been taking iodide of iron and iodide of potassium for three months for constitutional syphilis. The patient, a man aged thirty-five, the subject of renal and mitral regurgitant disease, was, when he died, under the care of Mr. Howard Marsh at St. Bartholomew's Hospital. He ceased to take the iodide on May 10, the eruption came out on the 13th, he was admitted into the hospital on the 18th, and died on the 22nd. The eruption occurred in the form of bullæ and pustules on the face and on the dorsum of the right hand. Its nature was recognised by Mr. Marsh, Mr. Baker, Mr. Langton, and Dr. Crocker. The part examined was from the dorsum of the hand. The cutis under the bulla presented three distinct areas of morbid change. The central area was composed of a structureless, almost homogeneous, but faintly granular substance, containing at several points rows of leucocytes. The middle area was composed of a layer of exudation cells suspended in a very delicate reticulum. The outer area was formed by remnants of connective-tissue bundles, separated from each other by wide spaces. There were a few bloodvessels in the second area, and a large number in the third. The vessels were distended by red corpuscles, and their walls were in many instances partially disorganised. The substance in the central area consisted of coagulated albuminous material from the blood. The third area was bounded almost abruptly by the ordinary bundles of connective tissue of the cutis. The sebaceous glands were unaffected. Portions of bloodvessels in the deeper strata of the cutis, and distant from the bulla and from the sebaceous glands, were found distended and plugged with disorganised blood. The epidermis over the central area was ruptured and disorganised. The bulla was formed by injury to the walls of the bloodvessels of a limited area, and by consequent escape of blood fluid which displaced the connective tissue, pierced the rete mucosum, and accumulated under the horny layer of the epidermis. The author pointed out that the tendency of iodine, when present in the blood-current, to attack special points of the vessels, as has been shown in the case, explained all the varieties of eruption produced by iodine. The injury in its mildest form was shown in the common iodine-acne, in a more severe form in bullous and pustular eruptions, and in its worst form in iodine-purpura. As an explanation of the latter form, it was suggested that a portion of the wall of the vessel was so suddenly and completely destroyed that the local changes were limited to effusion of a small quantity of pure blood and to plugging of the vessel. Amongst various conditions which it might be imagined act as causes of the more severe forms of iodine-eruption, it was suggested that a sluggish circulation and deficient excretion may find a place; and some such hypothesis might be framed to explain why in the present case the eruption only appeared during the week preceding the patient's death.

Dr. Baxter said that usually iodide of potassium was very rapidly eliminated. Was there any attempt made to determine whether iodine was present in the urine when the eruption appeared, even though its administration had been stopped.

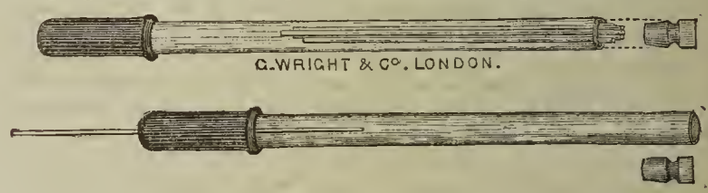
Dr. Barlow considered the point raised important. In his cases of bromide rash the eruption continued after the disuse of the remedy, and in one case the urine contained bromine weeks after its administration had been stopped. Disease of the kidney often went with these eruptions, so that elimination might be retarded; at all events, it was certain that the rash did not cease when the drug was stopped. In such cases œdema glottidis and dissolutio sanguinis were said to be sometimes observed: were they so here? The sebaceous view of the nature of these eruptions was a very superficial one; that advanced by Dr. Thin seemed more reasonable.

Dr. Thin, in reply, said he was sorry to be unable to give answers to the various queries; he would endeavour to obtain the requisite information.

NEW INVENTIONS AND IMPROVEMENTS.

PORTABLE VACCINE-TUBE HOLDER.

The illustration here given represents a little instrument which is intended to promote the universal use of the capillary tube for vaccination in private practice. It is a holder of the simplest construction; at the same time it assists in charging and discharging the tube. The capillary tube is



the best lymph-carrier, but from its delicacy and liability to breakage it is found troublesome to handle, and is not at the present time generally in use among practitioners. The introduction of the capillary tube into the mouth, moreover, is not free from risk. Now, the vaccine-tube holder takes the tube very conveniently, and securely holds it when passed through the small opening in the indiarubber cap. The tube can now be charged and the lymph drawn into the centre, either by gentle mouth-action or by compressing the cap and closing the end of the tube with the finger; it can also be readily discharged by the mouth after removal of the stopper. The holder, when not in use, forms very conveniently a receptacle for a number of tubes, and is small enough to carry in a pocket-case. This little instrument has been introduced by Dr. J. Ward Cousins, of Southsea, and is supplied in a neat case, with or without lancets, by the manufacturers, C. Wright and Co., 108, New Bond-street, London.

LIQ. SANTAL FLAVÆ CUM BUCHU ET CUBEBÆ.

This preparation, which was introduced to the notice of the profession by Messrs. Hewlett some months ago, contains the essential active principles of yellow sandal-wood, buchu, and cubebs. It gives very satisfactory results in cases of gonorrhœa after the acute symptoms have been subdued, and in gleet we are able to state that it is a very efficient combination. Although it cannot be said to be exceedingly palatable, it is certainly less objectionable to the taste than most of the remedies given for these disorders.

Fellowship Examinations.—The following were the questions on Anatomy and Physiology submitted to the candidates at the primary examination for the Fellowship of the Royal College of Surgeons on the 15th inst., viz.:—1. Describe the dissection required to expose the upper surface of the first rib; and mention, in order from before backwards, the several structures in immediate relation with that bone. 2. A transverse vertical section is made through the cranium and its contents, passing through the odontoid process. Mention, in order from above downwards, the several structures which would be divided. 3. Describe the development of the vertebral column, and mention the form of the vertebral centrum characteristic of each of the primary divisions of the vertebrata. 4. Describe the structure of the suprarenal capsule; and give the evidence which at present exists regarding its function. All the questions were required to be answered in the time allowed—viz., from half-past one to half-past five o'clock.

OBITUARY.

WILLIAM WITTMAN THOMPSON, M.R.C.S.

This gentleman, whose death, at the early age of forty-three, we recently recorded, was the son of an esteemed practitioner in Bognor, and grandson of the late Surgeon-General Thompson, who was present at the battle of Waterloo. Mr. Thompson was a St. Bartholomew's student, and had been a pupil of the late Holmes Coote. After qualifying in 1856, he served the office of House-Surgeon at the Lambeth General Lying-in Hospital; and later on, from 1857 to 1860, he served in the Mediterranean on board H.M.S. *Renown*. Then he joined his father in practice at Bognor, and married in 1867. He was appointed Medical Officer to the Coast Guard, and to the Merchant Taylors' Convalescent Home. He was much liked by the poor; for, in addition to his professional help, he frequently gave them pecuniary assistance. About a year ago he began to suffer in his throat, and shortly afterwards consulted Sir James Paget and Mr. Durham. They recognised, unfortunately, that he was the subject of cancer in the right tonsil. He died from the effects of this disease on October 27. His funeral was very largely attended. Nearly all the shops in Bognor were closed out of respect to his memory. Such marks of respect cannot but be acceptable to those he leaves behind. His eldest son, aged nine, is, we find, a candidate for the Royal Medical Benevolent College, at the May election next year.

JOHN JAMES ADAMS, B.A., M.B. Univ. Dub., etc.

The death of this estimable young physician took place on Wednesday, October 30, under peculiarly painful circumstances. Dr. Adams, who was the youngest son of Dr. William O'Brien Adams, a senior and much respected Fellow of the King and Queen's College of Physicians, resided with his father at Kingstown, County Dublin. On the afternoon of the day preceding his death, young Dr. Adams went out to ride on a cob, the property of a friend. He was riding along a public road in the neighbourhood of Kingstown, when a retriever ran out of a garden at the animal's legs, barking loudly, and, as it was alleged, actually seizing one of the hind fetlocks. The horse ran away at a furious rate, and Dr. Adams was either jerked off or leaped off, falling to the ground heavily. He was picked up insensible, and carried to his father's house, where he lay, without regaining consciousness, until his death next day. Dr. Adams was only twenty-four years of age, and his untimely death has excited much sympathy amongst his many friends in Dublin and Kingstown.

WASHINGTON LIGHT ATLEE.

We take the following obituary notice of this celebrated ovariotomist (whose death has so soon followed that of Dr. Peaslee) from the *New York Medical Record* of September 14:

Washington Light Atlee, M.D., died at his residence, Philadelphia, on September 7, of cancer of the stomach, a disease from which he had long suffered. He was born in 1808 at Lancaster, Pa., and was consequently in his seventy-first year. At the age of fourteen young Atlee was placed in a dry goods store. At the expiration of eighteen months, not being satisfied with commercial life, he commenced the study of medicine in the office of his brother, Dr. John Atlee, of Lancaster. In 1829 he graduated at Jefferson Medical College, and commenced the practice of his profession in the town of Mount Joy, where he frequently lectured on scientific subjects, and became known throughout the State as an active and earnest temperance advocate and orator. In 1834 he returned to Lancaster, and for ten years closely applied himself to his profession.

In 1845 Dr. Atlee was elected to the chair of Medical Chemistry in the Pennsylvania University, and in the same year removed to Philadelphia and entered upon the discharge of his new duties. He filled this chair until 1853, when his private practice had become so large that he was obliged to resign it. He was an active member of the State and County Medical Societies and of the American Medical Association. A brilliant extempore speaker, and an able debater, his weight was always cast in favour of a higher medical education and a broad and liberal construction of the rights and duties of medical life. As a practitioner he was famous for his advocacy of ovariotomy. Commencing ts performance and defending its propriety at a time when hardly another surgeon in the land dared support him, he vindicated its merits by his success in more than 300 cases. Dr. John Atlee, the brother of Washington, with whom he prosecuted his earlier studies in surgery, performed this operation with entire success in 1843. Being associated with his brother in this case, Dr. W. L. Atlee at once began studying the literature of the operation, and spent much time in collecting and advocating all that had any bearing upon the subject. He performed his first operation in Lancaster County, in 1846, on a married lady aged sixty-eight; it proved fatal. In the same year he performed it successfully on a younger patient in Lancaster City.

It was during this year that he came to Philadelphia to reside permanently. He found ovariotomy everywhere decried. It was denounced by the profession in the medical societies and in all the colleges; and, discouraged by his own colleagues, he was pointed at as a dangerous man, even a murderer; and a celebrated professor, in a published lecture, invoked the law to arrest him in the performance of the operation. His first patient in Philadelphia was visited by an eminent surgeon shortly before the operation was performed, and warned that if she permitted it she would be a dead woman within twenty-four hours. She declined to believe, was operated upon, and recovered. Dr. Atlee lived to see the practice he sought to establish generally recognised, and by many of those, indeed, from whom he encountered the greatest opposition. As a writer, he contributed ably to all the current medical and surgical journals. The prize essays of the American Medical Association in 1853 included one written by him; and quite recently (1872) he summed up his extended experience in a volume on Ovariotomy. His loss to the profession which he adorned, and to society, wherein he was esteemed and admired, is a severe one.

[Prof. Gross, in an eulogium delivered on Dr. Atlee at the Philadelphia County Medical Society (*Phil. Med. Times*, October 12), states, from the results of the post-mortem, that he died from malignant disease of the kidney. He had performed ovariotomy nearly 400 times.]

CHARLES LINGEN, M.D., F.R.C.S. Eng., J.P.

This well-known and highly esteemed provincial surgeon died at his residence, St. Owen's-street, Hereford, on October 28, in the sixty-eighth year of his age. Mr. Lingen, who was descended from an old and distinguished Herefordshire family, received his general education at the Cathedral School, Hereford, served his apprenticeship to a gentleman in that city, and pursued his professional studies at the University College and the Middlesex Hospital Medical Schools. In 1835 he became a Member of the Royal College of Surgeons; during the following year visited the medical schools of Paris and Heidelberg, and at the latter place graduated as M.D. by examination. In 1836 he commenced practice in Hereford, was elected one of the Surgeons to the Hereford General Infirmary in 1838, and in the following year became Senior Surgeon of the institution, which office he held for twenty-five years. In 1844 he was made a Fellow of the College of Surgeons. Mr. Lingen was a successful and distinguished practitioner, and a warm-hearted and generous friend. He enjoyed a wide and extensive reputation in his profession, being much consulted by the medical men in Hereford and the neighbouring places; and as an evidence of the general estimation in which he was held, it may be mentioned that in 1866, after having for some time declined the honour, he was placed on the Commission of the Peace. Never very strong, Mr. Lingen had for the last eight years worked against failing health, and had been confined to his bed for some weeks before his death.

Mr. Henry Colebrook, of Bath, was admitted a Fellow of the Royal College of Surgeons of England at the last meeting of the Council, his diploma of membership bearing date March 9, 1827.

The Conjoint Scheme for England.—A meeting of the Committee of Reference, appointed under the Conjoint Scheme, assembled at the College of Surgeons on Thursday, the 21st inst., to further consider the reports to the several medical authorities on the regulations for carrying out the Scheme.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examination in Anatomy and Physiology at the half-yearly meeting of the Board of Examiners on the 19th inst., and when eligible will be admitted to the pass examination for the diploma of Fellowship, viz. :—

Cheyne, William Watson, M.B. Edin., student of the Edinburgh School.
Creed, William Thomas, of Guy's Hospital.
Lang, William, diploma of membership dated January 23, 1874, of the London Hospital.
Nance, Henry Chester, of St. Bartholomew's Hospital.
Pain, Alfred, of Guy's Hospital.
Robson, Arthur William Mayo, L.R.C.P. Lond., July 21, 1874, of the Leeds School.
Stuart, George Ballingall, M.D. Edin., July 22, 1869, of the Edinburgh School.
Thompson, Charles Emilius, of the Middlesex Hospital.

The following gentlemen passed on the 20th inst., viz. :—

Barling, Gilbert Harry, student of St. Bartholomew's Hospital.
Butler, Audley Cecil, B.A. Cantab., of St. Bartholomew's Hospital.
Morse, Thomas Herbert, of Guy's Hospital.

Nineteen candidates out of the thirty examined having failed to acquit themselves to the satisfaction of the Board of Examiners, were referred to their anatomical and physiological studies for six months.

APOTHECARIES' HALL, LONDON.—The following gentleman passed his examination in the Science and Practice of Medicine, and received a certificate to practise, on Thursday, November 14 :—

Patterson, John Nesbitt, Earlestown, Lancashire.

The following gentlemen also on the same day passed their Primary Professional Examination :—

Galpin, George Luck, Middlesex Hospital.
Wilkinson, Charles Fixott, St. Bartholomew's Hospital.

NAVAL, MILITARY, &c., APPOINTMENTS.

ADMIRALTY.—Staff-Surgeon John Frederick Mitchell has been promoted to the rank of Fleet Surgeon in her Majesty's Fleet, with seniority of October 7, 1878.

BIRTHS.

BELLAMY.—On November 20, at 17, Wimpole-street, the wife of Edward Bellamy, F.R.C.S., of a daughter.

BUTLER.—On November 12, at Elm Croft, Westmeon, Hants, the wife of G. W. Butler, M.R.C.S.E., L.R.C.P. Edin., of a daughter.

CLARKE.—On November 19, at Wakefield, the wife of Henry Clarke, L.R.C.P. Lond., M.R.C.S., of a son.

CLOUSTON.—On November 7, at Hay, Breconshire, the wife of C. S. Clouston, M.B., of a son.

CREAGH.—On October 20, at Peshawur, India, the wife of Surgeon-Major William Creagh, of a son.

ETHERIDGE.—On November 13, at Ivy House, Seasalter, Whitstable, the wife of Charles Etheridge, M.R.C.S. Eng., of a son.

FRANKLIN.—On November 14, at Leicester, the wife of George Cooper Franklin, F.R.C.S., of a daughter.

ILES.—On November 19, at Watford, the wife of Wilson Iles, M.D , of a son.

LYDALL.—On November 15, at Mecklenburgh-square, the wife of W. H. Lydall, L.R.C.P. Edin., M.R.C.S. Eng., of a daughter.

MAUNSELL.—On October 29, at Mussoorie, N.W.P., Bengal, the wife of Surgeon-Major C. A. Maunsell, of a son.

NANKIVELL.—On November 10, at Penmellyn, Bournemouth, the wife of Herbert Nankivell, M.D., of a daughter.

RABAGLIATI.—On November 14, at 9, Walmer Villas, Bradford, the wife of Andrea Rabagliati, M.D., of a son.

MARRIAGES.

GALPIN—READER.—On November 14, at Lee, Richard Galpin, M.R.C.S., of Kelvedon, Essex, to Mary, third daughter of Thomas Reader, of The Chesnuts, Eltham-road, Lee.

MACDONNELL—MACDONNELL.—On November 13, at the Sardinian Chapel, Lincoln's-inn-fields, A. P. MacDonnell, H.M. Bengal Civil Service, to Henrietta, daughter of Ewen Macdonnell, M.D., of 20, Montague-street, Russell-square, W.C.

SIMPSON—WILSON.—On November 16, at Ealing, James Herbert Simpson, M.D., of Rugby, son of the late J. H. Simpson, M.D., of Pontefract, to Charlotte Maria, younger daughter of the late Henry Wilson, of Clapham-park.

DEATHS.

ASHBURNER, JOHN, M.D., F.R.S.A., late of Hyde-park-place, at 59, Cambridge-place, on November 13.

BATCHELOUR, WILLIAM, M.R.C.S.E., at 47, Jeffreys-road, S.W., on November 10.

DOWNES, CLAYTON, only child of Arthur Downes, M.D., at Munslow, Shropshire, on November 14, aged 2 years and 9 months.

FLEURY, SELINA AUGUSTA LILIAN, wife of Charles Robert Fleury, M.D., of 35, Finsbury-square, E.C., on November 14, aged 32.

JOBSON, MARY, wife of John Jobson, F.R.C.S., J.P., at Bishop Auckland, county Durham, on November 6, aged 68.

LECKIE, THOMAS, M.D., Surgeon-Major of H.M. Indian Army (retired), at 21, Southwick-street, Hyde-park, on November 18, aged 71.

LESLIE, PERCY, M.D., youngest son of the late Lieutenant-General John Leslie, K.H., at 8, Walpole-road, Brighton, on November 13, aged 43.

MATHEWSON, ROBERT R., L.R.C.S. Edin., of Belvidere, Kent, at Sands, Kincardine-on-Forth, on November 9, in his 45th year.

OXFORD, CHARLES JOHN, M.R.C.S.E., L.S.A., at St. Leonards-on-Sea, on November 13, aged 57.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BELGRAVE HOSPITAL FOR CHILDREN, 72, WINCHESTER-STREET, PIMLICO.—House-Surgeon. Applications, with testimonials, to the Secretary.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—House-Surgeon. Candidates must be Members of one of the College of Surgeons of Great Britain or Ireland. Testimonials to the Chairman of the Medical Committee, on or before December 10.

BRISTOL GENERAL HOSPITAL.—Physician's Assistant. Candidates must produce proof of a registered medical qualification, also satisfactory testimonials of ability and good moral conduct. Applications to the Secretary on or before December 7.

METROPOLITAN FREE HOSPITAL, 81, COMMERCIAL-STREET, SPITALFIELDS.—Assistant House-Surgeon. Candidates must be qualified. Applications to be addressed to the Committee.

MUTFORD AND LOTHINGLAND INCORPORATION.—Medical Officer. Candidates must be registered under the Medical Act, 1858, and must be qualified by law to practise both medicine and surgery in England and Wales according to the Order of the Local Government Board. Testimonials to T. S. Allerton, Clerk, Lowestoft, on or before November 25.

YORK COUNTY HOSPITAL.—House-Surgeon. Candidates must be unmarried and reside in the Hospital. Testimonials to Robert Holtby, Secretary, 5, New-street, York, on or before November 23.

YORK DISPENSARY.—Resident Medical Officer. Candidates must be duly qualified and unmarried. Applications and testimonials to S. W. North, Esq., 84, Micklegate, York.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population in computed according to the census of 1871.

RESIGNATIONS.

Halifax Union.—The Northowram District is vacant; area 3900; population 12,049; salary £40 per annum.

West Bromwich Union.—The East District is vacant; salary £65 per annum.

APPOINTMENTS.

Bolton Union.—Charles Segrave, L.K.&Q.C.P. Ire., L.R.C.S. Ire., as Resident Assistant Medical Officer at the Workhouse.

Congleton.—Joseph C. Bell, F.C.S., as Analyst for the Borough.

Madeley Union.—Thomas G. Thursfield, M.D. and C.M. Aber., L.S.A. Lond., to the Broseley District.

Pontypridd Union.—Wm. W. Leigh, L.R.C.P. Edin., M.R.C.S. Eng., L.S.A., to the Llangabon District.

Sunderland Union.—Andrew E. Legat, L.R.C.P. Edin., L.R.C.S. Edin., to the Ford and Hylton District.

Thingoe Union.—Keir J. Dougall, L.R.C.P., L.F.P.&S. Glasg., to the Fourth District.

Yeovil Union.—Henry C. M. Gibson, M.R.C.S. Eng., L.S.A., to the Third District.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.—Dr. C. Meymott Tidy (Lecturer on Chemistry, etc., at the London Hospital), will read a paper on "Anæsthetics" at the meeting of the above Association on Wednesday, December 18.

AN AMPLE MEDICAL STAFF.—We read in a letter to the *Boston Med. and Surg. Jour.*, on the Hospitals of Chicago, that the "Woman's Hospital of the State of Illinois" has accommodation for twelve patients. The medical staff consists of the surgeon-in-chief, four assistant-surgeons, two assistant-physicians, an electrician, a resident physician, and eight consulting physicians—seventeen in all!

LEPROSY.—In the report on the sanitary measure in India, just published, it is stated that the numerous trials of Gurjun oil in different parts of India had resulted in many cases in amclioration of the symptoms, but had failed to produce any permanent cure of leprosy. The Governmcnt of India have since reported that Dr. Dougall himself (who originated this mode of treatment) admits that the very hopeful prospect which it held out has not been realised.

VACCINATION IN INDIA.—From a report on the sanitary measures in India in 1876-77, and up to June, 1878, it appears that the total number of vaccinations in Bengal during the year was 1,509,034, the percentage being 98·18 successful; but in Calcutta and its suburbs the ratio of success was as high as 99·9 per cent. In several of the circles

the people are now more favourably disposed towards vaccination than formerly, and in the metropolitan circle they frequently ask and pay for the services of vaccinators. The preponderance of females over males operated on in the Ranchee circle, is explained by the circumstance of the people attaching less value to female children, and therefore being more ready to produce them for vaccination. In Madras, out of a total of 483,192 operations only 52,505 were performed on children under one year of age. An epidemic of small-pox in the Hangur Valley, from which some 300 children were said to have died, seems to have opened the eyes of the influential men of the district to the possible advantages of vaccination, which they had hitherto ignored. The Khan had the children of his family and of his relations vaccinated, and many of the people followed his example. Here also the number of females vaccinated always exceeded that of males. The Superintendent-General says that two causes may account for this preponderance of females—one, the hope that vaccination may kill them; the other, that it may save their faces from pitting, and render them more attractive in the matrimonial market. It is clearly shown that there are no class or religious prejudices in the North-West Provinces in the matter of vaccination.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

H. Horton, Esq., Devonport.—We fear our opinion under these circumstances would have little legal weight. You had much better consult your solicitor.

Henry Pearson.—This notorious person is not, as he states himself to be, a Fellow of the Royal College of Surgeons of England, for the simple reason, that having been convicted of felony, his name was at once erased from the College list; and on May 28, 1877, his name was erased from the Medical Register, by order of the General Medical Council, in consequence of such conviction. He has therefore no right to sign the document in question.

The Care of Lunatics.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—Would you kindly admit a few lines upon our poor lunatics from one who feels very much for those suffering under that heaviest affliction? In lunatic asylums, with every care and kindness, there is comparatively little medical care. Might this not be attributable in a degree to hopelessness and want of interest for the future? Everything to amuse or gratify the poor patients may be, and is, thought of; but does not the mind want interest? I would presume to suggest whether it might be practicable to have classes (such as are formed for young people in many institutes, and especially where the education has been neglected)—classes for men and boys, according to previous education: for reading, writing, etc., for the ignorant; for chemistry, astronomy, botany, history, etc., for the more educated (excellent manuals have lately been published by Macmillan, 1s.); and for cooking, needlework, embroidery, etc., for women and girls. Would not interest in such things (if arousable) not only lead the thoughts from dwelling on any special maniacal object or morbid disregard of all things, but give interest for the future—intellectual interest? and perhaps, by God's blessing, tend to the restoration of a sane mind. H. B.

The Registrar-General.—The retirement of Major Gragham from the office of the Registrar-Generalship of England and Wales will, it is stated, take place early next year.

Mr. Johnson.—The bust of Mr. Simon, C.B., can now be seen in the College of Surgeons, of which institution he is President. Fellows of the College are allowed admission to the examinations for both fellowship and membership on sending in their cards to the chairman—viz., at the pass examination to Mr. Holden, the senior Vice-President; and at the primary to Mr. Savory.

Bibliopole.—You will find the paper, and an editorial article on the same subject, in vol. xviii. of the *Medical Times*.

A Metropolitan Teacher.—The cases selected for the clinical examination for the diploma of Membership of the Royal College of Surgeons are obtained from the metropolitan hospitals, and last week consisted of lymphadenoma, syphilitic eruption, ganglion in the palm, hydrocele of the cord, squamous eruption, skin-grafting on a wound of the hand, double psoas abscess, varicocele, femoral aneurism, epithelioma of the hand, etc.

L.S.A., Clapham.—Of the recognised medical qualifications held by the candidates for the diploma of Membership of the College of Surgeons, the licence of the Society of Apothecaries considerably exceeds all others on every occasion. Last week there were as follows:—L.S.A., 17; L.R.C.P. Edin., 13; M.B. Edin., 2; M.R.C.P. Edin., 1; L.R.C.P. Lond., 1; M.B. Dub., 1; and M.D. Toronto, 1.

A Sanitary Requisite.—The Hove (Brighton) Commissioners have resolved to purchase two acres of land adjoining the Upper Shoreham-road, in the parish of Aldrington, for the purposes of a cemetery, the parish graveyard being full.

Medical Mayors.—To the list of medical mayors we have now to add the honoured names of Robert Elliott Huntley, M.D. St. And., M.R.C.S. Eng., L.S.A., etc., just elected Mayor of Jarrow-on-Tyne, and John Thomas Arlidge, M.D. Lond., F.R.C.P. Lond., M.R.C.S. Eng., elected Mayor of Newcastle, Staffordshire. The last-named gentleman was formerly student in human and comparative anatomy in the Royal College of Surgeons.

Chemicus.—Dr. Frankland's evidence before the Royal Commission on Scientific Instruction, with respect to the comparative amount of original work contributed by England and by Germany respectively to chemical science, was to the following effect. He had looked out in regard to chemistry the number of original investigations made in each country during one year. In the year 1866, which was the year he inquired, 1273 papers were published by 805 chemists. Of these Germany contributed 445 authors and 777 papers; France, 170 authors and 245 papers; the United Kingdom, 97 authors and 127 papers. He mentioned, however—speaking exclusively of chemistry, for he had not gone into the other sciences—that as far as research in Great Britain depends upon our scientific training, our case was much worse than appeared from that comparison, because a large proportion of those papers contributed by the United Kingdom were the work of Germans residing in this country, but who had not been trained in this country.

Food Adulteration.—From the recent Blue-book issued by the Local Government Board, it appears that during 1877 the public analysts had submitted to them 14,706 samples of food, nearly one-fifth of which, or 2826 samples, were adulterated. The largest number examined was from the metropolis—namely, 4472; of these 13½ per cent. were adulterated. In the county of Durham 782 samples were submitted, and 31 per cent. were adulterated; Lancashire had 1567 samples analysed, 27 per cent. being adulterated; Northumberland had 343 examined, of which more than 38 per cent. were adulterated; Staffordshire had 1041 samples, with 22½ per cent. adulterated; Warwickshire 437 samples, of which 25½ per cent. were adulterated; in the North Riding of York 97 samples were tested, and nearly half, or 42¼ per cent., were adulterated; in Carmarthenshire, of 41 samples, 51¼ per cent., were adulterated. Of 4435 samples of milk, 1070 were adulterated; of butter, 99 samples, or 11 per cent.; and of coffee, 127 samples, or 17½ per cent. Beer was adulterated to the extent of 9¼ per cent. of the samples tested; while 910 samples of gin and 475 of other descriptions of spirits were respectively adulterated to the extent of 57¾ and 47½ per cent. Of drugs 533 samples had 110 adulterated among their number. Small pecuniary fines are clearly undeterrent to the dishonest trader.

Student.—The anecdote is, that the late Lord St. Leonards having (as Sir Edward Sugden) been asked by Sir T. F. Buxton what was the secret of his success, his answer was—"I resolved, when beginning to read law, to make everything I acquired *perfectly my own*, and never to go to a second thing till I had entirely accomplished the first. Many of my competitors read as much in a day as I read in a week; but at the end of twelve months my knowledge was as fresh as on the day it was acquired, whilst theirs had glided away from their recollection."

Storing Rags and Bones.—A tradesman at Oxford has been fined 20s. and costs, under the Public Health Act, for storing rags and bones upon his premises in Bridge-street without the sanction of the Local Board. An offensive smell caused by the old rags was stated to be injurious to health. These traders too often, we believe, escape the vigilant supervision of the sanitary officer which the accumulation of such materials requires.

A Military Hospital Compounder.—The district court-martial which lately assembled at Chatham for the trial of Sergeant James Fitzpatrick, of the Army Hospital Corps, on charges of negligence in the discharge of his duties as compounder in the military hospital, in having contributed to the death of a private in the Royal Engineers, who died from the effects of a dose of disinfecting fluid given him instead of a draught ordered by the surgeon, resulted in finding the accused guilty, and sentenced him to be reduced to the ranks. Major-General Newdigate, commanding the district, however, disapproved of the sentence, because, though sergeant in charge, Fitzpatrick did not himself give the dose, and therefore was not directly responsible. The court-martial was subsequently reassembled, and the whole of the proceedings of the trial quashed. Sergeant Fitzpatrick has consequently been released from custody, and has resumed his duties as compounder at the casual hospital. A coroner's jury had returned a verdict of "Accidental death" prior to the court-martial being held.

Stimulants to Irish Workhouse Patients.—A letter from Lord Clarina was read at the last meeting of the Limerick Guardians, enclosing forms which he had drafted so as to record the amount of stimulants given to the patients in the workhouse hospital. He characterised the present system of keeping the stimulants accounts as utterly worthless and fallacious, and added that the reckless giving of stimulants could never be checked until the Guardians held the medical men responsible as to the quantity given to each patient under their charge. After considerable desultory discussion it was agreed to defer the further consideration of the question (a very vexed one among the Guardians) to a future meeting, when Lord Clarina should be present.

COMMUNICATIONS have been received from—

Dr. F. Churchill, London; Mr. John Chatto, London; Mr. J. Astley Bloxam, London; Mr. B. R. Wheatley, London; Mr. T. M. Stone, London; Dr. J. Hughlings-Jackson, London; Dr. W. Allen Sturge, London; Mr. J. T. W. Bacot, Seaton, Devon; Mr. George Gaskoin, London; Dr. J. R. Wolfe, Glasgow; Mr. Harry Leach, London; Mr. D. Colquhoun, London; Mr. J. Atkinson, Crewe; The Registrar of Apothecaries' Hall, London; Dr. Acland, Oxford; Mr. J. Rafferty, London; Mr. Frank Flower, London; Dr. Russell, Birmingham; Mr. T. Turner, Hereford; Dr. Edward Sparks, Mentone; Dr. Clement Godson, London; Mr. Henry Horton, London; Miss H. Bromley, Bewdley; Dr. Druitt, London; Dr. J. W. Moore, Dublin; Mr. Wm. Fry, London; Dr. John Beddoe, Clifton; The Honorary Secretary of the Hunterian Society; The Honorary Secretary of the Association of Surgeons Practising Dental Surgery, London; Mr. E. Sutton, Whitehall; The Registrar-General, Edinburgh; Mr. George Brown, London; Mr. M. Becher, London; Mr. J. B. Holloway, London; Dr. Sutherland, Whitehall; Mr. R. G. Black, Southampton.

BOOKS AND PAMPHLETS RECEIVED—

T. B. Curling, F.R.S., A Practical Treatise on the Diseases of the Testis and of the Spermatic Cord and Scrotum, fourth edition—Mr. W. T. Greenup, Food and its Preparation—J. R. Prettyman, M.A., Dispauperisation, a Popular Treatise on Poor-Law Evils and their Remedies—Edward Headlam Greenhow, M.D., F.R.S., On Bronchitis and the Morbid Conditions connected with it—Catherine J. Wood, A Handbook of Nursing for the Home and the Hospital—The Diseases of Women, their Causes, Symptoms, and Treatment, by a Physician—Dr. D. Federico Rubio, Estirpacion Total de la Laringe—Hardwicke and Bogue's Health Primers: Exercise and Training; Alcohol, its Use and Abuse; The House and its Surroundings; Premature Death, its Promotion or Prevention—Transactions of the Pathological Society of London, vol. xxix.—Rev. J. H. Timins, M.A., F.G.S., On Artificial Disinfection as a Means of preventing the Spread of Infectious Diseases—T. Holmes, M.A. Cantab., A Treatise on Surgery: its Principles and Practice—C. Macnamara, Fel. Cal. Univ., Clinical Lectures on Diseases of Bone—The House-Surgeon; or, The Doctor at Home, by the late Alfred Smee, F.R.S.—James Henry Bennet, M.D., On the Treatment of Pulmonary Consumption by Hygiene, Climate, and Medicine—After the Turtle: Thirty-one Years' Ministerial Policy, as set forth at Lord Mayor's-day Banquets, from 1848 to 1878, collected by Richard Seyd, F.S.S.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Gazette Hebdomadaire—Practitioner—North Carolina Medical Journal—New York Medical Journal—Giornale Internazionale delle Scienze Mediche—New Preparations—Chicago Medical Journal and Examiner—Guy's Hospital Gazette.

APPOINTMENTS FOR THE WEEK.

November 23. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

25. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Adjourned Discussion on Mr. Owen's paper. Dr. Brandeis, "On a Case of Unusual Ozæna."

26. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Royal Medical and Chirurgical Society, 8½ p.m. Dr. F. Semon, "Thyrotomy for Removal of a Membrane completely obliterating the Larynx." Mr. R. W. Parker, "On Tracheotomy in Membranous Laryngitis: the Indication for its Adoption, and Special Points in its After Treatment."

27. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 1½ p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

Hunterian Society (London Institution), 8 p.m. Dr. T. Braxton Hicks, "On Three Cases of Removal of very large Uterine Polypi, where the usual Diagnosis was impossible."

28. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

29. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 16, 1878.

BIRTHS.

Births of Boys, 1232; Girls, 1216; Total, 2448.
Average of 10 corresponding years 1868-77, 2356·0.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	845	820	1665
Average of the ten years 1868-77	811·7	805·1	1616·8
Average corrected to increased population ...	...	...	1730
Deaths of people aged 80 and upwards ...	...	...	70

Note.—The births and deaths registered last week may be compared with the average numbers in the corresponding weeks of the ten years 1868-77 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	3	4	6	5	9	1	...	1	1
North ...	751729	...	4	18	2	4	...	7	1	3
Central ...	334369	...	...	3	...	4	...	2	...	...
East	639111	...	3	7	1	10	1	7	...	...
South	967692	13	11	30	5	16	4	13	...	7
Total	3254260	16	22	64	13	43	6	29	2	11

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·220 in.
Mean temperature	39·8°
Highest point of thermometer	50·8°
Lowest point of thermometer	31·3°
Mean dew-point temperature	36·9°
General direction of wind	W. & N.W.
Whole amount of rain in the week	1·74 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, November 16, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1878.*	Persons to an Acre. (1878.)	Births Registered during the week ending Nov. 16.	Deaths Registered during the week ending Nov. 16.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3577304	47·5	2448	1665	50·8	31·3	39·8	4·34	1·74	4·42
Brighton	103923	44·1	52	36	51·0	30·4	39·4	4·11	1·54	3·91
Portsmouth ...	129461	28·9	69	43	...	...	...	...	...	...
Norwich	84620	11·3	61	33	...	...	...	...	...	...
Plymouth	73599	52·8	55	29	53·5	32·5	41·1	5·06	1·21	3·07
Bristol	206419	46·4	130	94	51·4	27·9	39·7	4·28	1·08	2·74
Wolverhampton ...	74240	21·9	47	43	49·0	27·4	36·7	2·61	1·10	2·79
Birmingham ...	383117	45·6	272	190	...	...	...	...	...	...
Leicester	121473	38·0	93	33	48·8	31·0	39·0	3·80	1·37	3·48
Nottingham ...	165267	16·6	96	55	47·6	26·0	38·0	3·33	1·04	2·64
Liverpool	532681	102·2	394	322	48·8	31·9	41·1	5·06	0·57	1·45
Manchester ...	360514	84·0	259	172	...	...	...	...	...	...
Salford	170251	32·9	136	90	...	...	...	...	...	...
Oldham	107366	23·0	75	78	...	...	...	...	...	...
Bradford	185088	25·6	110	88	45·0	29·0	38·4	3·55	1·40	3·56
Leeds	304948	14·1	228	163	48·0	27·0	39·4	4·11	1·40	3·55
Sheffield	289537	14·7	184	143	48·0	29·0	39·5	4·17	1·38	3·51
Hull	143139	39·4	101	67	47·0	24·0	38·6	3·67	2·00	5·08
Sunderland ...	112459	40·6	86	48	51·0	30·0	39·5	4·17	2·57	6·53
Newcastle-on-Tyne	144570	26·9	100	61	...	...	...	...	...	...
Edinburgh	222371	53·1	131	72	47·0	28·0	38·9	3·83	0·34	0·86
Glasgow	566940	94·0	356	281	47·5	31·2	39·5	4·17	0·40	1·02
Dublin	314666	31·3	154	187	51·7	25·0	37·4	3·00	0·09	0·23
Total of 23 Towns in United Kingdom	8373953	38·0	5637	3993	53·5	24·0	39·1	3·95	1·20	3·05

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·22 in. The highest reading was 29·95 in. at the beginning of the week, and the lowest 29·02 in. on Friday afternoon.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1878 by the addition of seven years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. Nottingham, Salford, and Oldham, however, form exceptions to this rule, as the estimates for these three towns have been revised with the aid of local information as to the rate of increase of inhabited houses. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

IV.

CLINICAL LECTURE ON PAINFUL SITTING.

BEING THE FOURTH OF A COURSE OF LECTURES DELIVERED AT ST. BARTHOLOMEW'S HOSPITAL

By J. MATTHEWS DUNCAN, M.D., LL.D.,
Physician-Accoucheur and Lecturer on Midwifery to the Hospital.

GENTLEMEN,—Painful Sitting is the subject of my lecture to-day. We have several cases illustrating this subject. In some of them painful walking accompanies the painful sitting; indeed, in the last disease that I shall mention to you, painful walking is more important than the painful sitting. Painful sitting is as good a name for a disease as dysmenorrhœa is, and quite as distinctive; but painful sitting is not a disease, nor is dysmenorrhœa—both are symptoms, and the term is used merely as an artificial arrangement of a variety of affections, just as dysmenorrhœa is so used. In both cases the designation is not a term of a pathological classification, but of what is called a nosological or artificial classification. The most common kinds of painful sitting are not to be considered to-day; only those that are observed particularly in women, and only those that are somewhat recondite. Such causes of painful sitting as an abscess of the vulva, an abscess of the perineum, tender caruncle of the urethra, an inflamed gland of Cowper, are very common; and in them nobody requires to hear anything said about the painful sitting—that is a matter of course.

The first special cause of painful sitting that I have to consider is inflammation—not affecting the external organs, not affecting the vagina, but affecting the deep-seated genital organs, the uterus and ovaries. This is not an infrequent cause; and the first case I am to read to you is a good example of it, an apposite example for us, because the poor woman came to the hospital declaring that she could not sit—that was her complaint; for her that was the disease. I shall read her case:—"M. C., aged twenty-seven; admitted November 16; married ten years; has had four children—the youngest two years old, two alive; the others died during teething. Has had no miscarriage. Catamenia began at thirteen years, and has generally been regular; nothing abnormal noticed about any of the later periods. About six weeks ago she was suddenly attacked with a severe pain in the right inguinal region, which has been present ever since when sitting. The pain is hardly felt at all when standing or lying down. This pain she ascribes to a kick on the belly; and I think it is a very probable explanation of it. About the middle of this term of six weeks she had a scanty thin brownish fœtid discharge, which has since subsided, and is now imperceptible. It lasted for a week or a fortnight. The pain is identified by pressing on the perineum, and subsequently by pressing the uterus digitally. The cervix uteri is nearly in its natural situation, patulous and hard, admitting the finger easily. It has an irregular hard internal surface. The uterus is fixed. The whole roof of the pelvis presents hardness, or dense fulness, which is tender." Now you can easily, from the record, make out that this woman has cancer of the neck of the womb. She knows nothing about that, and I believe does not suspect it; she thinks her disease was caused by the kick she got from her husband, and as for her the disease is painful sitting, I think she is quite right as to its cause. Somehow or other this kick was connected with an attack of perimetritis, an attack of inflammation around the womb, inflammation affecting the serous membrane, inflammation leading to the fixation of the uterus which we found; and, so far as her disease consists in painful sitting, this inflammation is the cause of her disease. Attacks of inflammation, apart from violence, are quite common in connexion with cancer of the womb. This woman's sufferings are caused by inflammation around the womb in the early stage of cancer of its neck. Now, I wish you to observe how clearly in this case the nature of the disease was made out. Firstly, a cancerous uterus is not a tender one. This woman's uterus was not tender where it was cancerous; it was the neighbourhood of the uterus that was the seat of the tenderness, the seat of the inflammation. When the perineum of this woman was pressed by the hand, while she was lying on her side, she at once recognised the pain of sitting. She felt the same pain as when the perineum was pressed upon by her seat. She had not the pain when she lay down or when she was standing. Following up the pain, the finger was introduced into the vagina, and found the same pain was produced by pressing upon the inflamed and tender parts near the womb. There could thus be no doubt of the nature of the disease. Of this part of her disease—which, unfortunately for the woman, is not the major part—she will get rid by suitable treatment, especially by continued lying in bed. She is, indeed, already nearly well.

In connexion with this case I have, lastly, to state the theory of this painful sitting; and a very easy experiment explains it. It is not generally recognised that the bowels are pressed upon by sitting; but it is a fact, as this case illustrates. When a woman sits upon a seat, the pressure upon her hips, even although the deeper parts are protected by the tuberosities of the ischia, communicates pressure to the deepest parts in the pelvis; and, if those parts are tender, pain is the result. The experiment that I alluded to, as demonstrating what I have just said, is to place the hand upon the hypogastrium while the perineum is exposed. If you press with it in the direction of the axis of the brim, you push down the perineum and the hips. A very slight pressure upon the hypogastrium makes the perineum bulge, makes the hips descend. Of course, when the hips are pressed upwards, or the perineum is pressed upwards, you have an influence which is, in like manner, communicated back to the hypogastrium, and thus you have pain. This is illustrated in many cases of ovaritis and metritis of all kinds. This part of painful sitting is a separate thing from the injurious influence of sitting. That I am not speaking about. The injurious influence of sitting is a subject I may illustrate at some other lecture. What I am speaking of now is painful sitting, and the injurious influence of sitting is a much wider subject than what I am now considering.

I go on, now, to another set of diseases connected with the coccyx, which diseases are not peculiar to women, but are, I believe, much more frequent in women than in men; and they have got a collective name, which is also an artificial, not a pathological name—Coccygodynia. Now, the pathology of this department of painful sitting is so far advanced that I recommend you to give up the use of this name except as a proper word to express pain in the coccyx, for which no further explanation can be given. That is to say it is a neuralgia; perhaps not a pure or simple neuralgia, but yet a neuralgia; and a neuralgia is in the majority of cases a disease of which no further explanation can be given. Indeed, many of the cases usually included under coccygodynia are not diseases of the coccyx at all.

Occasionally the coccyx is the seat of inflammation; or its periosteum gets inflamed, and you have abscess around it. Of that disease I have not seen an example, but I have seen enough to show me that such a disease may exist. I have, for instance, seen a periosteal abscess extending from the point of the coccyx to the base of the sacrum, the whole length, which shows that such a disease as inflammation and abscess of the coccyx may occur. There is no doubt, indeed, that it has occurred. But the commonest cases of neuralgia of the coccyx or of true coccygodynia, although they have tenderness, or rather sensitiveness, as a symptom, have no inflammation, no inflammatory tenderness. Now, this disease is common, and it is common in men as well as in women. I have seen cases of it in men, although I come very little in contact with that sex. In men it generally arises from constipation or some disorder of the rectum, such as hæmorrhoidal congestion. I may mention an example of it as it occurs in women. A young lady in her first pregnancy, enjoying perfect health, was sent to me, only two days ago, by her husband, because she could not sit. When she came into my room she laughingly said it was an absurd complaint, but she could not sit. It was easy to make out that she had this tenderness—not inflammatory tenderness—this sensitiveness, rather, of the coccyx. Now, this disease is generally easily cured, or rather it goes away, and the treatment of it is scarcely worth describing. It is the use of laxatives, hot bathing, sedative applications. In a severe and persistent case you might try the hypodermic injection of morphia, and it has been said to cure the disease. Whether it has done so or not I shall not answer for; perhaps time would just have cured it equally efficiently. The disease is essentially a come-and-go one, and it is very difficult to judge

in such diseases what is to be attributed to treatment and what to time. Now, these are the commonest cases. Other cases, however, are not rare; they arise chiefly from injury, and they seem to affect the sacro-coccygeal joint, and still more its ligaments, and the sacro-sciatic ligaments especially. Of this affection I shall give you an excellent example. Mrs. L., aged thirty-two, married for two years, had her first child nine months ago. During the second stage of labour she had intense suffering, especially during pains, in the region of the coccyx, where she has still all that she complains of. Ever since her confinement she has had the pain very severely during defæcation; but now it is less than it was at first. When she began to get up, sitting brought on the pain, and she had to give it up entirely; but lately the pain in sitting has diminished, and now it is entirely gone. On examination the coccygeal region is easily identified as the seat of all the pain. There is no swelling nor dislocation of the bone. Pressing on it increasing flexion, as in sitting, causes no pain; but extension so as to bring the least tightness of the sacro-sciatic ligaments brings on the well-known pain. Pressure on the ligaments to tighten them also induces the pain.

This is a very clear case, and the disease is gradually disappearing. The only pain that remains is produced by stretching the sacro-sciatic ligaments. I have no doubt that the disease in this woman is some sort of inflammatory rheumatic condition of these ligaments. Neither have I any doubt that she will get quite well: she is in the process of getting well. You observe that, in this case, the disease was brought on by injury sustained during labour. This intelligent woman's account of the second stage in her labour, and of the pain in the coccyx, leaves no room for doubt that then the disease was produced. The pain she suffers now is the same she suffered then—only much less. This case I recommended to be treated by hot bathing, by keeping the bowels easy so that large masses of fæces might not descend and cause great extension of the coccyx. No more treatment was demanded, because the case was progressing slowly in a very satisfactory manner. Should it prove obstinate, I would be inclined to recommend to this woman to have the sacro-sciatic ligaments divided at their attachments to the coccyx—an experiment which is well worth trying. It has frequently failed to cure this disease; but then its failure may be because the treatment was used in cases for which it was not appropriate. This disease is only in that condition of progress that we are differentiating the various kinds of it. You are not therefore to condemn this treatment altogether, on account of its failures, till the disease is much better known and the proper cases for this operation of dividing the ligaments are made out, if there are any proper cases. Its success in some cases surely indicates that there are proper cases. I should be inclined in the case of this lady to recommend its trial if the disease proves inveterate.

Before I pass further on, I shall make a statement to show you how imperfect yet is our knowledge of this disease. An eminent author, calling this disease coccygodynia, which indicates the want of recognition of the various diseases included under that name, says that a characteristic of it is that, while pressing upwards or from the outside is painful, pressing downwards or from the inside producing extension is not painful. The opposite was the condition of the patient in the case I have been describing to you, and the opposite is the condition I would write down if I were making such a general statement. I would rather be inclined to say that you had always pain from pressure extending the coccyx, pressing from within; only occasionally pain from pressure pushing the coccyx upwards, or flexing it by pressure from without.

I come now to another disease, of which we happened to have two examples in Martha almost at the same time—indeed, I think they were the same day—dislocation of the coccyx. In these dislocations you have no pain, you have no tenderness; you have merely inconvenience which amounts to pain, inconvenience arising from the abnormal position of the coccyx, and which you will see admirably illustrated in the dislocation forwards which I am to read to you presently. It would surely be a great mistake to call this disease coccygodynia. When a man has a dislocated arm you do not call it humerodynia; neither should you call this coccygodynia; it is dislocation of the coccyx. The first case, E. G., aged thirty-seven, admitted into Martha for carcinoma uteri. She made no complaint of her coccygeal region till her attention was called to it. Then she described herself as aware of something wrong there; and this has troubled her only since her last confinement, when she was delivered by instruments at the end of the seventh month of pregnancy. The coccyx is dislocated backwards, and is in a state of great unnatural flexion; it is only slightly mobile. This case, you see, is, like the last, a traumatic case; but it is also very unlike the last, for in this case you have no kind of inflammation; you have merely a dislocated coccyx. Dislocation is recognised by feeling externally the base of the coccyx, by passing the finger into the rectum, and feeling internally the point of the sacrum. Two parts which ought to be in contact are separate from one another, and the dislocation is backwards. In this dislocation backwards the coccyx is flexed. In this case nothing was done. It is recommended by some authors to reduce the dislocation. But it is a different thing to do it. Indeed, it cannot be done. At the time of the accident possibly it could easily have been done; but now the attempt would be vain. The hold you can get of the part is so slight that you could exert no adequate pressure to tear up all the connexions that are now formed in the situation of the sacro-coccygeal joint. Reduction, I believe, if it is ever to be successful, must be done either after dividing the connexions between the sacrum and coccyx, or at the very time of the accident.

The next case I have to give you is a case of dislocation forwards, and you will see that this is a much more important accident. The dislocation forwards in the case I am to read was traumatic, as in the last case. Mrs. N., aged thirty-eight, married for three years and a half. Has had three children. During her last confinement she required some extraordinary assistance, which she could not describe to make intelligible. Ever since that time she has had pain in what she calls her "tail." The pain is now almost gone, and she would say nothing of it were it not that sitting brought it on; and she wished to have her power of sitting restored. On examination, the coccyx is found in a position of extension, pointing downwards and projecting against the skin; it is not tender. Further examination finds its motion very restricted, and it is dislocated forwards. Now you can easily understand that dislocation backwards with flexion is a comparatively innocent matter; but if you have dislocation forwards, and the coccyx pointing down upon the perineum, as it did in this lady, you can easily understand how very soon aching would come on after sitting upon the point of the coccyx stuck into the seat, if she sat otherwise than upon a single ischium. All patients suffering from this disease or any of the allied diseases sit in a peculiar manner upon the edge of the chair, resting upon the ischium next the chair. In this way they escape the pressure upon the perineum. Surely it is extremely desirable that this very great disability should be cured. In this case I made no recommendation but one. The only thing that could cure this woman was to remove the bone, or at least to set it free, to put it into some other position. I should think the simplest matter would be to take it away altogether. In a case like this, did the woman not get accustomed to the state in which she is, I should certainly have no hesitation in dividing the connexions of the sacrum and coccyx, putting the coccyx into a more convenient position, or removing it altogether. Removing the coccyx altogether has been recommended for coccygodynia, and I am not to advise you never to resort to it. As little do I advise you to resort to it; because, so far as I know of it—and I know a good many cases—it has proved an extremely unsatisfactory proceeding. In the case of this lady, I have no doubt it would be satisfactory, and cure her with very little risk, almost none. As I have already said, the various conditions of painful sitting are not sufficiently recognised so as to enable us to say that coccygodynia is to be treated in any, as yet undefined, class of cases by excision of the coccyx. This is not a case of coccygodynia; it is a case of dislocation of the coccyx, with manifest easily accounted for painful sitting, and with a manifest cure to come from cutting out the offending bone.

I now come to do little more than mention a very interesting case of fracture of the sacrum and dislocation of the lower part, which no doubt made sitting impossible, and produced difficult walking for a long time. M. B., aged forty-seven. Eight months ago she fell from a ladder some twelve feet on her sacrum. She was confined to bed in consequence for a fortnight, having been picked up senseless. After this she was able to walk, but not so well as formerly. She has

had difficulty and pain in defæcation ever since. Complains of pain in her sacrum. The upper bones of the sacrum are normal, but at the junction between the third and fourth there is a sharp angle—a little more than a right angle—formed by the unnatural projection forwards of the lower two bones of the sacrum and the coccyx, which latter is itself movable. The uterus is in normal position and direction, but with mobility much impaired. The right side of the pelvis is natural, but on the left and behind is a dense hardness, rounded posteriorly, nodulated in front towards the left side. Per rectum, the angle of the sacrum can be distinctly felt, the fourth sacral vertebra being dislocated forwards, the dislocated portion being directed to the left. The rectum runs to the right of this part of the sacrum, and the induration above mentioned apparently starts from the left side of the sacrum, though part of it is in front of the rectum, between it and the vagina. This is a rare accident—the only one I ever saw of the kind. Were it not recognised, the physician examining the internal organs might be led to form very erroneous ideas as to the nature of the woman's disease; but there can be no difficulty, when we recognise the fracture and dislocation of the sacrum, in ascribing the morbid conditions internally to the fracture and bad healing of the bone. It is evident that the fracture led to some effusion on the left side of the uterus, and some adhesions in Douglas's space causing hardness. This accident, were the woman young, might produce very great difficulty in delivery, and it would require very careful consideration if a woman having it contemplated marriage; still more careful consideration if she were in the family-way. On that subject I have not time to enter.

The next case I have to mention to you is a still rarer one: not fracture, but dislocation of the spine upon the sacrum—a case of spondylolisthesis. This word does not describe the region of the affection, but its use is confined to the conditions I am to describe. There is no fracture here, for you have a joint, and the bones slip upon one another. The first bone of the sacrum and the last lumbar vertebra can be mutually dislocated without much fracture. There might have been fracture, but we found no evidence of it.

E. H., aged sixty-three, admitted for carcinoma uteri. She had a considerable time ago a fall from a trap-door on her back, some fourteen feet. She was stunned, and afterwards could not walk for some days. Ever since she has had pains all over both legs, but no loss of sensation or motion. At the first bone of the sacrum is a prominence, continued downwards into a strong sacral convexity retiring within the fold of the buttocks, the sacrum being unnaturally curved forwards as a whole. The lumbar spine is in a state of slight lordosis. Nothing additional is made out per vaginam. The conditions indicate spondylolisthesis or dislocation forwards of the spine upon the sacrum.

Before concluding this lecture, I have a few words to say upon a condition of the joints of the pelvis which is rare as a disease, and which interferes with sitting and walking, especially the latter—that is, relaxation of the great essential or intrinsic joints of the pelvis, the symphysis pubis and the two sacro-iliac joints. These joints in the end of pregnancy become naturally loose and juicy, and a considerable increase of motion is permitted in them. The loosening of these joints becomes morbid very rarely. When morbid, it has been found sometimes, in a few recorded cases, to be so extreme as to produce hopeless lameness. The joints have been so relaxed, and present such an amount of mobility, that by no contrivance can they be fixed so as to enable the woman to stand. Cases of that kind are among the greatest of rarities, but cases of slight extraordinary loosening are not very rare. They are recognised or diagnosed with great difficulty. You are led to suspect the existence of the condition by finding that the disease dates from pregnancy; it may be not from the first pregnancy. The last case which I saw was a case beginning in the second pregnancy. The next thing that leads you to suspect the disease is to find pain complained of in the symphysis pubis, or in what the patient calls "the bone" in the mons veneris, and in the two sacro-iliac joints, or in one of them. The pain of the symphysis pubis and in one of the sacro-iliac joints almost invariably go together, but both sacro-iliac joints are not invariably affected. What is the difficulty of recognising this disease? There is no difficulty in a case of extreme relaxation. Then, the woman can find the disease out for herself; but in a case of slight relaxation it is a matter of very great nicety, and you have frequently to put the woman through a variety of evolutions before you can satisfy yourself that these joints are moving. I have found it generally vain to try to make this out in the symphysis pubis, partly on account of the disagreeableness of the proceedings. The proceedings are extremely indelicate; but only in a certain sense, for there is nothing truly indelicate that forms part of a duty; but they are extremely unpleasant, and the word "indelicate" implies a part of the unpleasantness. Besides, when I have attempted to diagnose the movement of the symphysis, I have been extremely ill satisfied. In the case of the sacro-iliac joint there is no embarrassment; the difficulty is in being quite sure of the movement. In a healthy woman you can make out no movement. You start from that. If, then, we find distinct movement, we may be sure that there is this morbid condition. This distinct movement is to be ascertained by seizing the haunch-bone, and, while the spine is fixed, trying to make it move a little; or you fix the haunch-bone, and make the woman move her spine; and then you can see or feel, while the haunch-bone is fixed, a distinct movement of the spine upon it by making the woman change her position. I advise you not to be sure you make it out till you have perfectly satisfied yourself. Supposing you make it out, is there anything to be done? Like many others, this disease is fortunately frequently spontaneously cured. It is natural to expect that, as in a cow the moving huckle-bones get fixed again after parturition, so in a woman the movable haunch-bones will get fixed after parturition; and the same may happen more slowly in the extraordinary or morbid cases I am describing. In such cases I have always encouraged a woman to walk, to brave out the pain if she could, because the irritation produced by the walking may conduce to the refixation of the joint. Cases of this kind do get better. The bones do get fixed again. Until they get fixed there is one means which is of great value, that is, a very firm bandage around the pelvis. You give an artificial fixedness. Now, you will find it very difficult to get a woman to wear this bandage, because it is extremely unpleasant in itself; and it is only after she has found the advantage of it that she will consent to wear it. The bandage must be made, not of ordinary bandage materials, but of horse-girth stuff. This is put round the pelvis, and strapped as tightly as the woman can endure; and if it is to be of any use it must be inconvenient, because, in order to be fixed upon the proper part, it must descend to a considerable extent upon her limbs—that is to say, it must come down to, or even a little below, the trochanter major,—and this makes walking very disagreeable. I have seen cases in intelligent women where I can have no doubt of the real advantage of this bandage—where, indeed, the woman could not walk without it.

Abscess of the Margin of the Anus.—In a clinical lecture, Prof. Verneuil stated that in abscess of the margin of the anus, in which the pus has a tendency to find its way towards the surface of the buttock, no detachment of the wall of the rectum taking place, an incision of four or five centimetres in the direction of the anus discharges the pus. Cicatrisation rapidly ensues without any fistula forming. But when the pus, instead of pursuing this course, destroys the perirectal tissue, causing a slight redness and tumefaction in this region, the wall of the rectum becomes ulcerated, and a fistula is formed. The discharge of the pus, even by a large incision, does not prevent the subsequent formation of this fistula. Instead of, as formerly, first opening the abscess and then treating the fistula, Professor Verneuil, for some years past, has opened the abscess, and having introduced a grooved director, he guides this towards the wall of the rectum, raising and perforating this. He then brings the director down by the rectum, dividing by means of the thermo-cautery all the bridge of the tissues which is comprised between the two openings. He has performed many operations of this kind without ever having met with any serious accidents. The pus comes away readily, and the pains cease, and all that is necessary is to frequently disinfect the wound by injections of weak carbolic acid, without introducing any tents—a practice which is both useless and dangerous in fistula. A cure takes place in an infinitely shorter time than when the abscess is treated at one time and the fistula at another.—*Rev. Méd.* (Nov. 18) and *France Méd.*

ORIGINAL COMMUNICATIONS.

ON THE ACTION AND USES OF ALCOHOL IN HEALTH AND DISEASE.

By [Sir ROBERT CHRISTISON, Bart., etc., and] JOHN BEDDOE, M.D., F.R.S.

It may be well to mention the circumstances which led to the production of the following paper. I had given a long notice of my intention to bring the subject of Alcohol before the Bath and Bristol Branch of the British Medical Association. It was not my intention to take up the subject systematically, but merely to treat some portions of it in such a way as to invite or provoke discussion. Sojourning, however, in the Highlands this autumn with Sir Robert Christison, I mentioned to him what I was about to do; and he kindly offered me the use of his unpublished lecture upon Alcohol. This I gladly accepted, knowing that the dicta of the veteran Professor would be vastly more acceptable to the Society than any lucubrations of my own, and judging that the fact of his regarding alcohol with somewhat greater favour than I did, might prove of some advantage to the expected discussion.

In the first place, I may say briefly that Sir R. Christison's views agree with those of Anstie, as to the purely stimulant character of small doses of alcohol, and the non-necessity of any subsequent and corresponding depression. "In this question," says he, "lies the marrow of the controversy between abstainers and non-abstainers. The question is one of fact. Both parties may be right—within their own sphere of observation. For my part, I must protest against the sweeping proposition of the abstainers, and bear my willing testimony that their *rule* has constantly appeared to me to be the *exception*, and that by far the most general rule is—a gentle stimulus under the temperate use of alcoholics—a gradual return to the ordinary state of things—no subsequent depression—no ultimate injury to any organ or any function."

"Inference—that by frequent repetition of this gentle stimulus, alcoholics may exert a *tonic action*."

After discussing the effects of large and of enormous doses, and theorising upon them, Sir Robert resumes:—

"This much is fact: that alcoholics may cause local stimulus and general stimulus; that sooner or later depression follows; that this depression may be all but inappreciable, if excitement has been moderate; that preliminary excitement may, on the contrary, be imperceptible and depression great, when the dose is large; that this last effect applies chiefly to the nervous system."

He speaks of a *tonic* action, most secure when the dose is small, diluted, and often repeated, most observable in debilitated states of the constitution, whether from bodily fatigue or from disease; of a diuretic action (immediate), strongest from diluted spirits and from effervescing wines, great in some constitutions from all alcoholics, and in them a safeguard against intoxication; and of an uncertain diaphoretic action. The nutrient action he seems to consider probable rather than proven, and with regard to the experiments of Lallemand, Perrin, and Duroy, cites the analogy of farinaceous food, of which, when an excess is taken, the starchy lobules pass through the bowel unaltered; and of water, an excess of which similarly passes off, yet some is appropriated. The fact that Vierordt and Böcker, and Edward Smith, found excretion of carbonic acid diminished by alcoholics "does not," he says, "bear out the conclusion drawn from it. The question whether alcohol is nutrient or not is still undecided. The affirmative is not proved by most Methuists eating less than Nephalists, for this may arise from a new fact—that alcohol is an antitriptic," which he considers proved by the experiments of Böcker.

Under the head of influence of constitutional peculiarity, he remarks that "in some the stomach and brain are disturbed even by dietetic doses in great moderation, which in them cause excitement, dyspepsia, headache, drowsiness, and impairment of mental energy. In other constitutions such doses produce remarkable renovation from fatigue of body or exhaustion of mind, and no subsequent depression; while in a third class these doses cause no perceptible action of any kind." The effects produced on the brain by large doses vary extremely in different individuals, in kind, order, and intensity.

"Diseases affecting the head," he proceeds, "usually increase the action of alcoholics—thus apoplexy, paralysis, epilepsy, and most forms of insanity, the insane constitution sometimes substituting hallucination for drunkenness. Diseases which excite the circulation, as acute inflammations and sthenic fevers, also increase their action; but all those which enfeeble the circulation, and depress the nervous system, impair the action, such as fainting, anæmia, and typhous forms of fever and of eruptive fevers."

"Habit invariably diminishes the effect of alcoholics—variously in different persons—in some enormously. The stimulus caused by them diminishes, and even also the injurious effect on the stomach and head. But, in compensation, other injurious effects arise from long accumulation of action."

"Many instances present themselves to our notice of persons habitually intemperate, living, nevertheless, in the enjoyment of good health to an advanced age. There are few facts more remarkable in the physical history of the human constitution than the instances which occur in society around us, of men who habitually end the day with intoxication, but in the morning rise refreshed to resume business in the forenoon and drunkenness again in the evening, doing ample justice to either vocation, who go on thus most days of the week, from month to month and year to year, and who die at last at a fair old age, and of some ordinary disease, such as apoplexy, pneumonia, or erysipelas, towards which their habits have contributed only as a predisposing or aggravating cause. Such, however, is very far from being the common result. Much more generally, when alcoholic liquors are taken in excess frequently and for some continuance of time, they are all apt to bring on a variety of diseases and predispositions to disease." Of diseases directly caused, he proceeds to mention delirium tremens, cirrhosis of the liver, and granular kidney, and dipsomania; and of predispositions especially those leading to gout, gravel, cystitis, incontinence of urine, aneurism, mania, epilepsy, paralysis, apoplexy, spreading cellulitis, erysipelas, gangrene, with others less clearly proved. "But," he continues, "habitual excess acts injuriously to even a greater extent, though more insidiously, by impressing the constitution with inability to resist the attack of diseases in general. In constitutions undermined by intemperance, all acute and many chronic diseases are apt to put on severe and intractable forms, and to be accompanied with anomalous symptoms, indicating unusual derangement of the nervous system. It is far more in this indirect, unobtrusive way than by the more obvious and direct mode of actually inducing disease, that the prevalence of habitual intemperance affects the duration of life in a community. For example, in the course of a very wide experience of fever in hospital practice, I have only once known a drunkard recover from typhus after the age of forty. Moreover, in almost all diseases the course of the symptoms is less under the control of art in the intemperate than in the sober. The body, besides being comparatively feeble to resist the assault of disease, is likewise less able to bear the operation of remedies."

"Now let us speak of alcohol as an article of diet. When taken in moderation, in a state of health, its effect is to strengthen and somewhat quicken the pulse, and, during a state of fatigue, to restore, for a while, the muscular power. At the same time the blood is directed with increased force both to the surface, producing warmth, and towards the head, strengthening, at least certainly not enfeebling, the mental energies. Should the quantity be slightly in excess, the face flushes, and the faculties of the mind become preternaturally active."

"In those with whom alcoholic stimulants agree, there is no perceptible depression afterwards, perhaps some greater drowsiness than the accompanying meal will account for, but nothing more. Such persons may safely use alcoholics day after day without harm, so long as they adhere to moderation. In them we observe refreshment after fatigue of the body, energy after exhaustion of mind, improved digestion, and sound general health. Such facts form a sad stumbling-block in the way of the apostles of universal abstinence; for its ablest teachers and disciples can only get rid of them by denying them. But such facts will not bear denial; every impartial observer may encounter them every

day around him in society. What, for example, can the most ingenious of total abstainers say to the following remarkable testimony of Sir Samuel Baker?"

"In the course of his journey to discover the Albert-Nyanza, he was reduced to great distress by deficiency of food and frequent fevers. He bethought him of distilling spirit from the fermented pulp of the sweet potato (*Convolvulus batata*), and made four or five bottles of good spirit daily."

"'I found,' says he, 'an extraordinary change in my health from the time that I commenced drinking the potato-whisky. Every day I drank hot toddy. I became strong; and from that time to the present day fever left me, recurring only once or twice during the first six months, and then quitting me entirely. Not having tasted wine or spirits for nearly two years, the sudden change from total abstinence to a moderate allowance of stimulant produced a marvellous effect. Ibrahim and some of his men established stills; several became intoxicated. King Kamrasi got drunk so quickly on the potent spirit, that he had an especial desire to repeat the dose.'"

"Query? Would it have been sound African legislation to have deprived Baker of his wholesome antitriptic tonic, in order to prevent King Kamrasi from getting drunk?"

"But I own I am disposed to think that constitutions of this kind are nevertheless not quite so often met with as many would have us believe. There are many persons who are willing to be deceived into the opinion that their constitutions bear, or even require, the habitual use of stimulants at meals. On inquiring narrowly into their actual experience, it often turns out that even the moderate use of wine or other alcoholic liquors is followed by a stage of languor, heaviness, and inability to exert either body or mind for some hours after dinner. Whenever this happens it may be safely inferred that stimulants are at least superfluous, and generally hurtful."

"In regard to the greater proportion of people in easy circumstances, the more we look into the matter practically, the more shall we become satisfied that few healthy persons require the habitual stimulus of alcoholic liquors for the maintenance of health; that, under ordinary occupation of body or mind, few men go through their work better for using them habitually; that the greater number will do less under this habit, and that what they do will be done less comfortably, and with more exhaustion in the long run, than if they abstain altogether from stimulants; that during periods of unusual call for bodily or mental exertion, few find themselves benefited by the prevailing practice of supporting the strength by malt liquor, wine, or spirit, unless the period for such exertion be short; and that, on the contrary, nineteen people out of twenty will do more, and with less ultimate fatigue, under the system of abstinence from stimulants."

"But, on the other hand, there can be as little doubt that some people are benefited by the temperate use of stimulants; and that others neither reap benefit nor sustain harm, so that with them the adoption of the habit is simply a question of taste or of custom. In the case of all such persons there are certain rules the observance of which materially governs the wholesomeness of the habit. For—

"1. Stimulants seldom benefit, and often do harm, when taken alone, even in moderation. They are of use only at meals, and especially at dinner. 2. They ought not to be taken till that period of the day when business is over, and relaxation or amusement begins. In particular, very few people can take stimulants at dinner if they have afterwards to transact much serious business of a sedentary nature; if they use them they must have an after-dinner sleep before they are fit for work. 3. Stimulants answer better, on the whole, under bodily than under mental exercise. They answer peculiarly well with those who betake themselves for a season to country sports and other brisk exercises, as a restorative after long exercise of the mind in a sedentary profession. But still in this case they ought not to be used till exercise is over for the day. Taken in moderation after vigorous exercise, they remove fatigue and aid digestion; but their action is followed by a stage of languor, which is unfavourable to the continuance of exercise. 4. It is a great error to use stimulants, during active bodily exercise, at frequent intervals, apart from meals. There is no doubt that in this way, by relieving fatigue, artificial strength is gained for a time; but in a long day's exertion the ultimate result is unfavourable: more exhaustion is felt at the close, and the sense of fatigue next morning is greater. At the same time, no question can arise, that, under brisk exercise, stimulants taken in moderation, or even somewhat in excess, occasion much less injury than when used to the same extent during a sedentary life."

* * * * *

"Secondly. Of alcoholic liquors in the treatment of diseases.

"All diseases, in reference to the use of alcoholic liquors in their cure, may be aptly considered as of two great classes—diseases of reaction, and diseases of exhaustion. In the former, the circulation being in too active a state, they are generally hurtful; in the latter, the circulation being enfeebled, they are commonly beneficial. In a state of reaction they strengthen and quicken the pulse, augment local congestion, direct the blood with force towards the head, and aggravate nervous derangement. In a state of exhaustion, on the contrary, they exert a tonic action, strengthening the pulse without accelerating it, adding to the muscular power, removing faintness, giddiness, and sickness, and subduing the multifarious nervous symptoms which are apt to accompany great debility of the circulation. These general facts will for the most part form a trusty guide to the employment of stimulating liquors for the cure of diseases at large. Let us now look to details, and in the first instance let us see what are the relations of this method of cure to the treatment of *continued fever*. No one who has mastered the administration of stimulants in continued fever need be at a loss to use them successfully in most other diseases, whether febrile or not. Stimulant liquors are useful in some continued fevers, but hurtful in others; they are useful in one stage of some fevers, and injurious in another stage. Here it may be remarked at the outset that there is a great difference between different epidemics of continued fever in their relations to alcoholic stimulants as a remedy. In the first great epidemic that I saw, that of 1817 to 1820, and also in the second Edinburgh epidemic of 1826-28, not one patient perhaps in ten was the better for wine so long as the fever held its course. But in the epidemics that have prevailed since 1830, not more perhaps than one in ten has done so well without it."

As to the influence of the stage of the disease.

"There are few fever-patients who do not agree with wine or other alcoholics in the early stage of convalescence, and thus regain flesh and strength more quickly than without stimulants. On the contrary, there are few who require wine, or do well with it, at the commencement of fever, or until the close of the first week. It is chiefly, then, between the beginning of the second week and the setting-in of convalescence that the question will arise whether stimulants ought to be resorted to. Much will always depend on the dominant type of the epidemic. In pure inflammatory fever, the synocha of Cullen, *fièvre angiotonique* of Pinel, the relapsing fever of some modern nosographists—a form of which we had numberless examples in the epidemics of 1817-20, 1826-28, 1841-43, and 1847-48, but not in the intervals—alcoholics were generally inadmissible from first to last, until convalescence was fully established. In typhus they are usually required soon after the fever enters on the second week, but seldom sooner. In an intermediate form not now generally recognised in nosography, but designated by Cullen *synochus*—beginning with the characters of high reaction, but passing soon into typhus—stimulants are positively hurtful in the beginning, not always admissible subsequently at any stage, but more generally necessary in the secondary typhous period of the fever. In enteric typhus, or typhoid fever of late writers, stimulants are available according to precisely the same rules as in ordinary typhus."

He proceeds to say that the prevailing epidemic type ought always to be considered, *e.g.*, that during an epidemic of relapsing fever even typhus cases do not so well bear stimulants as at other times; and then passes on to the indications of particular symptoms.

"When the pulse is very soft and easily compressible," he says, "whether it be frequent or slow, full or contracted; when the countenance is pale and languid; when the skin tends to coldness; and when the muscular force is much reduced—few will hesitate to resort boldly to alcoholic stimulants. When the pulse is full and jarring at the extremity of its diastole, and yet easily compressible, alcoholics will still prove serviceable, provided the other signs of exhaustion be present. But if, along with this always

alarming pulse, there be much dryness and pungent heat of skin, high delirium, congestion of face and head, and other signs of determination to the brain, stimulants generally increase these unfavourable symptoms. When the pulse is fluctuating and irregular, the breathing interrupted and sighing, and the tongue dry and retracted, alcoholics are generally beneficial; and it signifies little, in deciding as to their use, that the delirium is high and not easy to govern."

"The next rule to be attended to is, never to be in haste to resort to stimulants in fever. It is a very ill omen when a skilful and cautious physician finds himself reduced to the necessity of allowing wine before the first seven days are over. Another, and an imperative, rule in all cases is to watch diligently the effects of wine for some hours after it is first administered. We may be satisfied that it is to answer when the pulse becomes fuller, but not jarring or more frequent; when the attitude, eye, and general expression denote less languor or less stupor; when the tongue becomes more clean and moist at the edge—perhaps the most unequivocal of all signs that we are on the right track; when delirium abates, or sleep takes the place of rambling; when the patient is more easily roused, and to a state of improved intelligence; when the appetite begins to return. On the contrary, stimulants should be withdrawn if the face become more flushed, the delirium or the stupor more intense, the pulse more jarring or more frequent, the tongue more dry, foul, and retracted, and the restlessness and jactitation more distressing." . . . . "It must not be assumed that it is always necessary to continue stimulants throughout a fever, because it has been found necessary to begin their use. There are important exceptions to the general rule, which is, that when stimulants have been resorted to with good effect, they must be faithfully repeated from time to time so long as the fever goes on. Consequently, care must be taken to insure the fidelity of the attendants to this point, especially in the early morning hours, when stimulants are usually most needed."

"I have already said that they are commonly necessary in the early stage of convalescence from most fevers. After all fevers the body falls into a state of languor and debility, which is unfavourable to the progress of convalescence; and not unfrequently the exhaustion is extreme, especially in the adolescent. This state is marked by a very soft, easily compressible pulse, sometimes too frequent, more commonly natural, often enough preternaturally slow; by great muscular weakness; by extreme tendency to faint, and by more or less nervous excitability. This condition is in no way more promptly and effectually relieved than by wine or spirit, and the stimulus must be carefully renewed from time to time, until the circulation be permanently strengthened by the assimilation of food. As convalescence advances, and the circulatory, muscular, and nervous systems regain tone with the progressive elaboration of the blood, stimulants become unnecessary, and ere long in the same doses will produce an excitant instead of a tonic effect. It is singular how abrupt a change may thus be effected. In a case of severe ephemeral fever, passing off with profuse perspiration, and leaving a state of great debility, listlessness, and slow feeble circulation, a pint of claret, taken at dinner on the second and third days after the diaphoretic crisis, produced clearness of head, and great relief from languor; but being repeated on the third day, it made the patient quite tipsy." (Egomet, 1848.)

On the quantity and kind of alcoholic stimulant to be used in fever, Sir Robert has some interesting observations, which, however, I pass by for the present, with one exception. "In increasing the dose," he says, "take care that the pulse be not rendered more frequent or more hard, about ten minutes after the addition is made." To other febrile diseases he applies the same principles. In scarlatina with fever of asthenic type, alcoholics, he says, are the chief remedies we have to trust to, and so in erysipelas and several other diseases.

"The danger of reduced living in advanced gout," he says, "is probably overrated by many; and rigid temperance may be safely and beneficially practised by persons long martyrs to gout and well up in years. I have known the change made abruptly at the age of sixty by a gentleman who had been long severely afflicted with both gout and asthma, and who reduced his allowance at once from a daily bottle of port, and often more, to simple lemonade. No evil resulted; his general health and comfort were much improved, and he survived till his seventieth year." (John Kemble.)

When a gouty constitution is suffering under an acute disease, the only correct rule of practice is to treat it, like other constitutions, according to the special manifestations of each case.

"We owe greatly to Dr. Todd the knowledge that paralysis often requires a stimulating treatment, and the discovery of a sound pathological reason for this therapeutic rule. Our guide to cases demanding the stimulant method is softness of the pulse, paleness of the features, and the absence of symptoms denoting cerebral inflammation."

When syncope depends on organic disease of the heart or great vessels, stimulants are seldom available for its relief; but to this rule fatty degeneration forms an exception. In syncope arising from functional causes, from hæmorrhage, etc., alcoholic stimulants are the best remedies we can employ.

Experience has constantly confirmed the doctrine that delirium tremens must be treated by stimulants, not by evacuants.

"In general, dyspeptics do not agree with stimulant liquors: digestion is in general not improved thereby, and in some persons it is positively injured. But fine French brandy, taken in moderation, and diluted with cold water, proves often an aid to digestion when simply feeble, although all sorts of wine and malt liquor are a source of constant suffering."

In diabetes he approves of the liberal use of alcohol, but disapproves of the extravagant quantities prescribed by Bouchardat and others, citing the case of a patient of his own, whose life was apparently cut short by Bouchardat's prescription of two bottles of claret daily, though she had some years of life to look forward to under different treatment.

Sir Robert concludes his disquisition on the use of alcohol in disease by adverting to the mischievous fashion, prevalent especially in London at the time of his writing (1870) and for some years previously; and by quoting from Dr. Fraser the following statistics:—

London Hospital.

Years.	Medical Wards.		Surgical Wards.	
	Consumption of wine.	Mortality.	Consumption of wine.	Mortality.
	ozs.	per cent.	ozs.	per cent.
1854-58 . .	32·75	11·9	36·7	4·50
1859-64 . .	116·5	12·8	134·2	6·66

So far Sir Robert Christison. Now I hope you will bear with me while I add a few words of my own. I shall avoid the moral aspects of the question, and touch firstly on the modes of action of alcohol, secondly on its use in health, and thirdly on its use in disease.

Is alcohol food? Definitions are proverbially difficult; and I believe there is no perfect definition of what we mean by "food." But if food be matter capable of suffering oxidation and generating force in the body, then I hold alcohol to be a food. Some of Anstie's and Inman's cases are sufficient to prove it to anyone who will be satisfied with something a very little short of rigorous scientific demonstration.

The other actions of alcohol may be arranged conveniently, if not logically, under three or four heads, as may also the diseases produced thereby.

First. Its antitriptic action, its effect in checking combustion and metamorphosis, whence chiefly come gout and its congeners and derivatives.

Second and Third. Its action as a direct irritant on certain tissues and organs, and its action on the vascular system, whence come cirrhosis of the liver, renal disease, and coarse arterial disease leading to aneurism, apoplexy, etc.

Fourth. On the nervous system purely, whence delirium tremens, chronic alcoholism, premature decay of nervous power, and old age.

"Though I look old," Shakespeare makes Adam say—

> "Yet am I strong and lusty,
> For in my youth I never did apply
> Hot and rebellious liquors to my blood."

Observe, Adam not only *was*, but *looked* old; but he retained some of the nervous vigour of youth.

The question whether a reaction of depression occurs after

a moderate dose of alcohol, which, as Christison justly says, is the marrow of the teetotal controversy, would fall to be considered here. From personal observation, but still more from the analogy of the effects of other nervine agents, I believe that it does occur, though it may in many cases be insignificant. One of the valuable points of practice which the homœopaths seem to have stumbled on is the administering of the powerful narcotics and other nervines, which form their principal weapons when they "mean business," in often repeated doses, so as to avoid the secondary effect. Here tea and coffee stand side by side with alcohol, and some of the extreme foes of alcohol ought to put them into the same *index expurgatorius*.

The very different effects of various alcoholic liquors may to a great extent be explained by the classification I have just given. "Why," said a medical friend to me, the other day, "should a tumbler, or even two tumblers, of cold whisky-and-water, taken at night after a hard day's work, seem to leave no bad effect in the morning, whereas a tumbler of 'hot with' would result in a headache?" Here the nervine and irritant actions are the same—the vascular action perhaps greater in the second case; but the real *differentia* is probably the sugar, which is an additional antitriptic, and by retarding the oxidation and destruction of the alcohol may prolong its effect. The notoriously greater effect of sweet wines in producing gout, and the absence of gout from Scotland while whisky and claret were the only drinks, may probably be in great part thus explained. On the other hand, cirrhosis and renal dropsy are, or used to be, greatly more rife in the Edinburgh than in the Bristol Infirmary, owing, doubtless, in part at least, to the greater consumption of unqualified spirit than of beer in the North. Sweet ale, mead, and the like, have always been known to be stupefying and productive of headache; they load the blood with carbon in the form of sugar or dextrine, and are slowly oxidised away. The small quantities of ethers and volatile oils, œnanthic ether, and the like, which exist in wines and spirits in various mixture and proportion, are evidently very powerful bodies, and cause important differences of action in the liquors containing them. Thus the differential characters of Burgundy and Bordeaux are in nowise due to any difference of alcoholic strength, which hardly exists. And if it be true, as the French will tell you, that the drinkers of white wine are more "*vif*," hasty, and irritable than the imbibers of red, and more liable to paralysis and nervous diseases, it is assuredly not due to the alcohol, but to some other constituent of the white wine.

The subject of "seasoning" is very important. It is clear that many constitutions can become seasoned to the nervine action of alcohol, as to that of tea, coffee, tobacco, or opium. I think what are called seasoned vessels are seldom large eaters, and they may thus escape gout. They are like the Bishop of Bath and Wells, who sang—

> "I cannot eat but lytle meate,
> My stomack is not good;
> But sure I think that I can drynke
> With anye that weares a hood."

As for the use of alcohol in health, the evening would be too short for citing half the facts and arguments against it; yet there is something to be urged on the other side. Assuredly it is unnecessary to most men, if not positively mischievous. There is a strong consensus of opinion, among those best qualified to judge, against its employment under hard and continuous labour and extremes of temperature. The Esquimaux live without it, our Arctic voyagers do best without it, so do our puddlers, so do those pedestrians and hill-climbers who have tried both plans. Hear Colquhoun, that prince of athletic sportsmen:—"Once I thought the spirit-flask almost as indispensable as the powder-flask; but experience has since taught me that nothing more effectually expends the remaining strength of a half-worn-out sportsman than a few pulls at the liquor-flask, however diluted: he gains a temporary stimulus which soon ends in complete exhaustion."

With reference to the effect of exposure under the influence of alcohol, let me cite a lamentable case which occurred within my own knowledge. A splendid fellow, one of the finest men, physically, to say the least of him, in the British army, with every organ perfectly sound, died from one night's exposure on a hillside in Asia Minor to a degree of cold that would have done, probably, no harm to a sober man.

Statistics on this subject tell us what we know already. Those of a well-known insurance office show that the expectation of life in total abstainers who insure is much greater than in so-called moderate drinkers. It was affirmed, or at least broadly hinted, in the *Lancet* some time ago, that an undue proportion of the abstemious insurers died of fever or of phthisis. I have been unable to test this statement; but in Dr. Fleming's medical statistics of the Scottish Amicable Society I find an unusually large proportion of publicans and wine merchants dying of those very diseases.

An asylum superintendent states, in the Canterbury Report on Intemperance, that he never knew a lunatic patient who had been a total abstainer. But though, in the departmental statistics of France, I found a pretty evident connexion between consumption of alcohol and rate of mortality, the distribution of lunacy did not seem to follow the same law.

Dr. Farr, who has lately discussed the effect of alcohol on mortality, with perhaps a little tenderness, inclines to think that its temperate use prevents the action of various infections. Ashantee experience, as related by Dr. Parkes, seems insufficient to decide this point. I have heard of a surgeon who lived on the Guinea Coast for upwards of twenty years, in the odour of anything but temperance. But one is surely entitled to look upon such cases as exceptional or idiosyncratic, like two others (English cases) which I will proceed to mention. One of these died at ninety-six, after getting drunk almost every night for thirty years. Another, who died at ninety-nine, a Wiltshire farmer, though customarily sober, was in the habit of getting pretty thoroughly drunk—"taking a skinful," as it was expressed—every now and again. Probably Chambers is right in supposing that such people possess kidneys of superhuman activity and hardiness, which rapidly excrete most of the alcohol they swallow. I am not disposed to adhere unreservedly to the doctrine of Anstie and others, that there is a certain quantity of alcohol which an average man may take with benefit or without harm, but beyond which, he being as it were saturated, the excess is mischievous, and begins to be excreted. At all events, the saturation point must vary greatly, or else it is no measure of moderation, for less than two ounces makes some men tipsy, while five times as much has no visible effect on others.

On the whole, I would wind up by agreeing with T. K. Chambers, that there are some "poor creatures" in whom alcohol prevents debility from becoming disease, but that almost all healthy people are better without it. That, if taken, it should be not as a stimulant or preparative for work, but as a defence against the injury done by work, whether of mind or body; and that increase in the desire for, and power of digesting, food should be (with the semi-invalid, that is) the guide and limit to its consumption.

I have scarcely any time to enter on its use in disease. I would express, however, with Dr. Goodridge, my disagreement with one single point in Dr. Fox's paper. I understood him to object to giving alcohol to convalescents. Perhaps he meant to do so on moral grounds. Physically, I should say that convalescence from fever or acute disease is a state which is often remarkably benefited by alcohol. Individually, I don't remember ever deriving any benefit from alcohol, except once during extreme exhaustion, and occasionally during convalescence from acute disease.

I confess, too, that I don't agree with Sir Robert Christison about delirium tremens. In my opinion, the majority of cases of delirium tremens do better, and recover more quickly and surely, without alcohol. Only where syncope is much to be dreaded would I ever use it.

As for gout, I would by no means prescribe total abstinence to *all* gouty people. Alcohol does not furnish the materials of uric acid; it does not always even favour its production; and its moderate use seems to prevent some gouty people from eating more food than they can digest.

Molluscum Contagiosum.—It may interest some of our readers to know that Professor Bollinger of Munich considers the above disease to be due to gregarinæ, and to be identical with an affection which sometimes attacks the comb of fowls. He believes he will be able to prove the relation of the so-called "molluscum-corpuscles" to gregarinæ.

A SHORT NOTE

ON THE USE OF IODOFORM PASTILLES;

AND ON THE ADVANTAGES OF GELATINE BASIS IN THE MANUFACTURE OF LOZENGES.

By W. MACNEILL WHISTLER, M.D., M.R.C.P.,
Physician to the Hospital for Diseases of the Throat and Chest; Honorary Physician to the National Training School for Music.

The application of strong ethereal solutions of iodoform to the pharynx, although sometimes followed by good results in cases of specific ulceration, is attended with so much discomfort to the patient, if it be at all freely made, that one is frequently prevented from using this valuable remedy in this form. Insufflation, on the other hand, of powdered iodoform, whether mixed with gum and sugar of milk, or starch, or combined with sulphate of zinc and morphia, is devoid of pain; but the good effect produced by either of these methods is, in my experience, so transient that comparatively little real benefit is obtained. The iodoformed wool recommended by Dr. Woakes in disease of the nasal cavities supplies a valuable means of keeping this remedy in prolonged contact with the diseased mucous surface of that part, while it gives little or no annoyance to the patient. The application of it to the lower portion of the pharynx, however, is impracticable, and of course in lesions of the mouth it could not be used.

Some time since I was led to try the effect on these parts of iodoform pastilles—a form in which, so far as I am aware, this drug has not as yet been used. The pastilles are composed of what is known as gelatine basis, and each one contains two grains of iodoform. The mass is of the consistency of firm jelly, it keeps very well, and both in taste and form the pastille is an agreeable one. The patient is directed to allow one to dissolve slowly on the back of the tongue twice or three times daily, so that from four to six grains of the medicine are swallowed in the twenty-four hours, while the mucilage which is formed by the dissolving gelatine keeps the iodoform for some time in contact with the diseased surface. My experiments, which have been conducted more especially in syphilitic affections of the mouth and throat, have not disappointed my anticipations, and I look upon these pastilles as an important addition to the remedial agents used in these affections.

This gelatine basis has been much used in making soluble bougies, but I have not known it to be employed before as a base in lozenges—a purpose for which it is admirably adapted. Since using it for the iodoform lozenges I have been so favourably impressed with it that I have discarded almost entirely all those in which the basis is gum or fruit paste. The results which I have thus far obtained have been so satisfactory that I venture to make this note, thinking the subject may not be devoid of interest, and in order that others may put these gelatine pastilles further to the test.

The advantages in using this basis are—1st. That it makes a soft, flexible lozenge, which is perfectly unirritating to the mouth: this is a quality which will be much appreciated by those patients who may be suffering with inflammation or ulceration of the tongue or palate, in which affections anything approaching to a hard lozenge gives pain. 2nd. Its demulcent nature; the gelatine keeping the mucous membrane constantly coated with mucilage, and giving more relief to dryness of the pharynx and larynx than any lozenge that I know of. 3rd. The readiness with which these lozenges are made is another, and by no means the least, recommendation for their use. As they require no drying oven or special apparatus they may be prepared by any chemist, and so the physician, no longer restricted to certain formulæ, may prescribe lozenges as he would pills or mixtures, extemporaneously, varying them to the requirements of the special case under treatment, using any remedy in them which he may see fit.

The process of making the lozenges is simple, and they can be prepared in a very short time. The gelatine basis, which should be kept ready prepared, is melted; the ingredients are incorporated with it; the mass is then allowed to cool, when it is cut into tablets of the requisite size.

I am much indebted to Mr. James, of the firm of Bullock and Co., Hanover-street, for the great care he has taken in preparing these lozenges for me, and for the very excellent formula he has worked out in order to give the basis the proper consistency. It is as follows:—Refined gelatine, one part; glycerine, two and a half parts; flavoured water, two and a half parts; liquid cochineal, q.s.; to be made into a paste.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

MIDDLESEX HOSPITAL.

A CASE OF ARSENICAL POISONING, WITH POST-MORTEM NOTES.

(Under the care of Dr. GREENHOW, F.R.S.)

[Reported by Mr. ALFRED LENDON, Physician's Assistant.]

Previous History.—R. B., male, aged forty-two, had been a porter to a firm of furriers in Oxford-street for upwards of twenty-five years, and as such had charge of a room in which, amongst other things, various chemicals used by furriers were kept. Of late he had been very intemperate, and was reported to have been drinking on the morning of October 2, 1878, when at 12.35 p.m. he took a large quantity (said to have been two teaspoonfuls) of white arsenic, which was kept in a piece of paper labelled "arsenic" in the above-mentioned room. He was at once brought to the hospital.

On admission, at 12.55 p.m., he was found in the out-patient department, lying on a couch, yelling and groaning; he stated himself that he had taken arsenic, and some fine white powder was observed on his moustache; he had not been sick. A large dose of the freshly precipitated peroxide of iron was administered forcibly. He then walked with assistance down to the delirium tremens ward. He was very noisy, and apparently drunk. At 1.10 p.m. a soft tube was introduced into his stomach, which was washed out by means of about two pints of warm water. He vomited a considerable quantity of matter by the side of the tube, which could not be saved; but in the fluid with which his stomach had been washed out, a large quantity of arsenic was found by Mr. Foster. At 1.20 p.m. he was seen by Dr. Greenhow, who ordered half an ounce of the following mixture to be taken every five minutes:—℞. Liq. ferri perchlor. ℥x., sod. carb. ℥iv., aquam ad Oij.—M. At 3 p.m. the pulse was 94, very feeble and irregular; the skin cold and clammy; abdomen tense and very tender; and the patient was tossing about in the bed, and crying out with pain. He had vomited several times, and had been purged three times, and the stools evidently contained the oxide of iron. He was very thirsty. He was ordered to continue the iron mixture—an ounce every hour, with two ounces of brandy every half-hour, mixed with egg and milk. At 3.30 p.m. the symptoms of collapse were increasing, and patient was complaining very much of the abdominal pain, and was extremely restless, but not delirious. He also had cramp, in the left leg and groin especially. At 5 p.m. the pulse was weaker. Since 3 p.m. he had been sick only occasionally, but had been purged very frequently. At 5.30 p.m. his extremities were very cold, and he complained of inability to breathe and want of air. At 6 p.m. his pulse could not be felt at the wrist, and he gradually sank, and died at 6.45 p.m.

Abstract of Notes of Post-mortem Examination made twenty-one hours after Death.—Body of a well-developed, muscular, and stout man. Rigor mortis moderate; well pronounced post-mortem lividity, with engorgement of the veins of the neck. No excoriation of mouth or fauces; tongue coated with rather thick white fur; upper half of œsophagus pale, lower half purple, with minute silvery-white patches on its surface which could not be detached without injury to the mucous coat, and several slightly raised opaque granules of the size of a millet-seed studded over the cardiac end of the tube. On opening the abdomen, the intestines were found to be of a rosy tint from minute vascular injection of the serous coat; the veins from the stomach were not congested, but the lower part of the omentum was injected. The stomach contained about half a pint of pale yellowish-brown grumous fluid, having an odour of rotten cheese, mixed with some soft curdled masses. It was lined with a glairy mucus, and some of the brown grumous material, and studded with numerous white granules, which were shown by the microscope to be crys-

talline in structure. The mucous membrane was thick and mammillated, and thrown into numerous rugæ, and of a pale ochrey tint at the cardiac end and fundus. There was no evidence of post-mortem digestion. There was marked inflammatory change at the pyloric end, over an area two inches and a half in width. The membrane on removal of the mucus presented a brilliant red, almost crimson, colour, uniform with similar patches radiating from it, and numerous punctiform hæmorrhages, especially arranged along the rugæ. In various parts erosions and superficial ulcerations, not extending deeper than the mucous coat, were found, some linear, others circular, and some having white granules embedded in them. The redness ceased abruptly at the pylorus, the duodenum being pale and natural, and the rest of the intestines healthy. The liver and kidneys were granular, and the spleen soft. Heart: A patch of bright extravasated blood was seen under the endocardium in the left ventricle on the septum, with striæ of extravasation on the musculi papillares. Lungs: Intensely engorged, with an extravasation in the right lower lobe. Brain: Firmer than natural; arachnoid opaque. The liver and spleen were examined carefully by Mr. Foster, and found by Marsh's test to contain very minute traces of arsenious acid, the reagents used being previously ascertained to be free from that impurity.

BIRMINGHAM GENERAL HOSPITAL.

A CASE OF SENILE CHOREA.

(Under the care of Dr. RUSSELL.)

D. T., aged sixty-eight, was kindly sent up to me from the out-patient department by my colleague, Dr. Saundby. He presented physically the signs of age somewhat more advanced than his years warranted, but no evidence whatever of decrepitude. His nose and malar prominences were coarsely vascular; his eyes had a large circular arcus. No evidence of arterial degeneration could be discovered; the sounds of his heart were pure, though more feeble than normal. He presented movements in a moderate degree, which had all the distinctive characters of chorea. They were perfectly distinct from any form of tremor; they were combined movements, without co-ordination. The affected parts of the body were in constant movement; to quote Dr. Saundby's description—"The arms are constantly changing their position: the hands are now clasped, then rubbed over one another; then the fingers are extended; one hand is often raised to the face as with the movement of stroking the moustache; there is constant play of the tips of the fingers and thumbs with each other. The head is frequently jerked from side to side, and the muscles of the lips are in continual motion." The movement affected chiefly, though not entirely, the lips, upper extremities, neck, and trunk; but the legs were not completely spared. The tongue was protruded normally, but was withdrawn after a few seconds. The grasp with the left hand was firm, but not sustained, and he entirely failed to pick up a pin; the right hand was maimed. He got out of bed easily, though using more caution than ordinary. In standing, his body advanced and receded alternately, in consonance with a similar movement of the lower limbs; he walked very slowly and with much care, and in a springy, dancing manner. Articulation was at times unintelligible, chiefly through fault in the lips; and want of perfect control over these organs also gave rise occasionally to a little awkwardness in swallowing. We could not test muscular force by the dynamometer; tactile sensation was perfect. Muscular irritability was decidedly low; the secondary current up to 15 of Stöhrer's two-celled machine only just causing muscular contraction. His intelligence was fairly up to the average of his class; he was not aware of having suffered any impairment of memory; he was clear and full in his answers, with the exception of being confused in respect of dates; and the account of his history which he gave to Dr. Saundby and that which he gave to me agreed in all points. He could not state the exact date of the commencement of his illness, but put it back to about eighteen months. He had done no regular work for twelve months. At first he "jumped" a good deal in sleep, but lately his nights have been quiet and his sleep good. He was always worse in hot weather, and the occasion of his leaving the hospital (which he did in September, after a short residence) was because he was sure he should improve on the approach of winter. He could not assign any cause for his illness. He had been in comfortable circumstances prior to the advent of his symptoms; he had not been intemperate. Careful inquiry into his family history by Dr. Saundby and myself failed to discover any evidence of gout or of rheumatism; the patient asserted that he had been quite free from these complaints. The first metacarpal bone of his right hand was enlarged; and the extensor tendons of that finger were rigid and did not admit of complete closure of the hand; he had "swelling of the hand" two years ago after running a splinter into the palm, from which this condition of the finger resulted. His bodily temperature was rather low, varying between 97° and 98°. His urine was amber in colour; specific gravity 1020; was free from sugar, but contained a trace of albumen; by the microscope it presented a few granular and blood casts, a few blood corpuscles, epithelium, and mucus.

EDINBURGH CITY POORHOUSE INFIRMARY.

CASE OF ACUTE PHTHISIS—PYREXIA—TREATED WITH OPIUM AND BELLADONNA WITHOUT EFFECT.

(Under the care of Mr. FURLEY.)

[Reported by Mr. LIONEL DRUITT, M.B., House-Surgeon.]

J. B., aged fifty-two, admitted into the Infirmary on July 31, 1878. Had been a soldier, of very irregular habits (as was shown by his being branded with two D's), and a very hard drinker. He was a full-sized man, of swarthy complexion, and his skin had a peculiar oily appearance, as if constantly anointed by a greasy exudation. He complained of intense pain in the subclavicular region of the thorax on the right side; pain also in the epigastrium, aggravated by pressure on any part of the abdomen; constant hacking cough, diarrhœa, and great thirst. The tongue was covered with a yellowish-white coating, resembling clay. Percussion of the thorax produced a dull sound at both apices, and a well-marked cracked-pot sound at the right. Temperature in the axilla on the evening of his admission 104·1°; pulse 108. He was ordered a light and nutritious diet, consisting chiefly of milk, and fifteen grains of quinine to be taken at once.

August 1.—Temperature 104°; pulse 112. Ordered forty grains of subnitrate of bismuth, with one grain of opium. Also a drink composed of acid tartrate of potash and lemon-juice in water, sweetened with sugar. Evening temperature 104·8°; pulse 112.

2nd.—Some relief from the abdominal pain and diarrhœa; but no visible improvement. Temperature in the morning 104·2°, evening 105°. Pain in the chest and cough still very distressing. Ordered a mixture of hydrocyanic acid, nitro-muriatic acid, infusion of quassia, and glycerine, after the formula of the late Dr. Begbie.

3rd.—No improvement of any kind. Temperature, morning 104·2°, evening 105·1°. Complains of profuse perspiration. Ordered two grains of oxide of zinc made into a pill with extract of gentian.

4th.—Still no improvement. Diarrhœa commenced again. Temperature, morning 104·3°, evening 105°.

5th.—Temperature, morning 104·2°, evening 104·8°. Complains of increased pain in the chest, aggravated by the cough. There is scanty expectoration of mucus tinged with blood. Sleep was almost entirely prevented during the preceding night by the cough. He was therefore ordered ten minims of muriate of morphia with five minims of tincture of belladonna to be taken thrice daily, and ten grains of Dover's powder to be taken at night.

6th.—The pain and cough are much relieved, and he passed a comparatively quiet night. Temperature, morning 104·2°, evening 104·8°. The morphia was continued, but the Dover's powder omitted.

He lingered on without much change for about three weeks, when he began to sink rapidly, and died on the evening of August 25.

Post-mortem.—The apices of both lungs were consolidated; in the left there were three small cavities. The right apex was strongly adherent to the parietes, and the lung being friable, tore when its removal was attempted, opening into a large cavity.

This case illustrates well the hopelessness of dealing with the more severe cases of phthisis.

In "Dr. Dobell's Report," vol. iii., an abstract of which appeared in the *Medical Times and Gazette* of August 31, the treatment of the pyrexia of phthisis by morphia and atropia was very highly spoken of by Dr. Bartholow; but in this case it entirely failed to produce any effect on the temperature, which was never below 104°. It did some good, however, by easing the pain and the cough, and procuring sleep. An objection to the free use of opiates in phthisis is that they tend to impair the appetite, which is a matter of much importance; but as the deappetising influence of many sleepless nights is greater than that of opium, the latter is to be preferred when not specially contraindicated.

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Medical Times and Gazette.

SATURDAY, NOVEMBER 30, 1878.

PAYING PATIENTS IN HOSPITALS.

Last week we had barely time and space to draw attention to the important action taken by the Governors of St. Thomas's Hospital in their resolution to open a certain number of wards to patients who could afford to pay for their maintenance and attendance in the Hospital. It would not be inappropriate here to inquire how it comes about that St. Thomas's Hospital, a Royal and munificently endowed charity, should be in a position to permit any of its wards to be occupied by other than the poor for whose sake it was founded. It is quite clear that anyone who can afford to pay as much as two guineas a week is not a fit object for the charity of such an institution as that of the palatial Hospital referred to, but it would not suit our present purpose to go back upon the various causes which have so brought it about that of 600 beds in that building only 350 are available for occupation.

The prospect of such an institution as St. Thomas's being willing to receive paying patients has been received, apparently, with a flutter of applause; but those of our profession who look below the surface of things will soon see that it is very far from being a boon to them, whatever it may be to those received into the Hospital. In short, there seems to be a vast amount of misconception abroad with regard to the whole subject. We will not revert to the unpleasant spectacle of a Royal charity being diverted to the use of those who can afford such a sum as two, three, or four guineas a week; and had the Hospital been a purely private undertaking, we should have had no very good right to do so; but in our capacity of guardians of professional interests we may well call public attention to the wrong proposed to be done.

In the first place we would invite our brethren to note that, after paying all expenses, the Treasurer calculates on netting £3000 a year from this misuse of the Hospital. It is for others to say whether this is too much or too little for the rent of one of the pavilions of St. Thomas's Hospital; but the treasurer defends his action on the ground that this increased sum will add to the income of the Hospital, and so enable the authorities to admit a larger number of poor patients to its charity. Let us see out of whose pocket this donation to the Hospital will come. The cost of the actual necessaries of life, and the contingent expenses of a sick-bed, will not be very greatly decreased, though the comfort of the patients may be increased, by grouping them together in the way proposed. But if the services of the staff of the Hospital are to be at the command of these patients without fee or reward, there will be a very large saving in doctors' bills. If, on the other hand, the medical staff of the Hospital are to be duly requited for their attendance on such patients, we say that they are lowering an honourable position—they are giving up their position of consultants, and doing the work as well as intercepting the fees of the general practitioner. We can hardly conceive that such a plan would improve the position of the St. Thomas's staff as consulting practitioners. But, put it either way you like, it is clear that the greater part of this £3000 is to come out of the pockets of a poor profession. Such a scheme deserves no support from us or our brethren. It has been said that this is simply an application of the principle asserted by certain members of our profession—that, namely, of establishing what are called "home hospitals." In our eyes it is very different. As we understand, the home hospital scheme is merely to enable a practitioner to treat his patient elsewhere than at home; or for a man rich enough to pay his own way to leave inconvenient lodgings and go to a place where he is sure to be well looked after, at the same time selecting and paying his own medical attendant. This is no attempt to bolster up a charity suffering from the effects of mismanagement. The position we assume stands, as we think, incontrovertible: it is that such a scheme as that proposed for St. Thomas's Hospital is calculated to inflict grave and deep injury on our profession.

But it is quite clear that much of the approbation bestowed in our public papers on the scheme has been given under a totally incorrect idea of the Treasurer's proposals. An article in the *Times*, to note one alone, was founded on the conception that this was to be a plan for the relief of families any of whose members had become the subjects of infectious disease. There can be no doubt of the value of such institutions; the Fever Hospital in Islington has thus done vast service to the State in limiting the spread of epidemics. But the Treasurer says—No, we will not admit anyone suffering from infectious disease. Probably, with such knowledge, the *Times* leader would have been couched in somewhat different terms.

We are even in a position to go farther. The wing which the Treasurer holds as so excellently serviceable for his scheme is that most remote from Westminster-bridge. Its construction is quite different, as Alderman Stone said, from that of any other of the pavilions. And why? Merely because it is that part of the Hospital specially built and constructed for the isolation of infectious diseases. We are not at present in a position to say how far the authorities of a Royal Hos-

pital are entitled to reject such cases; but it is a matter of notoriety among all hospital physicians and surgeons that cases of infectious disease do break out now and again in the wards, which must be dealt with in the hospital itself. We all know that a typhoid patient may be going about spreading the germs of disease everywhere, and yet not feel so ill as to seek relief at a fever hospital. When—as is often the case, again—such patients are admitted into a general hospital, they cannot well be removed, however undesirable their presence may be. Patients are also often admitted with some infectious disease incubating; it is not always possible to send them adrift when it has manifested itself. Now and again an epidemic breaks out in a hospital, when isolation is the only thing to which recourse can be had. To cope with such mischances—and we have only enumerated a few—it is clear that in each hospital there should be certain means of segregation; but here we have the authorities at St. Thomas's deliberately sacrificing a building constructed and kept apart for this very purpose: a bid for popularity or a few hundreds of pounds being apparently the ambitious end they have in view.

We were greatly surprised when we read that the medical and surgical staff of the Hospital had given their consent to any such scheme, but we have been since assured that in this the Treasurer made a mistake. We could hardly imagine it otherwise. It is at all times a pity that the lay and professional officers of a hospital should misunderstand each other, or that the popular element should seem to override that more strictly professional; but we trust, however, that the latter will be here strong enough to show the lay governors on what dangerous ground they are treading, and that the proposed scheme, if not entirely withdrawn, will be seriously amended.

THE PRIMARY EXAMINATION FOR THE FELLOWSHIP OF THE COLLEGE OF SURGEONS.

We begin to lose patience with the Board of Examiners at the College of Surgeons in respect of their plan of conducting the Primary Examination for the Fellowship. The obvious nature of the intrinsic defects of this examination is universally recognised, and from all ranks of the profession complaints are invariably heard, in May and November, of the manner in which these defects are unnecessarily exaggerated by the Board of Examiners. Yet, year after year, these gentlemen appear to endeavour to outdo themselves in setting papers which are calculated to test as little as possible the knowledge of the candidates. Were it not for the long series of disappointments we should be inclined to hope that at last the limit has been reached; for it is difficult to conceive a more unsatisfactory set of questions than that placed before the unfortunate gentlemen who recently presented themselves for examination. It is, in the essence of the thing, unfair to attempt to test a knowledge of the whole of physiology from answers to two questions, which may—one or both of them—well happen to be outside the range of a well-read candidate's attainments. But what are we to think of the wisdom, to say nothing of the fairness, of making one of these two questions include the subject of the functions of the supra-renal capsules, a question which the highest authorities even profess to know nothing about; and the other the "form of the vertebral centrum characteristic of each of the primary divisions of the vertebrata," to which we believe it is impossible to give a definite answer? One of the anatomical questions was, indeed, a straightforward one—we mean the dissection to expose the upper surface of the first rib; but the other, which required a description of the structures seen in a vertical and transverse section of the skull through the odontoid process, is in itself open to a variety of correct answers, and belongs moreover to the category of catch-questions, which we do not hesitate to say should, by this time, have been abolished from the examination-papers of such an important body as the Royal College of Surgeons.

We have no pleasure in opening up again the often-repeated question as to the kind of candidate for whom the Fellowship of the College is intended; but we feel sure that it is one to which before long a definite answer must be given, and it is clearly one which the profession at large will do well carefully to consider. We hold, and we believe that this is the generally received idea, that the Fellowship is intended as a distinction to be bestowed upon, and which should be obtainable by, men who have already entered into the ranks of active practitioners, not, of course, to the exclusion of those who find it convenient to devote a long period to their actual studentship. If this be the case, it is unnecessary to point out how completely the style of paper now set defeats its object. Is it conceivable that anyone, who is not actually or practically a student at the time, should be able to give satisfactory answers to the questions we have referred to? Do the examiners ever consider how many men, who should take leading places in the profession, have their hopes in life blighted, and their ambition to obtain appointments as hospital surgeons destroyed, by the perversity with which the examination is maintained in its present condition?

If the College would insist upon having as their examiners men who are actually engaged in the teaching of the subjects in which they examine; if they would let it be definitely understood how much (if any) comparative anatomy is required; if they would divide their paper into two or more distinct parts, and increase the number of the questions—we should, doubtless, no longer have to complain of the uncertainty of the examination, and of the large amount of useless knowledge upon the possession of which the success of the candidate appears so largely to depend. The Fellowship of the College should be sought after as a real distinction, and valued as a proof of merit.

*** The paper alluded to was as follows:—

"1. Describe the dissection required to expose the upper surface of the first rib; and mention, in order from before backwards, the several structures in immediate relation with that bone. 2. A transverse vertical section is made through the cranium and its contents, passing through the odontoid process. Mention, in order from above downwards, the several structures which would be divided. 3. Describe the development of the vertebral column, and mention the form of the vertebral centrum characteristic of each of the primary divisions of the vertebrata. 4. Describe the structure of the supra-renal capsule; and give the evidence which at present exists regarding its function."

THE MEDICINAL USES OF IODOFORM.

The numbers of the *Wiener Medizinische Wochenschrift*, 24 to 28 inclusive (1878), contain interesting papers on this subject by Professor Moleschott of Turin; Dr. Mracek, clinical assistant to Professor Sigmund at Vienna; and Professor Zeissl of Vienna.

Professor Moleschott, in a letter to Professor Binz of Bonn, specially intended for publication, enthusiastically praises iodoform in the form of collodion (1 part to 15 collodium flexile) applied night and morning with a brush, as a discutient of swollen glands in the neck and elsewhere, as well as of effusions into the pleura, pericardium, peritoneum, and even the arachnoid, and as a curative application to chronically inflamed joints. He has removed many glandular swellings with iodoform, which had completely resisted iodine; and a case of splenic leukæmia, which was pro-

bably also myelogenous, was wonderfully benefited by it. The most remarkable, however, of the recoveries which Moleschott ascribes to iodoform are three cases of "hydrocephalus acutus" (tubercular meningitis) in children. The symptoms were the well-known ones described in all the text-books, and Dr. Moleschott declares that "if iodoform had rendered him no other service than to shake his belief in the almost absolute incurability of tubercular meningitis, he would consider it his duty to sing its praises." The collodion was here painted three or four times daily over the nape of the neck, the mastoid process of the temporal bone, the temples, and the forehead. The only other treatment consisted in small doses of calomel, and aperient enemata.

A second use of iodoform, not commonly recognised, and on which Moleschott insists, is as a local anæsthetic. He says he has often relieved or removed the most intense gouty pains and other symptoms of gouty inflammation within twenty-four hours by painting on the collodion. In rheumatic pains it is less efficacious, but in the various neuralgias (intercostal, sciatic, etc.) it succeeds excellently. Unfortunately, as most people know, iodoform has a disagreeable smell, which makes those using it at times objectionable to others. To obviate this, Moleschott advises that the glass vessel containing the iodoform preparation (collodion, or, what he also uses, ointment) be kept outside the window in a leaden box, provided with a well-fitting cover, the opacity of the box having the additional advantage of retarding the decomposition of the iodoform by light. He also covers with gutta-percha tissue the part anointed with the collodion; and, if possible, only applies the iodoform at night, so that most of it is absorbed, or has evaporated, before the morning, and what remains (if the ointment is used) can easily be removed with soap and water. The use of iodoform sometimes causes cardiac palpitation, but Dr. Moleschott has also more than once found a weak, irregular pulse rendered stronger and more regular by small internal doses of iodoform, just as by small doses of digitalis.

Professor Moleschott ends his letter with some remarks on the probable cause of the powerful action of iodoform. He refers it partly to the slow rate of excretion of the drug by the kidneys, and partly to the development from it of free iodine in the nascent state in the substance of the tissues. Professor Binz of Bonn, we may remark in passing, has lately advocated the latter view from experiments of his own (*Archiv für Exp. Path.*, Bd. viii.), and he regards *the fat* as the solvent of iodoform in the body, dissolved in which it passes into the circulation, and sets free iodine, which then attacks the albuminous contents of tissue-cells.

Dr. Mracek briefly reports the result of the external use of iodoform in Sigmund's clinic during the early part of 1878. It was applied in one of the following forms:—One part iodoform to (*a*) 1 of rectified spirit, and 5 of glycerine; (*b*) 3 to 4 parts powdered white sugar; (*c*) 5 parts vaseline; or as collodion (1-10 or 1-15). A small brush was used to spread them; cotton-wool was then laid over the part, and fixed with plaster. The dressing stayed unchanged for from twelve to twenty-four hours. Syphilitic ulcers, hard chancres, swollen inguinal glands, and ulcerating gummata were treated with success. The iodoform causes next to no pain; the sores acquire a clean surface in twenty-four to forty-eight hours, in three to four days granulations are rapidly growing, and within a week cicatrisation has set in with remarkable vigour. The antiseptic effect of the iodoform checks all smell from gangrenous sores; and lastly, iodoform does not permanently stain the clothes. Compared with lotions of carbolic acid, salicylic acid, chloral, and astringent preparations of iron, etc., in precisely similar cases, iodoform carries off the palm.

Professor Zeissl especially recommends iodoform as an internal remedy in syphilitic neuralgia, and describes two cases which, resisting all other remedies, yielded only to iodoform. In suppurating glands, with or without sinuses, he is averse to the local application of iodoform for more than a few days; but in torpid ulcers, whether specific or not, he speaks most warmly of its value.

THE WEEK.

TOPICS OF THE DAY.

Although the recent outbreaks both of small-pox and scarlet fever may be said to have ceased to be epidemic, it is, nevertheless, extraordinary to note that the recklessness of the public in the matter of the spread of infection still continues. It is also difficult to understand why the traffic in one of the most common but most important necessities of life—milk—should seem to predispose those connected with it to rank amongst the chief offenders. At the Greenwich Police-court, last week, William Tryson, of Deptford, appeared to a summons, at the instance of the Lewisham District Board of Works, for exposing himself in a public thoroughfare while suffering from scarlet fever. Mr. Bridgland, the district inspector, deposed that on the 8th ult. a child had been taken by him to the hospital of the Board, suffering from scarlet fever; and he heard from the mother that the defendant, who was in the service of Mr. Fowler, of Deptford, had served her child with milk; and that the skin of his hands was peeling off. On the following morning he saw the defendant serving milk. Mr. Speed, surgeon, of New Cross, said he saw the defendant on the 15th and 16th ult. at his surgery, and he was then suffering from scarlet fever. The magistrate fined him 40s. and 2s. costs. Further, at a recent meeting of the Board of Guardians of the town of Galway, Dr. Brodie, Local Government Board Inspector, attended, and stated that at Rahoon, a place within the municipal boundary, a farmer who supplied milk to the town had in his house three persons lying ill of small-pox of a malignant type; and that not only were they in the house, from which the milkmaids walked into the town every morning, but were actually lying in the very room where the milk-pails were stowed.

At a recent meeting of the City Commissioners of Sewers, Mr. Felton, the Chairman of the Sanitary Committee, alluded to the satisfactory results that had attended the new arrangements which had been made for the disposal of putrid meat seized in the metropolitan markets and condemned as unfit for food. It will be remembered that Dr. Sedgwick Saunders, the City Medical Officer of Health, submitted a plan for dealing with this putrid meat, and it now appears that the amount received during the year for the meat thus dealt with was £1468, whereas under the old system the former annual average was only £70. The expenses, including inspectors' salaries, were £799, leaving a balance of profit of £669. It was also stated that many of these expenses would have been incurred if only the usual £70 had been realised.

The Syndicate appointed by the University of Cambridge to superintend the examinations in State Medicine, in their fourth annual report state that eight candidates presented themselves in October for both parts of the examination, and one for the second part only. Five received certificates of proficiency in sanitary science. The Syndicate have had under consideration the age at which candidates are admitted to the examinations. On several occasions persons have applied for admission at an earlier age than twenty-four years, generally on the ground that they were about to leave England for India or a colony. The Syndicate do not think it well to relax the rule of age at which certificates may be awarded, yet as the first part is of the nature of a

preliminary examination, and candidates are admitted to that part separately, the Syndicate are of opinion that candidates may be allowed to present themselves somewhat earlier for the first part only, and therefore recommend that Regulation 2 be altered and stand thus:—"That any person whose name is on the Medical Register of the United Kingdom be eligible as a candidate, provided he be in his twenty-fourth year at least when he presents himself for the first part of the examination, and have attained twenty-four years of age before he presents himself for the second part."

The promoters of the temperance movement are largely extending the sphere of their operations, and if they do not eventually achieve success it will not be because they have not deserved it. Within the past few days the Duke and Duchess of Westminster, and the Right Hon. J. G. Dodson, M.P., opened a fourth cocoa-house in Chester; and in speaking of the necessity for coffee-houses, the Duke remarked that public-houses had now degenerated into nothing but bars and vaults, where no comforts were given, and where there were only facilities for drinking, pure and simple: the cheerful houses to which men resorted for company were nearly all gone. At Portsmouth, also, Lord Shaftesbury recently opened a coffee-tavern, and urged that in the interests of the working-classes themselves it should be made self-supporting.

The Chief Secretary for Ireland last week received a deputation at Dublin Castle from the Dublin Sanitary Association, consisting of Lord Monck, Mr. Brooks, M.P., the Hon. Mr. Plunket, M.P., Mr. Meldon, M.P., and others. The object of the deputation was to present a memorial praying for an inquiry into the sanitary condition of Dublin. which was shown to be most unsatisfactory, as the death-rate is higher than that of any other large town in the United Kingdom, and is still increasing. Mr. Lowther, in reply, said the representations contained in the memorial should receive the utmost consideration at the hands of the Government; at the same time he would not pledge himself to promise any special form of inquiry. The memorial, as presented, will be found in another column of our present issue.

Were it not for the disastrous consequences continually being recorded, it would be pronounced almost impossible to administer instead of medicines the various deleterious articles in mistake, from which lives are constantly being lost. An inquest was held at Liverpool last week on the body of a child poisoned through having paraffin oil administered to it instead of lime-water. The mother had sent to a chemist's shop for the lime-water, and a boy in charge served the messenger with paraffin oil in mistake. The jury returned a verdict of "Death from misadventure," and censured the chemist for leaving his shop in charge of the boy. But the wonder remains how the mother could have given such a substance as paraffin oil without hesitation or suspicion.

An old offender was last week brought up at the Hammersmith Police-court at the instance of the Acton Local Board of Health, for carrying on a boiling business so as to cause effluvia. Proceedings had been frequently taken against the defendant, who on one occasion was indicted at the Middlesex Sessions in respect of the same premises, and suffered nine months' imprisonment. Mr. Thomas Francis, the Medical Officer of Health, said that on July 19 last the defendant was fined at this Court £5 for the boiling nuisance, and 40s. for pig-keeping. The last time he visited the premises was on October 4 last, but nothing had been done to abate the nuisance. The defendant said he did not intend to make any alterations. The boiling business was being carried on, still causing effluvia, and there were besides eighty pigs upon the premises. The defendant contended that he had carried out the order made at the Clerkenwell Sessions. The magistrate said it was arranged at that Court that Dr. Whitmore should inspect the premises, to see what alterations were necessary, but the defendant refused to admit him. He (the defendant) was liable to a double penalty for the boiling. Mr. Palmer, who appeared for the Local Board, said in the other case the defendant was liable to pay a penalty for every day for sixty days, but he did not press for the whole. The magistrate eventually fined the defendant £10 in the case of the boiling, and £5 for the second offence, with costs.

The *Sheffield Daily Telegraph* reports that, at a public dinner recently held at Derby, the Mayor announced that Mr. Michael Thomas Bass, the senior borough member, had placed at his disposal the sum of £5000 for distribution among the worthiest of the town charities. Some few months ago Mr. Bass expressed his intention of presenting this amount towards the purchase of a public park on the estate of Lord Belper, at Derwent Bank. It was, however, considered that Lord Belper demanded too large a sum for his ground, and the projected scheme for a public park was abandoned. Mr. Bass, nevertheless, has resolved that the £5000 shall still be devoted to the town, and the sum is ordered to be divided among the charitics of Derby. Among those intended to be benefited by this munificent donations are the Children's Hospital, the Infirmary, and the Nurses' Home. Mr. Bass has previously presented Derby with recreation-grounds, free swimming-baths, and a public free library.

An important deputation, headed by the Earl of Derby, had an interview last week with Mr. Sclater-Booth at the office of the Local Government Board, on the subject of noxious vapours, with a view of further legislation on the subject. Amongst those present were representatives of the South-Eastern Sanitary Association, London; the Lancashire, Cheshire, Manchester, and Liverpool Associations for controlling the escape of noxious vapours from manufactories; the Mayors of Liverpool and Warrington; Sir Richard Brooke, Bart.; and Colonel Blackburn, M.P. Lord Derby, in an address of some length, explained the circumstances which had induced the deputation to seek the interview, and was followed by other speakers. Mr. Sclater-Booth, in replying, stated that this subject had engaged his earnest attention ever since the report of the Royal Commission appointed to inquire into it had been rendered, and he begged them to believe that, even had they not waited upon him, he should have thought it his duty to submit proposals to the Government to deal with the matter; and without pledging himself to any particular line of action, he promised to endeavour to obtain authority to undertake measures which should at any rate be a substantial step in advance of previous legislation on the subject.

A meeting of the General Purposes Committee of the Hospital Sunday Fund was held at the Mansion House on Monday last, the Lord Mayor presiding. The question of removing the office elsewhere was considered, and although several offers had been made to set aside rooms for the Fund gratuitously, as none of these were considered sufficiently central, it was left to the President, Vice-President, and Secretary to engage an office at a rent of not more than £100 per annum. Some vacancies on the Council were then filled up, and it was decided that December 11 be fixed as the day for holding the annual general meeting, and it was understood that the Hospital Sunday Fund collection for the next year would take place on June 15.

PHTHISIS AB HÆMOPTOË.

A VALUABLE contribution to the debated question, whether hæmoptysis *per se* is an exciting cause of phthisis, is contained in a paper by Dr. Sokolowski, of Görbersdorf (*Berl. Klin. Wochenschrift*, No. 39, 1878). He reports eight cases observed by himself, in which perfectly healthy individuals, living under good sanitary conditions, and abundantly supplied with the necessaries of life, were attacked with hæmoptysis without any preceding cough or phthisical symptom whatever. In all the cases some mechanical exertion or injury was the cause of the hæmorrhage. In one carrying heavy logs of wood, in another prolonged singing in a hot and crowded room, in a third a fall from a horse, were the accidents which were immediately followed by hæmoptysis. The youngest patient was twenty-seven, and the eldest forty—ages which deviate from the ordinary time of onset of phthisis, for only the youngest patient, just referred to, was under thirty. Hereditary influence could only be traced, and that not decidedly, in one instance. All the patients were males. The symptoms following the hæmoptysis were in four cases high fever, cough, dyspnœa, and expectoration, commencing within a few days; in the other four they were less acute, and assumed from the first a chronic type. Those also which were at first acute soon lost their febrile aspect. In three of the cases the hæmoptysis recurred after a time. The symptom which appeared the earliest, and remained the longest, was cough. Only one case died, about six years after the injury which gave rise to the hæmoptysis. This patient was the one in whose family a phthisical tendency was suspected. The physical examination of the chest in all the cases revealed consolidation of one apex, and the usual auscultatory signs. One case is especially interesting, because the patient had been carefully examined by Dr. Sokolowski, about three years before, in the course of some spirometrical observations which he was engaged on, and his vital capacity was found to be 4200 cubic centimetres, his lungs and heart being perfectly healthy. The moral drawn by the author from his cases is that patients in whom hæmoptysis has succeeded exertion are not to return to their former occupation until all subacute chest symptoms have completely disappeared.

MIMIC SPASM OF THE FACE CURED BY STRETCHING THE FACIAL NERVE.

DR. BAUM, of Danzig, describes a case of the above (*Berl. Klin. Wochenschrift*, No. 40, 1878). The patient, a lady, aged thirty-five, had nursed her husband in a long and fatal illness, towards the end of which she had three or four epileptiform seizures. Immediately after the last, twitchings of the left half of the face, spreading from the eyelids downwards, were noticed. They recurred every two or three minutes with such severity that, without causing pain, they affected the patient's rest, as well as her general health. No abnormality was found in any of the organs of the body, and all that could be made out was that, except the muscles of the ear, all the facial muscles supplied by the portio dura of the seventh nerve were involved. All treatment by drugs—iron and other tonics, narcotics, and iodide and bromide of potassium—failed, as well as that by electricity and "derivatives"; and, as a last resource, stretching the nerve-trunk itself was proposed. The operation was performed on July 20, 1878, nearly six years after the first symptoms of *tic convulsif* showed themselves. The nerve was reached by cutting down on the upper border of the parotid gland with antiseptic precautions, and drawing the latter with hooks downwards, outwards, and forwards. The nerve was found of a dark-red colour, but not sensibly thickened. Dr. Baum seized it with a torsion forceps, and squeezed it with some force, at the same time drawing it from its bed. A few small arteries had to be tied before closing the wound. A temporary paralysis of the left half of the face, of half an hour's duration, followed the operation, but the twitchings did not return, nor had they returned at the time of the publication of the paper in October. Dr. Baum thinks the origin of the nerve-lesion may possibly be explained by some injury received during one of the epileptiform attacks above mentioned. That there was a local inflammation of the trunk of the facial nerve after leaving the stylo-mastoid foramen, is certain. He thinks that the rather rough treatment to which the exposed nerve was subjected was largely concerned in the successful result obtained; and that probably, from the comparatively small number of cases which have been published since Billroth and Nussbaum spoke in favour of nerve-stretching, there have been many failures from *too delicate* handling of the particular nerves experimented on.

THE SANITARY STATE OF DUBLIN.

SEVERAL facts are being brought to light just at present which seem fully to justify the Dublin Sanitary Association in asking the Government to institute an inquiry into the sanitary state of the Irish metropolis. We have before us the published report of the proceedings at the weekly meeting of the Public Health Committee of the Corporation of Dublin on November 22. At that meeting a report on the house-drainage in the city was read, in which it was stated that but twenty-five out of the sixty-nine houses in Mountjoy-square—one of the most fashionable quarters of Dublin—were provided with effective pipe-drains. Another report on the sanitary state of the South Dublin Union Workhouse was submitted to the same meeting by Dr. Mapother, the Superintendent Medical Officer of Health for Dublin, and Mr. James Boyle, Clerk to the Urban Sanitary Authority From their report, it appeared that at the north-west angle of the workhouse buildings there is a chamber or pit into which the closets had formerly discharged, and which contains foul matter, emitting an offensive stench. At the north-east angle matters are in the same state. The closets discharged into an old large square sewer, the covering of which is imperfect, and allows the escape of foul gases, which are perceptible for some feet, and find their way into the building. In the boys' and girls' yards there are foul privies allowing the escape of poisonous gases—in fact, the condition of the whole place is disgraceful, and calculated to cause disease and a low state of health.

THE HEALTH OF BIRKENHEAD.

THE report on the sanitary condition of Birkenhead and Claughton-cum-Grange for the year 1877, compiled by Mr. Francis Vacher, the Medical Officer of Health for the district, must be said to record satisfactory results. The annual birth-rate for the period is calculated at 35·11, and the annual death-rate at 17·61 per 1000 of the population living. The birth-rate of the two previous years was 38·25 and 36·91 respectively, the death-rate of these two periods 25·22 and 18·61; the death-rate of 1877 is therefore markedly lower that that of the two preceding years. But stronger evidence of the high standard of health enjoyed by the locality during the past year is afforded by a recapitulation of the fact that during the two years immediately preceding 1877 (in each of which the number of deaths was not only relatively but actually larger than in 1877), more than half of those who died were children under five years of age; and of the whole number of those who died during the ten years immediately preceding 1877 more than half were under five years of age. Yet, in 1877 only 41·8 per cent. of the deaths were of children under five. In addition the

proportion of deaths of young persons between five years and twenty was markedly less, and the proportion of deaths of old people was noticeably greater in 1877 than in either of the two preceding years, or the mean of the previous ten years. Nevertheless, of the 995 deaths registered last year, 233, or 23·41 per cent. of the whole number, were ascribed to zymotic diseases; 147, or 14·77 per cent., to constitutional diseases; 396, or 39·79 per cent., to local diseases; and 136, or 13·66 per cent., to developmental diseases. Mr. Vacher gives a very detailed account of the small-pox epidemic which occurred in Birkenhead during the year under notice, and winds up his report with a regret that out of all the sanitary legislation promised last session only one Act—the Canal Boats Act—passed through Parliament, so that the hands of medical officers of health have not been so much strengthened by legislation as might reasonably have been expected.

THE APOTHECARIES' SOCIETY *v.* SHEPPERLEY.

In commenting on the result of the trial of the Shepperley case before Mr. Baron Pollock, we observed that the verdict of the jury left the real question at issue just where it was beforehand. The jury were evidently dissatisfied with the character of the case of counter-prescribing put before them, which was one of a sham sore throat assumed by a detective officer employed for the purpose of catching the chemist; while the legality of counter-prescribing was left untouched. We are therefore not surprised to find that the verdict is to be challenged. In the High Court of Justice, Exchequer Division, Westminster Hall, on Thursday, November 14, 1878, before the Lord Chief Baron and Mr. Baron Cleasby, Mr. Day, Q.C., on behalf of the plaintiffs, asked the Court that the time for moving for a new trial in this case might be extended for three weeks, on the ground that notice of motion had been given to move the Court of Appeal, *non obstante veredicto*, on the ground that the judgment of Mr. Baron Pollock was wrong, because it was clear the plaintiffs were entitled to the judgment of the Court upon the admitted facts in the pleadings. He would have to move their Lordships for a new trial on the ground that the judge misdirected the jury, and also on the ground that the verdict of the jury was against the weight of evidence, and therefore he thought it would be more convenient that Mr. Baron Pollock (the learned judge before whom the case was tried) should be present when the motion was made. He pointed out to their Lordships that under the Judicature Act it was necessary to give fourteen days' notice of their intention to move the Court of Appeal, which notice had been given yesterday, and the motion would come on for hearing before the Court of Appeal on the first Wednesday after the expiration of the notice. He also pointed out that their Lordships had no jurisdiction to reverse the judgment of one of their learned brothers sitting at *nisi prius*. The learned counsel added that as his clients were the Society of Apothecaries, and had, as he was informed, a good stock of drugs, the defendant would be sure of his costs, and as he was a chemist and druggist of very great respectability in Nottingham, he would not be distressed by the delay. The Court allowed the time to be extended, adding that the plaintiffs must give notice of it to the defendant.

THE CANTOR LECTURES.

The first of the three courses of the lectures known as "The Cantor Lectures," which are given yearly under the auspices of the Society of Arts, was commenced on the 25th inst. in the theatre of the Society's House, John-street, Adelphi. The foundation originated in 1863, Dr. Cantor, who was a surgeon in the service of the Honourable East India Company, having bequeathed the great bulk of his estate, amounting to about £10,000, in equal moieties to Wellington College and the Society of Arts, to be disposed of virtually at the absolute discretion of those institutions. These joint legatees, having in conjunction made due provision by means of a life annuity for the wants of the testator's octogenarian mother, the possibility of whose surviving him he had never contemplated when he made his will, the Society of Arts employed the residue of its share in the endowment of these lectures. They are specially devoted to the practical treatment on a scientific basis, of manufactures and handicrafts, and kindred subjects. Thus, those now being delivered are on "Mathematical Instruments," particular attention being paid to the methods of their construction and use. The lectures in the first course are six in number, and are set down for as many consecutive Monday evenings. The Council of the Society of Arts has issued tickets to the workmen of the leading firms in the trade, many of whom were present at the first lecture of the series. The second course of the Cantor Lectures for the present session will be by Dr. W. H. Corfield, M.A., on "Household Sanitary Arrangements." It will consist of six lectures, to be given on as many successive Monday evenings, commencing February 17. The third course, consisting of five consecutive Monday evening lectures, beginning April 21, will be by Mr. W. H. Preece, on "Recent Advances in Telegraphy."

STATISTICAL SOCIETY.

The first ordinary meeting of the present session of this Society was held on Tuesday evening, the 19th inst., at the Society's Rooms, King's College, when the report of the referees on the essays in competition for the Howard Medal of 1878 was read. The Prize Medal with £20 has been awarded to Surgeon John Martin, L.R.C.S. Edin., of the Army Medical Department, at present serving with the Royal Artillery in India. An Extra Prize Medal has also been awarded to Captain H. Hildyard, of the 71st Highland Light Infantry, his essay having been scarcely inferior to that of Mr. Martin. The subject of the essays in competition for the Howard Medal of 1879 was announced to be "On the Improvements that have taken place in the Education of Children and Young Persons during the Eighteenth and Nineteenth Centuries." It was announced that at the next meeting, in December, Dr. Mouat, foreign secretary, will report on the Demographic Congress, and on the Permanent Commission of the International Statistical Congress, both held in Paris; and on the International Penitentiary Congress held at Stockholm during the present year; after which a discussion will be invited on "The Best Form of Statistical Annual for International Purposes."

"THE DISEASES OF MODERN LIFE."

The *Berliner Klin. Wochenschrift*, No. 43, 1878, contains a long and highly appreciative review of Dr. Richardson's work "The Diseases of Modern Life," published in 1876. The writer, Dr. H. Senftleben, recommends it to the German public as a model of English diction, as well as of classical expression. He wishes the "Vice-President of the Sanitary Institute of Great Britain" that "his life may be long spared to write books like the above, which are so delightful to read, as well as such powerful engines of civilisation." In this wish we heartily join.

Snake-Bites.—In a Parliamentary Blue-book just presented, Surgeon A. J. Watt states that the deaths from snake-bites alone in the Punjaub last year were 828, against 979 in the preceding year. He gives some painful illustrations of the rapidly fatal effects of the bite of the cobra. He states, moreover, that as many as 21,682 were killed by wild beasts and snake-bites in ten provinces, the largest number being in Bengal, viz., 10,062. The report is an interesting one.

THE HIGH DEATH-RATE OF DUBLIN.

On Wednesday, November 20, an influential deputation from the Dublin Sanitary Association waited on the Right Hon. James Lowther, M.P., Chief Secretary for Ireland, at Dublin Castle, for the purpose of presenting a memorial as to the insanitary state of the city. Amongst those present were—Viscount Monck, Mr. Maurice Brooks, M.P., the Hon. David Plunket, M.P., Serjeant Sherlock, M.P., Mr. Meldon, M.P., Dr. Head, President of the King and Queen's College of Physicians, and other leading representatives of the learned professions and commercial interests of Dublin. Mr. Brooks, one of the members for Dublin, having introduced the deputation, the following memorial of the President, Vice-Presidents, and members of the Dublin Sanitary Association, was presented:—

"1. The Association which your memorialists represent was formed in 1872 for the purpose of promoting the improvement of the sanitary condition of Dublin, and seeks to assist the legally constituted authorities.

"2. Constant and careful attention, from week to week, to the official returns of births and deaths, published by authority of the Registrar-General for Ireland, has impressed upon the Association the conviction that the state of the public health in Dublin is extremely bad, and shows no sign of improvement; the death-rate of the city of Dublin being habitually excessively high compared with that of other large cities and towns in the United Kingdom.

"3. The average death-rate of Dublin city for the past ten years has been 27·9 per thousand of the population. The reports of the Registrar-General for England show that this rate is exceeded by only four of the thirteen large towns and cities of the United Kingdom, for which the returns have been published for the past ten years.

"4. The death-rate of Dublin city for the year ending December 29, 1877, was 28·9 per thousand, a rate higher than that of any of the thirteen large towns above referred to. For the first three quarters of the current year, 1878, the rate for Dublin city has been 30·0 per thousand. This rate has been exceeded by none of the twenty cities or towns of the United Kingdom, included in the report of the Registrar-General for England.

"The death-rates in the several quarters of 1878 in the city of Dublin, and in the three English towns which were the most unhealthy, have been respectively as follows:—

	First quarter.	Second quarter.	Third quarter.	Average.
Dublin . .	32·1	31·6	26·3	30·0
Liverpool . .	28·8	27·2	30·0	28·7
Manchester . .	29·1	26·9	26·5	27·5
Sunderland . .	24·0	26·3	27·9	26·1

"5. Besides the fact of the alarming excess in the general death-rate, as shown by the figures above stated, it is known that some infectious diseases have at different times exhibited an exceptional fatality in Dublin.

"6. Under these circumstances, your memorialists believe that a searching inquiry into the causes of the excessively high death-rate of Dublin, and the reason for the exceptional fatality from particular diseases, is urgently called for, to allay the public anxiety on the subject, and as an essential preliminary to the institution of more active remedial measures than have yet been entered upon, but which the existing state of the public health imperatively demands.

"Your memorialists therefore trust that you will be pleased to direct that a public inquiry shall be held for the purpose aforesaid."

The memorial was supported by the following speakers—The Hon. David Plunket, Q.C., M.P.; Viscount Monck; Mr. Charles Meldon, M.P.; the President of the College of Physicians; Dr. Thomas Wrigley Grimshaw; and Mr. Charles Dawson, Town Councillor.

In his reply, the Chief Secretary observed that the subject was one of paramount importance. The most superficial observer, walking for the first time through the streets of the city, could not fail to be struck with a sense of the state of affairs which made the existence of such a body as the Sanitary Association a matter of no wonder. He wished to guard himself against acquiescing in any special form of inquiry, but the whole subject should certainly receive the anxious attention of the Government.

A "SCIENTIFIC" INVESTIGATION.

A regular contributor sends us the following in all sober seriousness, and we should feel ashamed, under these circumstances, to write, *à la* Artemus Ward, "This is a goak." By this, could we have ventured on such a course, we should have wished to indicate not the writing itself, but the nature of the whole transaction. If ever there was a good practical "goak," we have here the history of it—but who paid for it?

Sir Joseph Bazalgette, Chief Engineer to the Metropolitan Board of Works, having presented, at the last meeting of the Board, a report on the state of the river Thames, in the course of which he recommended that a committee should proceed down the river, with their professional advisers, for the purpose of taking the evidence of their own senses, and testing samples to be there and then taken from the river, on Saturday last a number of the members of the Board, accompanied by the Chairman (Sir James McGarel Hogg), embarked on board the saloon steamer *Alexandra* for the purpose of carrying out a practical and scientific inquiry. At half-past ten, two hours before high water, the steamer left London-bridge, a sample being taken from the river at the time of starting. Off the Custom-house another dip was made, and, on comparison, the two samples were found to be practically alike, both being somewhat turbid, but perfectly inodorous. The next samples, taken off St. Katherine and the London Docks, were much the same, only that the latter was dirtier in a perceptible degree, and was, in fact, the worst specimen yet taken, although quite free from smell. The next sample, off the Commercial Dock, was very much clearer; but the next, off Deptford Creek, was again less clear, the difference being obviously caused by the products running into the river at this point. Off East Greenwich the sample procured showed a marked improvement. Two samples procured at different points off Blackwall Pier, and the next drawn opposite the Victoria Docks, gave successive indications of increasing brightness; off Woolwich the water was still clearer, and there was no brackishness. The next sample, taken at the spot where the *Princess Alice* went down, was brackish, but otherwise as free from taste as from smell. Much the same was the case with the next dip, obtained off the Beckton Gas Works. When the Barking outfall was reached, the tide had turned, the penstocks were open, and the sewage of the northern shore was discharging. The next sample was taken in the outer circle of the "sewage zone," and the result showed that the water was actually clearer than that of the previous take, and utterly devoid of smell. The next point of importance was the southern outfall at Crossness; here the water was exceedingly clear, and totally devoid of smell, although brackish. The following sample was drawn off the West Kent Sewage outfall at Purfleet, and proved tolerably clear. Further samples were taken as far down as Gravesend, at which latter place the water was thicker and blacker, as well as brackish, which is stated to be always the case from the contamination of the Dartford sewage. It was remarked that unpleasant smells were frequent throughout the voyage; but these did not proceed from the river, but from the noxious manufactures on the different wharves. The return journey was so timed as to meet the outflowing stream of sewage, and samples were again taken at various points. In every case, however, the water was found to be free from offensive odour. Off the Glue Works, near Belvidere, the sample taken from the centre of the river was slightly worse, but still no smell could be detected. The vessel next arrived in the midst of the "sewage zone" and the exudations from the East and West India Docks, and, surprising as it may seem, the sample of water taken was no worse than what had been obtained at the previous dip. Several tests were then made at various points in the vicinity, and immediately opposite the outfall; although very turbid, the water here was without odour of any kind. Specimens taken severally from above and below Barking Creek showed a considerable

difference; the former being tolerably clear, whilst the latter was exceedingly turbid with a faint smell. At the spot where the *Princess Alice* foundered, the tide being precisely the same as when the disaster occurred, several samples were taken and minutely examined, and, though slightly thicker than at the trial on the down voyage, there was no smell or taste in the water. It was noticed, however, that a considerable quantity of filth was floating on the surface. A boat was then sent off to take a sample from the outfall of Beckton Gas Works; and on its return the glass vessel was found to contain an opaque liquid of a dark green colour, the odour from which rendered its presence unendurable in the saloon. The refuse and sewage from these works are discharged at a point nearly opposite the scene of the collision. This was the last sample taken; and the Committee will now be in a position to report their investigations to the whole of the Board.

FROM ABROAD.

The Paris Hospital Mortality Returns.

In his report to the Paris Hospital Medical Society for July August, and September (*Union Méd.*, October 31, November 5 and 7), Dr. Ernest Besnier observes that the atmospheric conditions of this third quarter of 1878 exhibited the following circumstances:—The mean temperature has been exactly that of the thermometric mean of the corresponding quarter calculated from 1806 to 1870, so that the deviations of temperature were not in excess. The fall of rain was not greater than that which ordinarily takes place in the quarter, while the dominant winds were usually west in July, south-west in August, and north-west in September. The *general mortality* was but little raised during the whole quarter, scarcely surpassing the mean mortality of preceding years, notwithstanding the increase of population and the immigration from all parts on the occasion of the Exposition. The total hospital mortality for the quarter amounted to 2927, while the mean mortality of the same quarter for the six preceding years was 2605.

"I have never been wearied," Dr. Besnier observes, "for a great number of years, in showing by facts that general hygiene and the prophylaxis of popular diseases can only be based with certitude upon a thorough knowledge of the laws of epidemiology, until lately completely ignored. It is in this direction that I have somewhat superabundantly demonstrated that there are really *benign medical constitutions* and *malignant constitutions*, determined by telluric conditions, which, although still obscure, are not doubtful as to their reality. Overcrowding, change of elimate, bad hygienic conditions, exposure to contagion, misery, etc.—in a word, all the traditional and classic conditions of the generation and development of these diseases—only occupy on the general etiological plane an infinitely lower level. The public health, as well as the condition of the atmosphere, is subjected to variations. Some of these are *fixed and unchangeable*—viz., the *seasonary* variations upon which the hygienist physician may found his previsions and general prophylactic measures may be regulated beforehand. Others are *irregular*, at all events in appearance, but which we are even now able, under certain circumstances, to foresee and announce, just as we are commencing to be able to scientifically announce the cause of storms. It is these latter conditions, and not the contingent traditional conditions of ordinary hygiene, which determine and regulate the great oscillations of epidemic diseases. Although these propositions have at the present time, in presence of the observations which we are continually accumulating and classifying in these reports, become truths relying upon evidence, they are far from being known or appreciated according to their value by medical opinion diverted into other channels, perhaps rich for the future, but certainly less fertile in immediate applications to the useful and practical knowledge of popular diseases."

1. *Affections of the Respiratory Organs.*—These have been infrequent comparatively to the analogous periods of former years, and their gravity has not been considerable, although it seems to be greater than in winter. This greater mortality is, however, only apparent, and depends upon the fact that in the warm season there are not admitted into the wards such large numbers of slight primary or secondary catarrhal affections which render the relative mortality less. During the quarter there were admitted 917 cases of phthisis with 534 (57·76 per cent.) deaths; pneumonia 309 cases, with 102 (33 per eent.) deaths; 1070 cases of bronchitis, with 79 (7·48 per cent.) deaths; and 330 cases of pleurisy, with 38 (14·51 per cent.) deaths. Dr. Besnier states that owing to the defective hospital statistics, the pneumonias and the pleurisies are the only affections of the respiratory organs that can be rigorously counted.

2. *Diphtheria.*—"I continue for diphtheria," Dr. Besnier observes, "the demonstration which I have pursued for a great many years of its annual and invariable *evolution*. That is, that this affection attains its *minimum* during the third quarter of the year, increases in the fourth, reaches its height in the first, to decline again during the second; and that the same in years in which the cases are numerous as in those in which they are few. In my last report I stated that from 703 deaths from diphtheria during the first quarter of 1878, the diphtheritic mortality of Paris sank to 559 in the second quarter, and I added that the decline would continue during the third quarter. This prediction, of the accuracy of which I had no misgiving, has been superabundantly verified, for from 559 in the second quarter the deaths have sunk to 368 in this third quarter, *i.e.*, that there are 191 fewer deaths. Nevertheless, I have not yet had the satisfaction of seeing these facts sufficiently known and recognised; but, without allowing myself to be discouraged, I shall continue to accumulate the proofs as long as they are necessary."

During the quarter there were admitted into the hospitals 185 cases of croup or diphtheria, and of these 122 (or 66 per cent.) died. The admissions during the same quarter for eight years amounted to 1044, and the deaths to 620, or 59·36 per cent.

Annual Trajectories.—"No investigation has ever been undertaken in past times which would allow of our judging, by eomparison with anterior periods, whether diphtheritic epidemics are subjected to laws during their evolution in the course of years—*i.e.*, whether these epidemics follow in their *multiannual* oscillations eertain determinate curves which would allow of our predicting their ulterior course, as we have shown may be done mathematically with respect to the *seasons* of each year. During twelve consecutive years we have shown the continuous ascent of the diphtheritic curve, which attained in 1877 a height that it seems never to have reached during the epochs in which we have been able to follow it with precision. During the present year a slow but continuous decline seems to have set in, quite independently, however, as usual, of the seasonary oscillations. Whether this is a temporary decline or the commencement of a true decrease is a question eoncerning which I have no means of furnishing an answer."

3. *Variola.*—The immense flood of persons arriving from all parts of the world for the Exposition has not interfered with that phase of sterility of this disease which has prevailed since 1872. During this quarter only nineteen deaths from small-pox occurred throughout the whole of Paris, in place of the twenty-one deaths during the same period for last year. During the three quarters of 1876 the entire deaths amounted to only thirty-seven. The hospitals during this quarter received only eighteen cases of small-pox, three of these proving fatal.

"Still, how many of these immigrants from the provinces and from abroad had never been vaccinated! What overcrowding and promiscuity in all these hotels, whether old or improvised, and in the innumerable crowds brought by the railways! All may thus be stated. For some reason, utterly unknown, but very probably telluric in origin, the Parisian soil is temporarily refractory to variolic germination. Isolated cases do not form centres of infection. Here we have a great epidemiological instruction, a great light thrown on secular darkness—perhaps the aurora of some great discovery as to the genius of zymotic affections. At all events, we have a very useful lesson as regards hygiene and prophylaxis, the part played by which, in these particular cases, should never be appreciated in an isolated manner, and without taking into account the epidemiological character of the epoch under observation."

4. *Typhoid Fever.*—"In spite of the union of all the classic

conditions for the development of typhoid fever, as overcrowding, change of climate, etc., the progress of the disease (in this quarter) has taken place exclusively according to the precise laws which the *constant conditions of the season* and the *variable* conditions of the state of the soil impose upon it. This double fact, of such a capital importance, the series of my observations enables me to present as unassailable, the interest of which, both in general epidemiology and in special epidemiology, needs no demonstration. While remaining within the very moderate limits which the telluric conditions have assigned to the present epidemic of typhoid, this, having attained in the spring the lowest point in the *annual curve*, rose again in the summer quarter, and will attain its paroxysm between that quarter and the end of autumn; the decline then commencing again and continuing until the end of the second quarter of the year, and so on in succession in the different seasons and years." The number of cases of typhoid fever in the hospitals during this third quarter was 462, and of the deaths 101.

Syphilitic Phthisis.

Dr. A. Fournier communicated to the Académie de Médecine (*Gaz. Méd.*, November 23) a case of tertiary phagedæna of the foot, and syphilitic phthisis. The seat of the phagedæna is in the highest degree unusual, and the simulation of ordinary phthisis was remarkable. When the woman entered the hospital, the lesion of the foot had already destroyed the second and third toes and a part of the fourth, and her general aspect was that of extreme cachexia. She had coughed and expectorated during several months, and the examination of the chest revealed advanced lesions. All the ordinary symptoms of pulmonary consumption were present—this being the essential characteristic of the case. But before long, under the employment of a specific treatment for the phagedæna, improvement began to take place, and gradually her cure became complete.

Dr. Fournier observes—1. Such is the well-known frequency with which tuberculosis occupies the apex of the lung, that any lesion of this organ that is so localised is immediately, from this very fact, set down as ordinary phthisis. This generalisation is, to say the least, excessive; for syphilis—to speak only of it—may, like tubercle, occupy this seat; and when it effects a lodgment there it assumes the mask of phthisis, and may thus give rise to error. 2. What is no less true, is that every pulmonary lesion accompanied by general symptoms gives rise to a suspicion of tuberculosis; and a patient with such lesion, who wastes away, is at once pronounced a subject of phthisis. This is another hasty generalisation, for pulmonary lesions having a syphilitic origin will be attended by the same symptoms. Most positively there is a pulmonary consumption of a syphilitic nature—a syphilitic phthisis entirely comparable with the phthisis of tuberculosis. 3. This patient has owed her recovery entirely to the phagedæna of the foot, which has saved her; for it was solely in reference to this lesion that the specific treatment was resorted to. Without this she would certainly have died, for there was no other indication for specific treatment, and the ordinary treatment of phthisis would have been for her a sentence of death. 4. The most curious point about the case is the fact of the cure having been obtained amidst conditions to all appearance most deplorable. When she was admitted no one would have believed that she would quit the hospital except for the dead-house; and yet she was dismissed cured of the phagedæna, of the lesion of the lung, and of the cachexia. This proves that syphilitic lesions of the lungs, far from being curable only in their early period, and in their benign forms, are so even in their most advanced stages and menacing forms—even after extensive infiltration, softening, or the formation of cavities has taken place, and when the general symptoms present themselves under all the aspects of true phthisis. They may, in fact, be cured, as in this case, contrary to all expectation, in patients who are exhausted, etiolated, and cachectic in the strongest sense of the word.

The Chairs of Medicine at Berne and Kiel.—Dr. Lichtherm, Extraordinary Professor at Jena, has succeeded Prof. Quincke as Professor of Medicine at Berne, Quincke having been called to occupy the chair left vacant by the lamented death of Prof. Bartels.

REVIEWS.

Lectures on Dermatology. Delivered in the Royal College of Surgeons of England in 1876-78. By Erasmus Wilson, F.R.S., F.R.C.S., Member of Council and Professor of Dermatology. London: J. and A. Churchill. 1878.

With the present volume Mr. Wilson's course of lectures at the College comes to an end. He has well and manfully executed the task he proposed to himself in 1869, and has delivered altogether fifty-four lectures on his favourite subject. When we remember Mr. Wilson's experience, his long career, and his almost total devotion to cutaneous medicine, many of us must wonder at the store of enthusiasm still at his disposal; and, while we wonder, some of us, perhaps, in secret may envy him the even temper of mind and the robust habit of body which have enabled the author to do what he has done.

The Lectures before us embrace the subjects of derangements of the colour of the skin, epidermic affections (ordinarily known as parasitic affections), and diseases of the nails, of the hair, and of the glands—sebaceous and sudoriparous. There is a large store of interesting matter embedded in all the lectures, and especially in those connected with diseases of the hair, baldness, hairiness, etc. In the lecture on epidermic affections, Mr. Wilson describes certain diseases to which he gives the name of "tinea," "favus," "versicolor," "lichen maginatus" (*seu* circinatus); and we naturally suppose that he has recanted his old views, and accepted the theory that these diseases are due to parasitic fungi. But no; the change which is met with is only a "phytiform metamorphosis of the rete mucosum, dependent on morbid conditions of the part and of the individual whole"; "a change due to a modification of nutrition, and consisting of a proliferation of the granular and nuclear elements of the formative and growing cells." There is no doubt about Mr. Wilson's real meaning, for he says at page 61—"After as long an experience of the pathology and diseases of the skin as any man at present living, I am an utter disbeliever in this simple and attractive theory of fungus-vegetation and contagion." Still later, at page 257, where the same diseases are briefly described under the head of "phytosis," he says—"After a great deal of thought devoted to the subject, I feel it impossible to give my adhesion to the parasitic hypothesis." *Soit.* In spite of Mr. Wilson, the parasitic hypothesis is the only one accepted, or likely to be accepted in Europe, in explanation of the phenomena of "tinea," "favus," and "pityriasis versicolor." Mr. Wilson admits the exact resemblance of his "phytiform degeneration" to the real fungus: why does he refuse to admit that the two are identical? "The same, and yet another!" is his cry, and we feel tempted to inquire whether he may not be a descendant of that house which Tennyson speaks of in his beautiful poem "The Princess," and of which

> "Some sorcerer had foretold,
> Dying, that none of all their blood should know
> The shadow from the substance, and that one
> *Should come to fight with shadows and to fall.*"

As in former volumes, there is much reference to preparations and models in the College Museum, and therefore, to utilise it thoroughly, the book should be studied with the help of these. Even, however, for persons who are unable to visit London there is plenty of useful information which is worth reading anywhere, and Mr. Wilson is never reticent as to the methods of treatment which his ripe experience has found to be the best. The style is by no means dry, and, though the alas! ever increasing neglect of the study of Greek in our schools will probably in a few decades render much of his nomenclature unintelligible to the student, the solidity of the matter will, long after the author's Lectureship on Dermatology has become a thing of the past, render the work a standard authority on many points.

It seems to be the rule in England for endowments to be diverted from their original intention. This seldom happens, however, in the founder's lifetime; but Mr. Wilson is to have his noble bequest estranged before his very eyes. "With the course of 1878, the limitation of the chair to Dermatology alone will probably cease; it is intended to enlarge the scope of the endowment, and, without excluding Dermatology from the field, to embrace original (*sic*) work in every department of surgical pathology." This sentence occurs in

the preface, and Mr. Wilson makes no comment on it, but there is little hope for dermatology with the vultures of surgical pathology, steeped in originality, hovering around their prey. The hopes of an English Hebra, or Hardy, or Bazin—and such exist—are nipped in the bud.

May the distinguished founder of the perverted chair, the benevolent patron of Epsom College, and the munificent donor of Cleopatra's Needle, long enjoy the repose he has so well earned.

On the Treatment of Wounds. Clinical Lectures by Sampson Gamgee, F.R.S.E., Surgeon to the Queen's Hospital, Birmingham, etc. J. and A. Churchill. Pp. 160.

Mr. Gamgee's collection of Clinical Lectures on the Treatment of Wounds is, we venture to think, worthy of more than a mere passing notice. A choice little volume, printed in bold type, and containing facts and suggestions worthy of the consideration of all who are engaged in the active practice of surgery, treated in Mr. Gamgee's fluent and agreeable manner, is one which is certain to be perused with pleasure and studied with profit. Not that Mr. Gamgee has many, or indeed any, new facts to bring before the profession; his aim appears to be, at a time when the introduction of new and, as we think, important improvements in the treatment of wounds, seems likely to distract the attention from certain well-known and essential elements of success, to point out how much may be accomplished by one of average manual dexterity by simple attention to these fundamental principles. The principles upon which Mr. Gamgee most emphatically insists are cleanliness, dry dressing, uniform pressure, position, and immobilisation. He describes with accuracy the methods which he adopts in his own practice for the attainment of these objects, and he is able to give a list of very serious cases, the results of which are all that could be desired. Of course, in the absence of complete statistics, the recital of a certain number of successes cannot be said to weigh very heavily; but, at the same time, Mr. Gamgee is, no doubt, to be congratulated on being able to relate a series of injuries such as those detailed in Chapter IV., ending up with that of a most severe compound fracture of the thigh at page 76, all of which, under his skilful treatment, and by the adoption of the simple means, which he would recommend, were brought to a uniformly successful issue. What these simple means are, it is not our present purpose to discuss, but we may say that they are such as will no doubt commend themselves to every practical surgeon. But we must dwell for a moment on the subject of the last three chapters, which indeed form to some extent the kernel of the book. It is an argument against the employment of the antiseptic system of treatment, because, in many of the cases which the author enumerates, although a wound containing blood-clot existed, no putrefaction took place. Mr. Gamgee objects to Dr. Roberts' explanation of the difficulty, viz., that putrefaction did not occur because the healthy living tissues are not a suitable nidus for the development of organisms; and he says:—"It follows that practical surgeons need not trouble about germs when they operate upon healthy living tissues, and have at their command the suitable means which are necessary to secure the conditions of physiological repair." Yes,—if the surgeon could indeed always work with healthy, or sufficiently healthy, living tissues, and if he could be quite certain of avoiding some of the conditions which are unfavourable for physiological repair, Mr. Gamgee's argument would hold. But as long as we have to deal with tissues whose vitality has been reduced, and as long as we are not sure of preventing the accumulation of serous and other effusions, which, as all allow, are prone to putrefy, the adoption of precautions to prevent putrefaction, if such precautions are really trustworthy, is surely the duty of all thinking surgeons. The present writer is a firm believer in the principles involved in the antiseptic treatment, and also in the advisability of practising them, and yet he recommends the careful study of Mr. Gamgee's facts and suggestions, not because he thinks that the conclusion the author arrives at with regard to this treatment is proved, but because he feels sure that many of those who adopt it are apt to trust to it too blindly, and to neglect those other, and perhaps equally important, principles to which Mr. Gamgee is now again drawing attention—principles by the adoption of which, as his pages show, much may be accomplished by the simplest means, but without which the most scientific treatment must prove a disappointment and, comparatively speaking, a failure.

The Public Health (Ireland) Act, 1878; with Schedules, an Introduction, and a well-digested Index. Dublin: John Falconer, 53, Upper Sackville-street. 1878.

It will be remembered that the objects of this Act, passed in August last, were to consolidate under one head the various provisions with respect to sanitary matters and burial grounds of the several Acts (twenty in number) in force in Ireland, and to amend the same where amendment was required. The present is one of those handy little volumes, reference to which often saves the fortunate possessor a long search through an interminable Act for some required passage. All the different clauses are classified, and the index is arranged in such a manner that any subject can be turned up with the least amount of trouble. As a reference-book on sanitary matters in Ireland it will be found of the greatest value.

GENERAL CORRESPONDENCE.

INJECTION OF CARBOLIC ACID IN ERYSIPELAS.

Letter from Professor Hueter.

[To the Editor of the Medical Times and Gazette.]

Sir,—No 1473 of your esteemed journal (September 21, 1878, page 365) contains a letter from Dr. R. Neale, discussing the priority of the use of carbolic acid subcutaneously for erysipelas. You would oblige me by mentioning in your paper that my first publication on the subcutaneous injection of carbolic acid for the treatment of erysipelas appeared in the *Centralblatt für die Medicinischen Wissenschaften*, 1874, No. 5, January 24. The paper of Dr. Aufrecht (Magdeburg) was published in the same *Centralblatt*, 1874, No. 9, February 21.

The new treatment is based on scientific principles, considering the origin of erysipelas as a migration of a living poisonous matter in the cutaneous tissues. These principles I described in my book, "Allgemeine Chirurgie," published 1873, by the office of F. C. W. Vogel, Leipzig.

Greifswald, November 18. I am, &c., Hueter.

A NEW REMEDY FOR DIARRHŒA.

Letter from Mr. W. J. Spencer.

[To the Editor of the Medical Times and Gazette.]

Sir,—In *Nature* of May 9 last I see a statement that a new remedy has been discovered lately in New Zealand for diarrhœa, of a plant called "Roromiko"; and in another paper I saw it described as a kind of heath. Perhaps some of your readers may like to know something more about the plant in question. In the first place, its Maori name is "Koromiko." It is a member of the natural order *Scrophulariaceæ*, and is described by Dr. Hooker, in his "Handbook of the New Zealand Flora," under the names of *Veronica salicifolia*, *V. macrocarpa*, and *V. parviflora*, the dissimilarities between the three plants being so slight, and the gradation so gentle, that he is disposed to consider them rather as local varieties than as distinct species. The plant is a medium-sized shrub, with terete branches, opposite or quadrivariously arranged leaves, and racemes of small purplish-coloured flowers. It is very common in this country, and is well known also in England. Dr. Hooker says—"Many varieties of this, and hybrids between it and *V. speciosa*, *macrocarpa*, and others, are extensively cultivated in England under various names (Kermesina, Lindleyana, and Andersoni of gardeners; *versicolor*, and *linariæfolia*, Visiani, etc.)." In general appearance and medicinal properties it appears to be very similar to its first cousin, the *Veronica Virginica* (Leptandra) of the United States Pharmacopœia, which is figured in part 26 of Bentley and Trimen's "Medicinal Plants."

Of its chemical composition I know nothing, except that the tincture contains a considerable amount of tannic acid, and I am not aware that any analysis of it has been attempted. Of its medicinal properties in chronic dysentery I can speak from experience, having used it frequently in cases where

the usual routine (nitrate of silver, sulphate of copper, ipecacuanha, opium, etc.) has failed, and I have mostly found that two or three weeks' use of the veronica has arrested the discharge of mucus and blood, relieved the tenesmus, and enabled the patient to take solid food without discomfort. It appears to act also as a stomachic, improving the appetite and strengthening the digestive powers. The form in which I usually prescribe the drug is the tincture—made by macerating one ounce of the leaves in one pint of rectified spirit. Of this I order one drachm in a little water three times a day, with a teaspoonful of castor-oil every second morning.

I am, &c., W. J. Spencer, M.R.C.S.E.

Napier, New Zealand, October 11.

THE NON-EXISTING SCHOOL OF MEDICINE.

[To the Editor of the Medical Times and Gazette.]

Sir,—In last week's issue you have laid before your readers the endowments—almost the only endowments in England—for education in medicine at Oxford. You have not told them the duties attached, though you add that no instruction is given.

It may perhaps add to the astonishment you attribute to many medical men to learn that, under the scheme laid down by the founders, the Professor of Clinical Medicine is to visit the patients in the wards of the Radcliffe Infirmary with the pupils daily from October to March, and that he is also to read a lecture two days in the week.

In addition to the emoluments you have named, there is an old bequest producing about £80 a year, divided equally among the physicians of the Infirmary—formerly six, now three, in number. The Clinical Professor, as one of them, takes his third, in addition to the emoluments of his two well-endowed chairs.

I am, &c.,

Oxford, November 26. Medicus.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, November 6.

Charles West, M.D., F.R.C.P., President, in the chair.

The following gentlemen were elected Fellows:—Izett William Anderson, M.D., Jamaica; Edmund Overman Day; John C. Eaton, Ancaster; Richard Ellery, Plympton; Louis Henry, M.D., Melbourne, Victoria; Nathaniel H. K. Kane, M.D., Kingston-hill; Albert Angus Macdonald, M.B., Toronto; and George Mowatt, Swansea.

Rupture of Fallopian Tube.

Dr. A. E. Aust-Lawrence, of Clifton, showed the uterus and appendages of a woman who died from rupture of the right Fallopian tube. The patient was admitted into the Bristol General Hospital, suffering from endometritis, and for this Dr. Lawrence applied nitric acid to the interior of the uterus after previously dilating the cervix with a tangle-tent. The woman did well for four days, when she developed symptoms of peritonitis, and died in three days. The post-mortem disclosed general peritonitis, most marked in the pelvic region. The left Fallopian tube was dilated into a cyst; the right tube was very much dilated and thickened, and had given way, the contents escaping set up peritonitis, the interior of the uterus presenting the usual appearances of granular endometritis. Dr. Lawrence did not attribute the fatal termination to the application of the acid. The immediate cause of the rupture of the tube was probably its over-distension by menstrual secretion, the portion which had become very thin giving way under the pressure. The act of menstruation was coincident with the development of peritonitis.

Drs. Barnes, Braxton Hicks, Playfair, and Edis made remarks; and

The President expressed his entire agreement with their views, that the condition of the Fallopian tube led to death, and that the application of nitric acid had nothing to do with it.

Improved Cautery.

Dr. Aveling exhibited a regulator to be used with Paquelin's cautery. It was a simple and inexpensive screw tap, made by Messrs. Meyer and Meltzer, which could be added by anyone having a thermo-cautery, simply by cutting the tube an inch from the handle, and inserting the extremities of the regulator into the cut ends. By turning a screw any heat may be produced and maintained.

Case of Cephalhæmatoma.

Dr. John Brunton exhibited a child suffering from double cephalhæmatoma. It was the first instance of the kind he had seen, though he had notes of severe single ones.

The President, Dr. John Williams, Dr. Godson, and Dr. Aveling made some remarks.

Malignant Disease of Ovary.

Dr. Hayes showed the uterus and appendages of a woman, aged forty-one, who had died in King's College Hospital. One of the ovaries was converted into a large unilocular cystic tumour, evidently of a malignant nature. The uterus was uniformly enlarged, and closely adherent behind to a dense carcinomatous mass reaching downwards into the pelvis, and upwards into the abdomen. Ovariotomy had been recommended at another hospital. Dr. Hayes decided against it because the fixity of the uterus led him to believe that this organ was diseased, probably secondarily so, the ovarian tumour being malignant.

Rupture of Vagina during Labour.

Dr. Galabin related two cases of rupture of the vagina during labour. The first was that of a patient, an enormously fat woman, under the care of Mr. Sharman, of Gipsy-hill. She had had eight children previously. During labour the patient had got out of bed, and strained violently upon a nightstool. Immediately after, the head was found to have descended to the perineum, and was quickly expelled through the vulva. Uterine action then ceased, and the fœtus was extracted alive. After twenty minutes, as expulsion of the placenta could not be otherwise procured, gentle traction was made upon the funis, but it broke and came away, leaving the placenta behind. On introduction of the hand, a substance was felt which, being carefully brought into view at the vulva, proved to be the large intestine, recognised by its longitudinal bands. The placenta could not be found, though the arm was introduced up to the elbow. The author saw the patient about eight hours after the rupture, and found that the posterior vaginal wall had been torn away from the cervix for more than half its circumference. The os uteri was closed, and the placenta not to be discovered. It was thought that it would give the only possible chance to the patient to perform gastrotomy, sponge out the blood from the peritoneal cavity, and search for the placenta. A jet of dark blood spurted out at the first puncture of the peritoneum, and more than two pints were found collected in front of the uterus. The placenta was also lying in front of the uterus and upon the top of the bladder. Symptoms of peritonitis set in next day, and death took place forty-two hours after delivery. The second case was that of a patient aged forty-one, who had had ten children delivered naturally. She was attended in the Guy's Charity. The author was called to see what was said to be a case of placenta prævia, in which considerable hæmorrhage had taken place. He found that no presentation was within reach, and that the finger penetrated a long way without resistance. Chloroform being given, it was ascertained that there was an extensive rent in the posterior vaginal wall, separating it from the cervix. The fœtus and placenta had passed into the abdomen—the head of the fœtus uppermost. The posterior lip of the cervix, which was bilaterally cleft, and the peritoneal surface of the uterus, had been mistaken for the placenta presenting. As the patient and her friends—who were Irish—refused to allow gastrotomy, the foot of the fœtus was brought down through the vagina; but the occiput had to be perforated before the head could be brought through the brim, and the patient died shortly after delivery. In both cases the accident appeared to be due, not to any degeneration of uterine tissue, or any considerable disproportion between pelvis and fœtal head, or protraction of labour, but to a violent pain having occurred while the uterus was in a position of extreme anteversion, so that the fœtal head was driven against the posterior wall of the genital passage.

Dr. Braxton Hicks related a case in which lateral rupture of the vagina had occurred. He thought the obliquity of the uterus might have been occasioned by the position in which patients are placed in this country.

Dr. Barnes considered the cases important as showing that

spontaneous rupture of the vagina may occur during labour. Had the forceps been employed in either of these cases, the practitioner would probably have been blamed for the result, and the laceration have been attributed to his manipulation. In fat women the tissues give way under slighter forces. Cases of ruptured vagina occur suddenly in morbid tissues, and before there is any indication on which to act.

Dr. Cleveland referred to a practical point in the first case, and suggested that it might prove a useful warning under all circumstances to employ the utmost gentleness in attempting to bring down the placenta by traction on the funis. Although there was no evidence that undue force had been used, yet the fact remained, that, had the cord not been unfortunately broken, the placenta might have been cautiously traced to its resting-place and removed without the operation.

Dr. Matthews Duncan related the particulars of two cases of ruptured vagina, and remarked that when the great majority of such ruptures take place, the cervix and vagina form one tube, whose parts are distinguished chiefly by the rim of the external os projecting. The vagina might rupture or the cervix might rupture, but the body did not. Vaginal ruptures are not rare, forming about a third of the whole.

Dr. Gervis mentioned two cases of ruptured vagina, in one of which the child and placenta had both escaped into the peritoneal cavity, and remained there undetected for forty-eight hours, putrefactive changes having begun; and in the other, the rupture occurred in a labour in which the forceps had been used, and the collapse was attributed, prior to the detection of the vaginal rupture, to the continued influence of the anæsthetic.

Dr. Roper remarked on the common features of these two cases. Each woman had had a large number of children, and the abdominal walls had become weakened, constituting the "pendulous belly" of pregnancy. He had seen such cases where the laxity of the abdominal muscles allowed the pregnant uterus to fall so far forward that its fundus pointed downwards. Under such circumstances the labours are exceedingly long and painful, and likely to end in rupture of the vagina at that particular part described by Dr. Galabin. The immediate restoration of the uterus to its proper position, so that its long axis and that of the child may correspond to the axis of the brim, is the first important step in treatment, and then timely aid with forceps is needed.

Dr. Playfair pointed out how very strongly these cases seemed to him to show the correctness of the practice he had long advocated, that after the rupture of the uterus, when any considerable part of the child or the placenta had escaped into the peritoneal cavity, gastrotomy afforded the patient the best chance of recovery. This rule was not, however, generally taught in our obstetric works.

On a certain class of Cases of Anteflexion of the Uterus with certain Correlated Conditions.

Dr. George Roper read a paper as above. The object of the paper was to describe and differentiate a special class of cases of anteflexion of the uterus. In these cases the abnormal shape of the uterus was a congenital malformation, and was not either an effect or a cause of pathological change in its texture. The axis of the organ was a curve with the concavity forwards: it was not bent at an angle at any one point. There was no softening of the tissues, but, on the contrary, rather rigidity, for the organ could not be easily straightened. This condition was often associated with deformity of the cervix and stenosis of the external os and canal. To distinguish this malformation from other kinds of anteflexion, the author proposed to call it *antecurvature* of the uterus. He believed this antecurvature was much commoner than any other kind of anteflexion, and that in the unmarried especially it caused no symptoms beyond those of dysmenorrhœa. He had noticed other kinds of developmental peculiarities, one or more of which generally co-existed with this malformation. These were—(1) a short conical vagina; (2) a narrow perineum; (3) a conical distribution of the pubic hair, long hairs on the mammary areolæ, and an unusual amount of hair on the legs and forearms. The deformity of the uterus often gave rise to dysmenorrhœa from the canal being curved and narrow. The treatment of this was then considered. The author thought incision of the vaginal portion advisable when the cervix was much hooked. Incision of the cervix up to and through the internal os, sudden dilatation of the cervix by expanding sounds, the use of tents, intrauterine stems, or vaginal anteflexion pessaries, he considered either inefficient or unsafe, and therefore objectionable. He had obtained excellent results from gradual dilatation of the cervical canal with metallic bougies: he believed this treatment to be quite free from risk, and therefore preferred it. There was also in these cases a condition of sexual nullity; sexual desire was absent; in many cases sexual intercourse was painful, and there was often vaginismus. He thought the co-existence of these conditions was not accidental, but that they were part of a general developmental defect. The pelvis too, he thought, partook somewhat of the male type. The paper concluded with a description of two specimens of this antecurvature of the uterus, which were exhibited to the Society.

Dr. Gervis considered the term antecurvature an unnecessary addition to the nomenclature already in use. He differed somewhat from Dr. Roper's conclusions regarding division of the cervix in some intractable cases of anteflexion, especially where associated with conical cervix and pinhole os. He had found it of much service, and since adopting the plan of applying the solution of perchloride of iron to the cut surfaces, he had rarely if ever had any subsequent inflammation. The iron checked hæmorrhage, prevented any primary union, and greatly lessened at all events the risk of septic infection.

Dr. Graily Hewitt thought that Dr. Roper was attempting to draw too hard-and-fast a line between congenital and acquired anteflexions; he had failed to discover this difference. He attached no importance to the passage of the uterine sound being more difficult in one case than in another. The condition of the tissues of the uterus had much to do with the flexion, being of great softness, not only at the point of flexion, but throughout. With reference to treatment, he had failed to discover the curative power of bilateral incision. He preferred tents and dilators, and the contemporary use of pressure outside by means of vaginal pessaries.

Dr. Braxton Hicks called attention to a peculiar type of flexions of a temporary character which might be called amœboid, in which one doctor recognises an anteflexion, and another a retroflexion, produced probably by contractibility of tissue, perhaps the result of irritation in the ovary.

Dr. Barnes believed that pigmentation had not been sufficiently studied, for its bearings in diseases of women are of great importance. He considered a small os uteri frequently a complication of flexion, and in such cases lateral incision was of service, and would not interfere with the treatment of the flexion subsequently by straightening the uterus.

Dr. Aveling denied that division of the cervix was repudiated by all sagacious observers. He had practised it, and found it of great service.

On the motion of Dr. Bantock, seconded by Dr. Wynn Williams, the debate on Dr. Roper's paper was adjourned till the next meeting of the Society.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

Friday, November 15.

Mr. Jacob, Vice-President, in the Chair.

The minutes of the previous meeting having been read and confirmed, the report of the Council on three subjects referred to them was read, as follows:—1. The power of the Privy Council to make "orders" under the 34th section of the "Contagious Diseases (Animals) Act, 1878." In reply to a letter received from the Secretary, Professor Brown said that the action of the Privy Council would be limited to giving powers to the local authorities to make regulations under the powers of the Contagious Diseases (Animals) Act. It was resolved that a letter be addressed to the Privy Council, urging them to put in force the by-laws which have been framed for the management of cow-sheds and dairies, both in urban and rural districts; also that such conditions be prescribed to the local authorities as will insure efficiency from a sanitary point of view. 2. The communication from the National Health Society in reference to the prevention of the spread of infectious diseases by persons attending the waiting-rooms of hospitals and dispensaries. The Council resolved that the hospital authorities be requested to write to the medical officers of health, sending the addresses of any cases from their districts admitted to the Asylums Hospitals. Also that it be desirable to take such precautions in the waiting-rooms of hospitals as shall effectually isolate the patients suffering from infectious

diseases. 3. The steps advisable to be taken to give effect to the opinion of the Society, "That the relief afforded to the sick in hospitals for the treatment of infectious diseases should be completely dissevered from any relation with pauperism." The Council resolved to request the Local Government Board to insert a clause in a Bill to be presented to Parliament, making it obligatory that relief afforded to the sick in hospitals be completely dissociated from any relation with pauperism, and ought not to be considered as pauper relief. Letters were then read from the Metropolitan Board of Works, requesting that a copy of the regulations for the management and control of cow-sheds be forwarded to be considered by the General Purposes Committee of that Board. Allusion was then made to the new by-laws under the Metropolitan Buildings Acts Amendment Act shortly to become law. It is understood that these regulations will effectually check the erection of dwelling-houses without due regard to sanitary requirements, but there seems to be no regulation as to the necessary admixture of lime and sand instead of "garden mould," as now often used. No doubt the effluvium given off from the admixture of decaying animal and vegetable matter must seriously endanger the health of the inhabitants.

Dr. Collie, of Hammersmith, was then balloted for, and duly elected. Dr. Tatham (of Salford) and Mr. F. Winter Clarke (of Bury St. Edmunds) were proposed as extra-metropolitan members. Dr. Collie (of the Fever Hospital) and Dr. W. J. Vereker Bindon were proposed as associates.

Dr. Dudfield moved that it is very desirable for each medical officer of health to be possessed of a copy of the Asylums Hospitals Health Reports.

Mr. Harry Leach, Medical Officer of Health for the Port of London, then read a paper (of which we subjoin an extract) entitled—

Port Sanitary Work.

The author began by referring to the piecemeal character of legislation as affecting the floating population. In the Public Health Act of 1872 certain sections were framed referring exclusively to Port Sanitary Authorities. The Port of London is made the subject of a distinct section, and the Corporation of London pay out of their corporate funds all expenses relating thereto. The duties assigned are included in the various Nuisances Removal Acts, and so much of the Sanitary Act of 1866 as relates to the Nuisances Removal Acts. Under the powers of this Act any ship or vessel shall for sanitary purposes be treated as if it were a house; so that plenty of real work exists for an inspector of nuisances, as well as a medical officer of health, even in a comparatively small port. A correct practical interpretation of the Act involves:—1. The systematic visitation of all craft within the port limits. 2. The dealing with the importation of epidemic diseases, whether brought from abroad, from other outports, or from the canals of the United Kingdom. 3. The dealing promptly with persons affected, and providing for the fumigation and cleansing of the vessel, and the disinfection or destruction of the bedding and clothing. 4. To superintend the removal of foul cargoes. 5. To examine the drinking-water provided for the various crews, both with reference to the place at which it was originally procured, and its present condition. 6. To exercise a general supervision over all school-ships moored in the ports. 7. To provide for the sanitary safety of all inward-bound emigrants or passengers. Under general circumstances every ship is visited within from twenty-four to forty-eight hours after having come to moorings in the river or the docks. No enactment exists that enables the Sanitary Authority to stop a vessel, except under conditions that presuppose the existence of cholera. Any cases of infectious diseases must be collected as soon as possible after the vessels have come to moorings,. The importation of infected clothing is also a subject of care and concern, because the Merchant Shipping Act ordains that the effects of deceased seamen shall under most circumstances be sent home. There is no doubt that the drinking-water used in ships, particularly small coasters, is a fruitful aid to the propagation of epidemic diseases. Vessels of all kinds frequenting this port are mostly supplied with water by the Samaritan Company, which has in constant operation on the river and in the docks a number of so-called tank-barges, from which water is pumped into the vessels. At Rotterdam, Amsterdam, and other places, it appears to be the rule rather than the exception to fill up from the river in which the vessel is lying—which river constantly receives the sewage of the city through which it flows! Meat unfit for human food also comes occasionally in the shape of carcases sent from the North of Europe and Mediterranean ports for the London market, and must be condemned. The Public Health Act of 1872, copying the Sanitary Act, 1866, was so framed that all ships belonging to her Majesty's Government, whether in commission or not, were exempt from all civil sanitary control. Under the Act of 1866, school-ships and port sanitary work did not appear to occupy, in any sort of way, the minds of our legislators. But when the Consolidation Act of 1875 was in process of manufacture, the paragraph was altered, and now reads:—"This section shall not apply to any ship or vessel under the command or charge of any officer bearing her Majesty's commission," etc. There are now seven school-ships of various kinds moored between Charlton and Grays, that accommodate unitedly 2300 boys. Since port sanitary work commenced, one or other of these ships has been invaded by typhoid, measles, and scarlatina. In one case typhoid affected no less than 40 per cent. of the inmates, and very much on account of the want of any sort of adequate hospital accommodation. These ships have their own visiting medical officer, and both he and the administrative staff, as well as the committee, work most cordially with the sanitary authority. In these floating habitations the principles of house sanitation must, of course, be followed as closely as possible, beginning from below upwards, and not, as is usually the plan with school-ship architects, from above downwards. The difference between wooden, iron, and composite ships, as to temperature, as well as other minor matters, should be studied well before a health officer who works afloat can be competent to judge as to how far this or that ship fulfils, as a habitation, even moderate conditions of health. The mere fact of her being at fixed moorings in a particular spot, or swinging with the tide, or moored off hilly or marshy ground, or in the immediate neighbourhood of an outfall, are all points in port sanitary work that must be considered carefully. If any cases of epidemic disease occur on emigrant ships before they start for their final destination, it is doubtful as to how far the emigration officer can claim assistance from the Port Sanitary Authority, as it appears that the Emigration and Healths Act somewhat clash on this point. The Public Health Act, 1875, says nothing about either emigrants or immigrants, but merely gives power to the Sanitary Authority (as on land, Section 124) to remove any person suffering from an infectious disease, wherever they may be. The ventilating arrangements that obtain on board merchant vessels, as well as on ships of war, are very defective; and those on the former are certainly part and parcel of the knowledge to be gained by a port medical officer of health. The best of our ironclads are very badly provided with means for efficient ventilation, and so are, also, the smartest passenger-ships of our mercantile marine. The vessel is in most cases designed and built before the ventilation is so much as thought of. Vessels are, as a rule, best ventilated by attending specially to the exhaust principle; being assured that, inasmuch as a ship is surrounded by pure air, such air will always flow in somewhere if a vacuum be established by the abstraction of the foul and heated atmosphere from the cabins, holds, and other enclosed spaces. But cargoes require ventilation almost as much as passengers. Coal, grain, and several kinds of seeds, as well as patent manures, are all capable of generating gases that are intensely disagreeable, always unhealthy, and sometimes dangerously so, as well as being explosive. Closets are still a weak point; and a good plan, if it can be enforced, is to direct that all ship latrines should be closed when the vessel is hauled into dock, and until her departure, as there is plenty of closet accommodation ashore. The Merchant Shipping Act of 1867 prescribes a certain cubic or superficial space for each seaman, which is to be properly caulked, ventilated, and so forth. But the Board of Trade (the department charged with the administration of the Act) appoints no inspectors to see that these regulations are systematically carried out, so the Port of London Sanitary Authority meets the matter by sending to Whitehall, for the information of this department, a monthly list of vessels that have been, in the judgment of their officers, found deficient in sanitary requirements. That very many unseaworthy sailors exist is abundantly evident to anyone who has had an opportunity of seeing any of the class, or of going round the wards of the Seamen's Hospital at Greenwich. As it is the duty of health officers to prevent the importation of acute epidemic diseases, so is it their duty in an equal degree to keep a record of those sailors found afloat suffering from chronic disorders,

and report such cases to the Marine Department of the Board of Trade, in order that some further practical steps may be taken to secure the safety of ships and those who travel by them and work on them. Too little has been done to secure the seaworthiness of the vital material as contrasted with the inanimate belongings of the vessels registered in this country. It is hardly necessary to do more than allude to scurvy, the existence of which in any ship on arrival it is the duty of the port medical officer to report to the Board of Trade. The authorities in London and in some outports have provided a floating hospital for infectious cases, and this is, under ordinary circumstances, the best as well as the cheapest mode of isolation, if the vessel provided be properly built and arranged. Arrangements have been made with the Metropolitan Asylums Board as to the reception of small-pox patients, all other cases being taken in at the *Dreadnought* Seamen's Hospital. If cholera appears, this authority would probably establish a floating hospital in the centre as well as the lower end of the port, so as if possible to prevent the landing of any infected or suspected persons. The old hospital hulk, the *Rhin*, though unsuitable for the accommodation and treatment of acute cases, has proved very useful in housing for a time several large bodies of emigrants and school-ship boys, suffering with or suspected of cholera, small-pox, or enterio fever. The inhabitants of Gravesend complain that infected emigrants are occasionally sent on shore from outward-bound ships. Other riparian towns dislike the presence of school-ship hospitals in their midst. It appears also to be in some sort of way the province, if not the positive duty, of port medical officers of health to observe the kind of food provided for sailors, inasmuch as it facilitates the examination of meat and other provisions when complained of by them. Since port sanitary authorities were constituted, two special Sanitary Acts have become law—the Rivers Pollution Act, which received the Royal assent in the autumn of 1876, and the Canal Boats Act, which became law at the end of last session. The eighth section of the Rivers Pollution Act gives to every sanitary authority power under certain conditions to enforce its provisions. It seems that as the word "waters" is interpolated, port sanitary authorities are not only responsible for the craft moored in their jurisdiction, but also for the condition of the water in which they float. Having taken this view of the matter, even before the Rivers Pollution Act came into operation, the Thames Sanitary Authority has succeeded, with the assistance of the various riparian authorities, in causing many small outfalls to be closed between Chelsea and Woolwich. All riparian towns between Teddington-Lock and Chiswick, however, still drain into the Thames. The upland authorities have lately (with the exception of Brentford and Twickenham) united for drainage purposes, and have obtained the necessary Act; but the Metropolitan Board of Works have secured saving clauses in this and all other Acts that enable them to laugh to scorn the attempts of any port or riparian sanitary authorities to interfere with their outfalls.

A short discussion followed the reading of the paper.

Dr. Tidy, as hon. sec. of the original Thames Inspection Committee, which became the Port Sanitary Authority, was gratified to find that so much real sanitary work had been done on the river by Mr. Leach. Until very recently this important highway had been entirely neglected, from a sanitary point of view.

Mr. Radcliffe commented upon the efficient way in which cholera had been nipped in the bud when introduced into the river. The Port Sanitary Authority, without knowing precisely the extent of its legal powers, had stopped the vessels and placed them in quarantine. A permanent improvement had been made in the sanitary condition of the docks since Mr. Leach had been appointed. Doubtless before long the Port Sanitary Authority will be able effectually to deal with the great nuisance of the pollution of the Thames at the main drainage outfalls. The multiplicity of Acts governing the river population greatly hampered the Port Sanitary Authority in effectually dealing with the shipping population. It is needful that a consolidation measure be framed to enable these Acts to work in harmony with existing views of sanitary reform.

Dr. Tripe could not agree that the epidemics of cholera in 1848 and 1864 were under efficient control by the sanitary authorities. The epidemic in St. George's-in-the-East would not have assumed such proportions if properly controlled by the river Authority.

Mr. Corner suggested that it was very desirable for shipowners to agree to a uniform scheme for sanitary inspection of sailors before being taken on board, to avoid shipping men unfit for work. Many suffering from venereal disease and the incubative period of infectious fevers would thus be prevented from engaging themselves for a voyage.

PATHOLOGICAL SOCIETY.

Tuesday, November 19.

Charles Murchison, M.D., LL.D., F.R.S., President, in the Chair.

Gangrene of the Penis from Thrombosis.

Mr. Gay exhibited this specimen, which had been removed from a man of thirty-one. The patient, who had not suffered from syphilis, had been exposed to damp, and, in consequence, had a succession of rheumatic affections of various parts. First there was tonsillitis; thereafter rheumatism of the ankles and knees, with pains in the calves and soles, and fever, by which he was confined to bed. Then came supraorbital pains and œdema of the upper eyelids, followed in a few days by a rash in front of both elbows. Thereafter there appeared pain, tenderness, and swelling in the calf of the leg, which, in their turn, passed off. The patient was next attacked with very severe pain in the perineum; leeches were applied; but in a few days the penis became injected, swelled rapidly, became completely filled with blood, rigid, and tense, and the prepuce became œdematous. Twenty-four hours later the glans was found to be dusky, and the whole penis thereupon died. Separation occurred, the sphacelated parts were removed, and the wound healed with surgical assistance. Recovery was complete. Mr. Gay said that this case was probably unique. The patient appeared to have suffered from rheumatic phlebitis, metastatic in its course, and ending by attacking the internal iliac veins. Thrombosis was the result, affecting the deep parts of the penis, while the skin, with a different venous outlet, remained unaffected. Mr. Gay described at length the arrangement of the veins of the legs, penis, and other parts, and insisted upon the importance of a compensatory outflow or relief-channel in certain venous districts, while the absence of this in the veins connected with the penis (except in its integuments) rendered it liable to complete thrombosis and gangrene, as in the present instance.

The President said that it was remarkable that the patient had recovered. With respect to the escape of the skin of the penis from the sloughing process, this immunity is not observed in the gangrene of typhoid fever. Was the heart examined?

Mr. Gay replied that there was no valvular disease of the heart. Cases of gangrene due to blood-poisoning differed materially from such as the present; for in the former every part of the organ was involved and would perish.

Sir Joseph Fayrer said that cases of gangrene of extremities due to arterial plugging in malariously-poisoned persons in India were exceedingly common. Post-mortem, the artery was found completely obstructed.

Aortic Aneurism Rupturing Externally.

Dr. Lediard showed this specimen, which was taken from the body of a man of thirty-seven. The whole duration of the case was about twelve months. The man, who was a potman, had not had syphilis. The signs were characteristic of aneurism of the arch of the aorta; and the principal feature of the case was the rapid growth of the tumour forwards. Within a fortnight of the man's admission into the infirmary, in the tenth month of his illness, the skin over the aneurism was ecchymosed. Thereafter the skin of the area involved became red, afterwards glazed, and then black; blood began to ooze from the surface; and finally the tumour burst, deluging the bed with blood. Post-mortem, a large aneurism was found involving the ascending aorta, and perforating the right anterior wall of the chest in such a way that there was an extra- as well as an intra-thoracic portion of tumour. The intra-thoracic portion contained no clot; but a clot of various ages was found externally. The heart was natural, and the valves were healthy. Rupture externally was to be considered a rare termination of thoracic aneurism.

The President remarked that Dr. Sibson had collected several cases of this kind.

Dr. Ralfe said that this termination was rare in his expe-

rience. Usually the tumour increased backwards, while consolidation occurred in front.

Aneurism of the Abdominal Aorta.

Dr. Lediard showed this specimen also, which probably proved fatal by uræmia. It occurred in a labourer of fifty-two, who had bruised his side four years previously, and was now suffering from palpitation, pain, and dropsy. He had not had syphilis. The surface was pallid; the vessels were tortuous; a double aortic murmur was audible; and a pulsating tumour, with pain and tenderness, was found beside the nipple. A projection of the lumbar spine was afterwards formed. At last anasarca supervened, with incontinence of urine and drowsiness, and death took place in an uræmic condition. No albumen was found in the urine. Post-mortem an aneurism of the aorta was discovered immediately below the diaphragm, concealed by the liver, and bulging backwards. The right renal artery was obliterated, and the right kidney was atrophied, weighing only three ounces; the left kidney was large. The renal structure was perfectly normal. The spinal column was absorbed in part. The aortic valves were diseased.

The President asked what was the evidence of uræmia.

Dr. Lediard replied that there had been convulsions, dropsy, and heavy breathing.

Dermoid Cyst of the Brain.

Dr. Irvine exhibited a specimen of dermoid cyst of the brain from the body of a girl of seven, who had been admitted into Charing-cross Hospital for loss of power of the limbs. After a time, convulsions and double internal strabismus came on, and before death there was complete paraplegia. There was some history of a blow on the back of the head two or three years previously. Post-mortem, the dura mater over the cerebellum was found adherent to the skull as well as to the brain beneath; and on cutting into the substance of the cerebellum at this spot a quantity of sebaceous matter and a lock of long hair escaped. These substances were found to belong to a cyst which occupied both halves of the cerebellum, and involved even the cervical portion of the cord. The walls of the growth were lined with sebaceous matter, and traces of inflammation were evident around it. Dr. Irvine said that this specimen was of great pathological interest; it was a true embryonic anomaly, and the situation of the growth was readily explicable by reference to development, the lining of the primitive vertebral groove being originally continuous with the epiblast or upper layer of the general body of the embryo.

The President remarked upon the great rarity of such a specimen.

Acute Atrophy of the Liver.

Dr. Ralfe showed a specimen of diseased liver, which was probably to be regarded as an example of acute atrophy. A boy of seventeen was admitted into the Seamen's Hospital, Greenwich, from a training-ship on the river, with jaundice, muttering delirium, and finally coma. A specimen of urine obtained proved to contain no sugar or albumen, but bile, and an amount of urea equal to twenty grammes in twenty-four hours. On evaporation, a sticky residue was left, from which crystals of tyrosine were obtained. The vertical hepatic dulness measured three inches. The temperature did not reach 100°. There was repeated coffee-ground vomiting; no stool was passed; and the urine was retained. Death occurred in thirty-six hours. Post-mortem, the liver weighed thirty ounces and three-quarters; it was rather soft, with a fatty appearance; the margin and inferior surface were tinged with bile, and the gall-bladder was empty and shrunken. The kidneys weighed ten ounces and a half, and appeared pale. The spleen weighed four ounces and three-quarters. The stomach, duodenum, and jejunum were full of a coffee-ground fluid, while their surface was not ulcerated. Time had not permitted a microscopical examination of the liver.

Embolism of Pulmonary Artery.

Dr. Lyell showed an embolus which was found in the pulmonary artery of a woman, admitted into the Middlesex Hospital for cancer of the breast, and operated on by Mr. Lawson. Ten days after the operation the patient complained of a bunch of varicose veins beside the left knee, and above this spot there was evidently plugging of the vessels. The case progressed favourably as regards both breast and veins, until one morning, when she suddenly sat up, shrieked, complained of pain generally; became pallid, with blueness of the lips; and died in twenty minutes. Post-mortem, the pulmonary artery and its right branch were found distended with a clot. The right ventricle was in the condition of diastole, and contained dark fluid blood, but no clot. Protruding from between the cusps of the pulmonary valve was the end of the clot in the artery. There was no clot in the right auricle. The pulmonary artery, on being carefully opened, proved to contain a clot more than six inches in length, which extended into the right main branch, while the left main branch was quite empty. The clot was represented by a coagulum, which was folded upon itself at the lower part; and this fold formed the protrusion between the arterial cusps. The folded part of the clot occupied a portion of the trunk of the vessel; the rest of the trunk of the vessel and the right main branch were occupied by unfolded or single clot. One extremity was free and pointed; at its surface there were attached one or two more or less cylindrical strands, which floated freely at their other end, and seemed to be detached portions of the clot. The right lung presented no evident change. The vena cava inferior proved to be empty as far as the bifurcation; the right common iliac and corresponding veins were perfectly healthy. The left common iliac and corresponding veins were collapsed and small, and the tissues around were firm as if from inflammatory change; the veins below Poupart's ligament were full of clotted blood; the external iliac vein was empty as far as the beginning of the common femoral, but traces of membranous films of fibrin were found within it. With respect to the nature of this case, Dr. Lyell said that the question was whether it was a thrombosis or embolism. There were many facts against the idea of thrombosis in the pulmonary artery. The clot was strictly limited; it appeared to be all of the same date; and there was complete absence of clot in the heart. The position of the clot, too, was such that it could not have grown thus *in situ;* it must have been detached from some large vessel. It must therefore have been an embolus; and the same arguments disproved any local increase of size. The clot must have been carried up by the stream, and doubled up in the pulmonary artery. The condition of the veins indicated that they had been originally filled with clot.

The President remarked upon the interest of this case, clinically as well as pathologically. The suddenness of onset was remarkable. He knew of a somewhat similar case of gouty phlebitis, where a man was suddenly seized with dyspnœa and died; the post-mortem appearances being much as in the present instance.

Dr. Goodhart said he had seen several cases of thrombosis of the pulmonary artery *in situ*.

Dr. Morison asked whether any auscultatory signs had been elicited in this case.

Dr. Lyell replied that no physical examination of the chest was made on account of the suddenness and severity of the symptoms.

Unilateral Cancer.

Dr. Braidwood, of Birkenhead, related this case, and showed microscopical sections of the morbid growths. An unmarried lady of sixty, who had never had serious illness previously, but whose aunt had died of cancer, began to suffer from cough, unrelieved by medicine. In February last she complained of "sciatica" of the left side, and a bluish appearance was seen on the left buttock. At this time the patient confessed that in the previous July she had fallen with the left hip against the step of the carriage; that she had been relieved by treatment; but that in a few months she had begun to suffer from "lumbago," etc. After this the patient noticed a small firm swelling behind the left ear; and another on the left temporal bone. Then another swelling appeared on the left thigh; and thereafter the patient gradually sank. Post-mortem, most of the viscera proved to be healthy. The last lumbar vertebra was soft; the left ilium contained a cavity with cancerous juice; and the left sacro-iliac joint was disorganised. All the other swellings appeared to be of a similar nature. Some mesenteric glands on the left side were diseased. There was no cancer in the viscera. Dr. Braidwood said that in this case cancer appeared to be almost confined to bone. The chief feature, however, of the case was the limitation of its distribution.

Mr. Butlin said that he doubted whether the disease was to be considered true carcinoma. It was a cylindrical epithelioma. No mention had been made of the state of the rectum, without which the case was incomplete.

The President asked whether there were any symptoms

pointing to the rectum, and whether it had been examined physically.

Dr. Braidwood replied in the negative. It was not opened post-mortem.

Dr. Sturge mentioned a somewhat similar case that had come under his observation. A man had "sciatica" with loss of power in his right leg, and a firm tumour was detected by rectal examination. Post-mortem, the whole of the ilium was found to be involved in an enormous malignant tumour. The lungs were filled with medullary cancer. There was no disease of the rectum. The petrous bone also contained a growth.

Dr. Pye-Smith said that if this were really an instance of true primary carcinoma of bone it would be an unique case almost. Some primary epithelial source had, however, been probably overlooked.

Dr. Braidwood replied that it was possible that a small ulceration of a mucous membrane had been overlooked: but certainly no large growth.

MEDICAL NEWS.

Apothecaries' Hall, London.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, November 21:—

Adolphus, Theodore Frederick Pennington, Lyndhurst-road, S.E.
Barker, Frederick Rowland, Aldershot.
Culling, William Robert, Thornhill-crescent, N.
Gayton, Frederick Carteret, St. Mary's-terrace, Paddington.
Vinrace, John Hinks, Hockley, Birmingham.

The following gentleman also on the same day passed his Primary Professional Examination:—

Harwood, John Gassen, St. Bartholomew's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to all new Appointments that take place.

Davidson, A.D., M.R.C.S., L.S.A.—Ophthalmic Assistant to St. Thomas's Hospital.

Hadden, W. B., M.B. Lond., M.R.C.S.—Assistant House-Physician to St. Thomas's Hospital.

Sandwith, F. M., M.R.C.S., L.R.C.P.—Resident Accoucheur to St. Thomas's Hospital.

Sheppard, C. E., M.R.C.S., L.R.C.P.—House-Physician to St. Thomas's Hospital.

Smith, R. P., M.R.C.S., L.R.C.P.—Assistant-House-Surgeon to St. Thomas's Hospital.

NAVAL, MILITARY, &c., APPOINTMENTS.

Admiralty.—Staff-Surgeon Gerald Molloy has been promoted to the rank of Fleet-Surgeon in her Majesty's Fleet, with seniority of November 13.

BIRTHS.

De la Cour.—On November 22, at Camden-road, N.W., the wife of G. F. De la Cour, M.D., of a daughter.

Harries.—On November 17, at North Parade, Aberystwith, the wife of T. D. Harries, F.R.C.S., of a daughter.

Myers.—On November 19, at 26, Park-street, Windsor, the wife of Arthur B. R. Myers, M.R.C.S., Surgeon Coldstream Guards, of a daughter.

Philpot.—On November 17, at Moorcroft, Parkstone, the wife of John R. Philpot, L.R.C.P., L.R.C.S., of a daughter.

Stevens.—On November 26, at High-street, Stoke Newington, N., the wife of A. Felix Stevens, M.D., of a daughter.

MARRIAGES.

Cooper—Rawlinson.—On November 25, at Yarmouth, I. Neild Cooper, M.R.C.S., of Hyde, Lancashire, to Ada, youngest daughter of the late T. L. Rawlinson, of Corby, Lincolnshire.

Frazer—Pooley.—On November 26, at All Saints', Norfolk-square, William Frazer, B.A., M.D., of Bournemouth, eldest son of W. Frazer, F.R.C.S.I., of Dublin, to Marion Augusta Pooley, daughter of the late T. Pooley, Esq., of Upwood.

Jones—Lloyd.—On November 20, at Bradwell, Richard Owen Jones, M.R.C.S. Eng., of Bala, to Harriette, eldest daughter of the late David Morris Lloyd, of Palé, Merioneth.

DEATHS.

Anderson, Sarah Matilda, wife of C. L. Anderson, L.R.C.P. Edin., at 31, Fitzclarence-street, Everton, Liverpool, on November 19, aged 30.

Bolton, David, M.B., F.R.C.S., late of Clifton and Birmingham, at 30, Promenade, Cheltenham, on November 23, aged 72.

Clarke, Mary Elizabeth, widow of the late James Fernandez Clarke, M.R.C.S.E., of 23, Gerrard-street, W., at 10, Charles-street, Soho, on November 25, in her 73rd year.

Dassanville, Kate, wife of William Alston Dassanville, M.D., Retired Deputy Inspector-General of Army Hospitals, at Thun, Switzerland, on November 18.

Harris, Edith, youngest daughter of Richard Harris, M.D., at Holton, on November 25, aged 19.

Mullar, Edward K. D., son of F. G. W. Mullar, M.D. Edin., on board ship *Indian Empire*, on voyage to Ceylon, of hydrophobia, on August 8.

Noël, David Cole, L.R.C.P., M.R.C.S., at Upper Tooting, on November 20, aged 58.

Quin, Frederick Foster, M.D., at Queen Anne's Mansions, on November 24, aged 79.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Belgrave Hospital for Children, 72, Winchester-street, Pimlico.—House-Surgeon. Applications, with testimonials, to the Secretary.

Birmingham and Midland Eye Hospital.—House-Surgeon. Candidates must be Members of one of the College of Surgeons of Great Britain or Ireland. Testimonials to the Chairman of the Medical Committee, on or before December 10.

Bristol General Hospital.—Physician's Assistant. Candidates must produce proof of a registered medical qualification, also satisfactory testimonials of ability and good moral conduct. Applications to the Secretary on or before December 7.

Carlisle Dispensary.—Junior House-Surgeon. Applications, with copies of testimonials, stating age and qualifications, to Mr. J. H. W. Davidson, Hon. Sec., 8, Devonshire-street, Carlisle.

Hull General Infirmary.—Honorary Physician. Applications to the Chairman of the Board of Management, from whom further information as to qualifications, etc., may be obtained, on or before December 10.

Infirmary for Consumption and Diseases of the Throat and Chest, 26, Margaret-street, Cavendish-square, W.—Visiting Physician. Candidates must be Members of the Royal College of Physicians of London. Testimonials to the Secretary.

Metropolitan Free Hospital, 81, Commercial-street, Spitalfields.—Assistant House-Surgeon. Candidates must be qualified. Applications to be addressed to the Committee.

University College Hospital, London.—Surgical Registrar. Applications and testimonials to Talfourd Ely, M.A., Secretary, on or before December 10.

York Dispensary.—Resident Medical Officer. Candidates must be duly qualified and unmarried. Applications and testimonials to S. W. North, Esq., 84, Micklegate, York.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Bradford (*Yorks*).—Mr. S. C. Hirst has resigned the North-East District; salary £100 per annum.

Huddersfield Union.—Mr. J. Irving has resigned the Huddersfield South District; salary £37 per annum.

Great Yarmouth Parish.—Mr. Thomas Lettis has resigned the South District; salary £100 per annum.

Mutford and Lothingland Incorporation.—Mr. H. Hope has resigned the Kessingland District; area 10,126; population 5533; salary £60 per annum.

APPOINTMENTS.

Dunmow Union.—Henry J. Gover, M.R.C.S., L.S.A., to the High Easter District.

Holbeck Union.—Wm. Dobson, M.R.C.S., L.S.A., to the South District and the Workhouse.

Leominster Union.—Samuel Staniland, M.R.C.S., L.S.A., to the Bodenham District.

Rochford Union.—Walter G. Sheppard, M.R.C.S. Eng., to the Hadleigh District.

Mr. W. Hull, of Acton, has been awarded the Entrance Science Scholarship of £40 at St. Thomas's Hospital.

Traumatic Rupture of the Heart.—Dr. Dehenne relates the case of a cavalry soldier, who, on leaping over a fallen tree, had his horse fall upon him, and expired immediately. The right auricle of the heart was ruptured, and was the only lesion found. He observes that true traumatic rupture of the heart is rare—*i.e.*, rupture produced by external pressure or shock, without aperture in the thorax, and with perfect integrity of the organ in all its parts.—*Recueil de Méd. Mil.*, August.

Vaccination in the Madras Presidency.—From a report on the sanitary measures in India just presented to Parliament, it appears that during the official year 1876-77 the number of vaccine operations performed during the year was 483,192, or an increase of 101,780 on the results of the previous year. On an average, Surgeon-Major Cornish states, 94,33 per cent. of the cases operated on were reported as successful. The operation of vaccination is not obligatory on the people. The number of children vaccinated under one year of age was 52,505. The people have a fear of infants undergoing the operation, and usually desire to defer it until the children can run alone.

A New Test-Paper.—M. Lacour, an army pharmacien, prepares this by adding to rhubarb double its weight of liquid ammonia, which produces a magnificent red-purple. After a quarter of an hour the liquid is separated by filtering, and strips of filter-paper dipped in it are then dried. Under the influence of acids the paper becomes a lemon-yellow, and with alkalies it regains its former colour. It is a very sensitive test.—*Recueil de Méd. Mil.*, August.

The Chair of Mental Pathology at the Paris Faculty.—Appointed to this chair more than eighteen months ago, Prof. Ball has never, in spite of repeated attempts, been able to obtain a clinical service wherein to commence his lectures; and he seems destined to wait a good while yet, as the last suggestion is that a building for that purpose may be erected adjoining the St. Anne Asylum, the wards of which are in the possession of MM. Bouchereau and Magnan. The *Progrès Médical* suggests that amidst the changes which will occur incidental to the creation of the new chairs at the Faculty, the Professor of Mental Pathology will perhaps be allowed to permute or exchange, "allowing the Faculty the means of repairing its error in having chosen on this occasion for this special teaching a man thoroughly competent to the task."

Royal College of Surgeons.—At the half-yearly examination for the Fellowship of the College, which was brought to a close on Saturday last, sixteen candidates were examined, nine of whom were reported to have acquitted themselves to the satisfaction of the Court of Examiners, and at the next meeting of the Council will be admitted Fellows of the College. The following were the questions on Pathology, Therapeutics, and Surgery submitted to them at the written examination on the 21st inst., when they were required to answer all the questions from 1.30 to 5.30 p.m., viz.:—1. Describe the characters of the lupous, the rodent, and the tertiary syphilitic ulcer; pointing out those which are especially to be relied on in diagnosis. 2. In a case of hæmaturia describe the method of investigation you would pursue, and the facts or symptoms by which you would be guided in the diagnosis of its source and cause. 3. Describe the immediate and remote effects which may follow an injury of a large nerve-trunk. 4. Discuss the relative advantages and disadvantages of median and lateral lithotomy.

Opening of the Ménilmontant Hospital.—This Hospital, situated at the north-east of Paris, and which has cost 9,343,000 francs, was formally opened on November 20, by the Minister of the Interior, accompanied by a number of the hospital administrative bodies. These were all complimented in a neat speech, the *corps médical*, however, being completely forgotten on the occasion. The Hospital will accommodate 800 patients, and separate buildings have been erected for accouchements and contagious diseases; and indeed the whole Hospital has been built on the separate pavilion principle. The wards contain twenty-two beds, with a cubic space of fifty-three metres for each bed. There are six physicians and two surgeons attached to it, each of whom is to receive 3000 francs per annum. The eight *internes*, besides being boarded and lodged, are each to receive 500 francs for the first two years, 600 for the third, and 700 for the fourth year. The *externes*, on account of its distance, are to receive fifty francs per month, instead of the usual allowance of a franc daily.—*Union Méd.*, November 23.

Fatty Degeneration from Arsenical Poisoning.—Dr. Pinkham terminates an account of an example of this read before the Massachusetts Medico-Legal Society (*Boston Journal*, September 19) with the following conclusions on the general subject:—1. It is an established fact that arsenic, in common with phosphorus, antimony, and other poisons, will cause fatty degeneration of the liver, kidneys, gastric glands, heart, and other organs. It acts after absorption, probably by its direct irritant power, causing parenchymatous inflammation, the final stage of which is fatty degeneration. 3. This effect may be produced in a few—certainly in ten—hours after the ingestion of the poison. 4. Arsenic cannot always be detected by chemical tests in tissues which have experienced its extreme effects. 5. Fatty degeneration is a frequent result of arsenical poisoning. Probably either it or the preceding condition of granular degeneration always exists. 6. The discovery of fatty degeneration post-mortem, especially if widely diffused, should be regarded as presumptive evidence of poisoning, and as warranting a thorough chemical examination.

Cerebral Localisation illustrated by Injury of the Head.—Prof. Broca read a case to the Académie de Médecine, on the part of Prof. Oré, of Bordeaux, bearing the following title:—Fracture of the Cranium—Considerable Depression of the Occipital Bone opposite to and below the Parieto-Occipital Suture: the depression reached the upper curved line of the occiput—Disorders in motor power and language and disturbance of vision—Cure, with restoration of the lost faculties, verified two years and a half after the accident. This case, Prof. Broca observed, which is of great interest in regard to cerebral localisation, occurred in the person of a railway *employé*, whose head was struck on the left side against an obstacle during the passing of a train. Loss of consciousness continued for several days, and disturbances of locomotion were observed on the right side. After some time, on trying to speak, he found that he could only speak the *patois* of his native town; and it was only at a later period that he was able again to speak French, which he had been for years in the habit of speaking. The difficulties of locomotion and speech gradually disappeared, leaving him with only some derangement in the motions of the left eye (preventing him, for example, following the movements of the telegraphic needle, and obliging him to desist from this portion of his employment). The depression existed just at the point corresponding to the centre of the movements of the eyes, as indicated by Ferrier and other physiologists.—*Gaz. Méd.*, November 16.

Tracheotomy in the Convalescence of Typhoid Fever.—After narrating a case in full detail, Dr. Poignard, a military surgeon, arrives at the following conclusions:—1. Deep-seated lesions of the larynx not infrequently complicate bad typhoid fevers. This laryngitis usually reveals itself at a late period by sudden and menacing symptoms. It is usually misunderstood at this period, its progress is insidious, and its prognosis is always very unfavourable. 2. Attacks of dyspnœa occurring during the course or convalescence of typhoid should at once give rise to a suspicion of œdema of the glottis, this being the ultimate symptom of deep-seated laryngitis in typhoid. 3. The diagnosis is sometimes very difficult, and the application of the laryngoscope is often impossible or dangerous. 4. The lesions produced are deep ulcerations, perichondritis, and necrosis of the cartilages, the cricoid being the most frequently affected, which explains the relative frequency of intra-laryngeal œdema without infiltration of the upper part of the larynx. 5. Change of voice during the existence of angina ought to lead to fear of the eventual occurrence of this laryngitis. 6. In presence of œdema too much reliance must not be placed on topical remedies. Tracheotomy is indicated when the dyspnœa is intense or when suffocative paroxysms become long and frequent. We should never wait for imminent asphyxia, it being better to interfere at the early stage, especially in very debilitated subjects. Very advanced asphyxia, syncope, or abundant hæmorrhage must not cause the operator to hesitate or desist. Tracheotomy has several times been performed in laryngitis with necrosis, and the results, which at first were but little encouraging, have of late become more and more favourable. Sometimes a persisting stenosis remains, obliging the patient to wear a permanent canula, constituting an infirmity with an unfavourable prognosis, but not militating against tracheotomy.—*Recueil de Méd. Militaire*, August.

Professional Secrecy.—A correspondent of the *New York Medical Record*, October 19, relates an instance in which he believes that professional secrecy was unduly observed. A young man, while under treatment for constitutional syphilis, brought to his physician a lady suffering under some slight ailment, telling him that he wished her cured as soon as possible, as they expected to be married shortly. The physician remonstrated with him very emphatically, informing him of the evil consequences which would follow. The marriage took place, however, and the wife is now the subject of syphilis in a severe form. Thus, through ignorance on the part of the lady, criminality on the part of the man, and "professional obligations" on the part of the medical adviser, this evil work was accomplished. The physician, who is one of long and large experience, maintains that his "obligations of secrecy" to his syphilitic patient ought to prevent him informing the lady of the danger she ran, after his remonstrance with the man was unheeded. The narrator of the case, however, maintains

that it was his imperative duty to have insisted on a postponement of the marriage, and in case of this being refused, to have warned the unsuspecting victim of the evil results of such a union. The editor observes upon the case, "that while it seems deplorable that such a crime should be perpetrated in defiance of a possible prevention, it must nevertheless be remembered that the attending physician is neither a detective, an informer, nor an officer of the law, and that, technically and ethically speaking, he shifts the responsibility of the case to the criminal as soon as he warns him of the dreadful consequences of his crime. From a strictly moral point of view, however, the aspect of the question alters itself very materially; so much so, indeed, that no physician could be trusted to give an impartial decision regarding the steps which should be taken to prevent the disease from entering his own family."

PROTEST AGAINST AWARDS AT THE EXPOSITION UNIVERSELLE.—The jury of Class 14 has addressed to M. Teisserenc de Bort, Minister of Agriculture and Commerce, and President of the Commission Supérieure de l'Exposition, a letter expressing its "*étonnement profond*" at the highest awards having been adjudged to the "Société Internationale de Secours aux Blessés Militaires (France)" and to a Society called "Assistance aux Mutilés Pauvres." These awards were adjudged in the name of the jury without the jury ever having decreed them or even having officially examined the claims of the two societies in question, while one of them—"Assistance aux Mutilés Pauvres,"—although receiving a gold medal in their name, was quite unknown to the jury. The protest is signed by Joseph Lister, president of the jury, Béclard, vice-president, Thomas Evans, secretary, U. Trélat, reporter, and MM. Faure-Muller, Vulpian, Richet, and Léon Le Fort, members of the jury.—*Gaz. Hebd.*, Nov. 22.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. R. Harding, Wellington, N.Z.—Received with thanks.

Dr. Augustus Florance, Christchurch, N.Z.—Received with thanks.

Mr. A. Allen, Bath.—The letter to which you allude not having appeared in our columns, your reply to it would not be fully understood.

THE POSTAL MICROSCOPICAL SOCIETY.

We have been requested to publish the following circular, sent to the members of the Postal Microscopical Society, and to state "that the special histological slides will not circulate amongst the lady members":—

Owing to an influx of new members of the Postal Microscopical Society, many of them being gentlemen in the medical profession, it has been thought desirable to circulate a new series of slides more especially interesting to them. These will be devoted to histo- and pathological preparations, and other subjects of a kindred nature.

To avoid sending in the first case empty boxes to those whose names are first on the list, I shall be glad if each medical member, and those others who are willing to do so, will send to me as early as possible one slide with notes, and, if possible, drawings illustrative of the same; and as early as convenient afterwards three other such slides, also accompanied by notes and drawings. For this purpose I will supply both writing and drawing paper of the requisite size.

It is also proposed to form a botanical circuit in the same manner as the pathological, to both of which all members are asked to contribute.

There will be no extra subscription to either of these circuits, and in carrying out these proposals it is not intended to interfere with the usual working of the Postal Microscopical Society. The names of new members will be inserted in the existing circuits according to their geographical situation; and, in addition, new circuits will be formed exclusively of those who contribute to the special boxes, so that they may receive a special box about once a month in addition to the usual one fortnightly. If thought desirable, the special boxes may go the entire circuit of the Society.

1, Cambridge-place, Bath. ALFRED ALLEN.

A Pleasing Surprise.—During October, Dr. Frankland reports that the quality of the water supplied by the five metropolitan companies drawing from the Thames was considerably superior to that delivered in the previous month, and all the water was efficiently filtered before delivery. The Lambeth Company delivered the best, and the Chelsea Companies the worst. The Lea water was of much better quality than that drawn from the Thames. The deep well waters supplied by the Kent and Colne Valley Companies, and by the Tottenham Local Board, were, as usual, of excellent quality. The New River water, however, was "slightly turbid, owing to the presence of white filamentous crystals of carbonate of lime."

Sir Humphry Davy.—The Penzance Corporation are considering what steps should be taken to celebrate the centenary of the birth of Sir Humphry Davy on December 13 next. Sir Humphry was a native of that town.

Russian Prisons.—General Steins, in visiting the prisons of Odessa for the first time recently, expressed his astonishment when the Governor of the City Gaol informed him that 400 persons were confined in cells that had been originally built for only 215; and when he remarked that the Registrar had more than once taken notice of the presence of 600 the new prefect said that such disgraceful overcrowding should never be repeated while he held the reins of power.

A Magistrate on Oakum-picking by Women.—A short time ago, Mr. Saunders, the Thames Police-court magistrate, declined to convict a pauper for refusing to perform the task of work allotted to her by the Poplar Board of Guardians. She had been set to pick four pounds of oakum, but only picked half a pound, alleging that she had done all she could. At the same time, the magistrate remarked that "it was the most degrading thing that could be given her to do—it was all that could be given to a prisoner in a gaol to do." The Guardians subsequently requested an explanation, and received, in reply, a letter from Mr. Sannders, in which he says:—"I look upon a female pauper, who has the misfortune to become an inmate of the workhouse, as not a person deserving of being treated as a felon, and made to execute work of the nature of punishment, and that to set her at task-work, which in our gaols is considered as the most degrading, irksome, painful, and unremunerative of occupations, is as opposed to the principle of pauper-relief, as it is cruel in itself and mischievous in its tendency. To put the female (whose nerves and muscles are utterly unsuited to such work) to the distressing and laborious duty of picking oakum certainly appears to me to be one of the character I have described; and I have not the least doubt that, if the practice were brought under the attention of the House of Commons (as no doubt it will be), it would receive the condemnation which I conceive it deservedly merits." The Guardians have decided on forwarding a copy of the correspondence to the Local Government Board.

Death through Officialism.—An inquest was held last week at Birmingham on the body of an infant aged sixteen months, who was alleged to have died from exposure to cold. The evidence of the mother was to the effect that she was deserted by her husband in June last, and was left with four children to maintain. On August 14 she was committed to the borough gaol for three months. Before her committal she had sold all her furniture but the bed, in order to get the means of subsistence. She took the deceased child with her to gaol, the three other children going to the workhouse. On the morning of the 13th inst., when she left the prison, an officer of the Board of Guardians took the three children who had been in the workhouse to meet her, and left them by the doors of the gaol in the cold, where they were "nearly starved." She happened to miss them, but two of them subsequently came to her at her mother's house. She received on leaving the prison 1s. 5d., which was all she had to support herself and family. The baby had been very ill during the previous few days, and became worse at her mother's house. She went to the parish officers for a medical order, but the child died that evening. A doctor who examined the infant after death, deposed that it was very much emaciated and died from convulsions. "Sending a child out of gaol," he added, "in a cold north wind when it was suffering from diarrhœa and bronchitis, as this child was, would be dangerous to health." The Coroner remarked, that "as far as officialism was concerned. the child had had plenty of it. The child was sent to gaol with its mother on account of its tender age, and when the time expired it would have been false imprisonment to have kept it. The other three children were taken to the gaol, the idea being that the woman having just come out of prison had plenty of money to support them and herself. The theory might be very good, but in practice it did not work well, for in this case a child perished in a few hours. He did not see that the jury could reach anyone, and the case seemed to illustrate one of the penalties of poverty and crime." The verdict returned was "That the child died from convulsions, brought on by exposure to the cold."

Post-mortem Examinations, Italy.—As a rule, little reliance can be placed on the result of the post-mortem examination in Italy, for the obvious reason that the fee is so ridiculously small (5 fr. or 6 fr. a subject) that no man of any practice or experience can be found to undertake the duty, and it falls into the hands of incapable persons. The Procureur-General, who orders inquiries, is powerless to obtain better men, and he is frequently exposed to ministerial censure for spending too much money. On sending in his voucher of expenses some revising clerk in the Accountant's office tells him that the Ministry is determined on economy, and that if he wishes to get on he must either not institute so many inquiries or employ cheaper experts. The result of this system is, that the country incurs heavy law expenses for trials, which the employment of a competent anatomist at first would in all probability have prevented.

Eggs.—No less than 1371 waggon-loads of eggs (each waggon is reputed to contain about 130,000 eggs) have during the past twelve months been consigned to England and Belgium by the firm of Francisco Cirio in Turin. Before the year 1875 this firm never employed in the best seasons more than two hundred waggons, while they are now compelled to use nearly 1400. Other firms are employing 918 egg-waggons to supply the same international traffic.

COMMUNICATIONS have been received from—

Dr. J. M. Bruce, London; Mr. J. Chatto, London; Mr. D. Colquhoun, London; Dr. Clement Godson, London; Mr. R J. Godlee, London; Dr. John Beddoe, Clifton, Bristol; Dr. W. Macneill Whistler, London; Mr. B. R. Wheatley, London; Dr. J. Matthews Duncan, London; Mr. T. M. Stone, London; Mr. J. Astley Bloxam, London; Dr. O. Sturges, London; Mr. E. M. Boddy, Dartford; Mr. Alfred Allen, Bath; Mr. T. Mark Howell, London; Dr. Gillespie, London; Dr. Tilbury Fox, London; Mr. W. J. Spencer, New Zealand; Dr. Edward Sparks, Mentone; Honorary Secretary of the Epidemiological Society, London; Dr. J. W. Moore, Dublin; The Registrar of Apothecaries' Hall, London; Dr. C. Hueter, Greifswald; Mr. Hussey, Oxford; The Secretary of the Statistical Society, London; Dr. Wolfe, Glasgow; Dr. Frankland, London; Mr. Hamilton Craigie, London; The Honorary Secretary of the Clinical Society, London; The Secretary of the South London School of Pharmacy; Dr. Dunglison, Philadelphia; Mr. Henry Horton, Devonport; The Honorary Secretary of the Harveian Society; The Registrar-General, Edinburgh; The Secretary of the Royal Institution; Messrs. Blunt and Son, London; The Secretary of the Obstetrical Society, London.

BOOKS AND PAMPHLETS RECEIVED—

Ziemssen's Cyclopædia of the Practice of Medicine, vol. viii., Diseases of the Chylopoëtic System—Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris, vol. xiv.—Postal Microscopical Society's Annual Report—Hermann Schwartze, M.D., The Pathological Anatomy of the Ear—F. W. Pavy, M.D., F.R.S., The Croonian Lectures on Certain Points connected with Diabetes, delivered at the Royal College of Physicians—Benjamin Ward Richardson, Total Abstinence, a Course of Addresses—William Bodenhamer, A.M., M.D., An Essay on Rectal Medication—S. J. Chantrey Harris. The Southern Guide to the Hot Lake District of the North Island of New Zealand—William H. Barlow, M.D., On Regressive Paralysis (Infantile Paralysis, Spinal Paralysis of Adults).

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Gazette Hebdomadaire—Quiver Christmas Number—Canada Lancet—Students' Journal and Hospital Gazette—Indian Medical Gazette—Dublin Journal of Medical Science.

APPOINTMENTS FOR THE WEEK.

November 30. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

December 2. Monday.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Dr. Leared, "A New Explanation of a Proximate Cause of Dyspepsia."

Royal Institution, 5 p.m. General Monthly Meeting.

3. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Pathological Society, 8½ p.m. Dr. Saml. West—1. Specimen of an Unusual Form of Pneumonia; 2. Primary Cancer of the Supra-renal Capsule, with Secondary Growth in the Lung. Dr. Goodhart—Lung containing Gummata and Tubercle. Dr. Pye-Smith—Disease of the Hair lately described as "Piedra." Dr. A. Morrison—Hæmorrhage into the Pons Varolii. Mr. J. H. Morgan—Sarcoma of the Scapula in an Infant followed by Multiple. Dr. Hoggan—Specimens illustrating the Comparative Growth of Fungi in Ringworm and Favus. And other Specimens.

4. Wednesday.

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 1½ p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

Epidemiological Society, 8 p.m. Dr. Airy, "On Infection considered from a Darwinian Point of View."

Obstetrical Society, 8 p.m. Specimen: Dr. Edis—Twins with Placenta. Papers: Adjourned Discussion on Dr. Roper's paper "On Antiflexion of the Uterus." Dr. James Braithwaite, "On Digital Dilatation of the Os Uteri in Labour."

5. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

Harveian Society, 8½ p.m. First Harveian Lecture—Dr. Hughlings-Jackson, "On the Diagnosis of Diseases of the Nervous System."

6. Friday.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 23, 1878.

BIRTHS.

Births of Boys, 1283; Girls, 1247; Total, 2530.
Average of 10 corresponding years 1868-77, 2258·5.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	796	751	1547
Average of the ten years 1868-77	821·4	793·9	1615·3
Average corrected to increased population ...	...	...	1728
Deaths of people aged 80 and upwards ...	...	...	59

Note.—The births and deaths registered last week may be compared with the average numbers in the corresponding weeks of the ten years 1868-77 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	1	4	9	...	4	1	2	...	2
North ...	751729	...	...	12	3	7	...	7	1	3
Central ...	334369	...	1	3	...	2	...	3	...	2
East	639111	...	7	5	1	5	1	2	2	1
South	967692	6	6	25	7	13	1	4	...	7
Total	3254260	7	18	54	11	31	3	18	3	15

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·905 in.
Mean temperature	40·6°
Highest point of thermometer	49·0°
Lowest point of thermometer	32·9°
Mean dew-point temperature	36·2°
General direction of wind	N.N.E.
Whole amount of rain in the week	0·12 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, November 23, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1878.*	Persons to an Acre. (1878.)	Births Registered during the week ending Nov. 23.	Deaths Registered during the week ending Nov. 23.	Temperature of Air (Fahr.): Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.): Weekly Mean of Mean Daily Values.	Rain Fall: In Inches.	In Centimetres.
London	3577304	47·5	2520	1547	49·0	32·9	40·6	4·78	0·12	0·30
Brighton	103923	44·1	62	34	48·0	36·4	40·9	4·94	0·17	0·43
Portsmouth ...	129461	28·9	88	34	...	...	...	...	...	...
Norwich	84620	11·3	50	37	47·5	34·0	40·8	4·89	0·45	1·14
Plymouth	73599	52·8	50	30	50·5	29·5	39·4	4·11	0·19	0·48
Bristol	206419	46·4	158	97	46·7	26·4	38·8	3·78	0·25	0·63
Wolverhampton ...	74240	21·9	65	26	46·7	28·6	36·5	2·50	0·07	0·18
Birmingham ...	383117	45·6	303	178	...	...	...	...	...	...
Leicester	121473	38·0	79	44	47·5	29·0	37·6	3·12	0·22	0·56
Nottingham ...	165267	16·6	116	70	47·3	25·2	37·2	2·89	0·09	0·23
Liverpool	532681	102·2	392	298	46·0	29·2	36·5	2·50	0·00	0·00
Manchester ...	360514	84·0	273	182	...	...	...	...	...	...
Salford	170251	32·9	141	97	...	...	...	...	...	...
Oldham	107366	23·0	72	78	...	...	...	...	...	...
Bradford	185088	25·6	120	93	46·0	30·0	37·8	3·23	0·04	0·10
Leeds	304948	14·1	228	159	49·0	31·0	38·7	3·72	0·05	0·13
Sheffield	289537	14·7	194	179	46·5	26·0	36·1	2·28	0·03	0·08
Hull	143139	39·4	98	62	49·0	29·0	36·1	2·28	0·27	0·69
Sunderland ...	112459	40·6	82	42	48·0	34·0	41·7	5·39	0·59	1·50
Newcastle-on-Tyne	144570	26·9	108	64	...	...	...	...	...	...
Edinburgh	222371	53·1	140	97	47·3	28·8	39·5	4·17	0·84	2·13
Glasgow	566940	94·0	338	315	...	...	...	...	...	...
Dublin	314666	31·3	149	213	48·7	22·3	36·2	2·33	0·05	0·13
Total of 23 Towns in United Kingdom	8373953	38·0	5836	3976	50·5	22·3	38·4	3·55	0·21	0·53

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·91 in. The lowest reading was 29·20 in. at the beginning of the week, and the highest 30·30 in. on Tuesday evening.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1878 by the addition of seven years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. Nottingham, Salford, and Oldham, however, form exceptions to this rule, as the estimates for these three towns have been revised with the aid of local information as to the rate of increase of inhabited houses. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

THE CAUSES AND COURSE OF DISEASES OF THE HEART,(a)

WITH SPECIAL REFERENCE TO PREVENTION AND TREATMENT.

By J. MILNER FOTHERGILL, M.D., M.R.C.P.,
Assistant-Physician to the City of London Hospital for Diseases of the Chest, Victoria-park, and to the West London Hospital.

Lecture IV.

THE NEUROSAL AND REFLEX AFFECTIONS OF THE HEART.

It has been stated by more than one writer on the diseases of the heart that when a patient comes into the physician's consulting-room complaining of his or her heart, usually there is no cardiac disease; that is, unless previously told by some other medical man that there is heart mischief present. My own experience is quite in unison with this expression of opinion. The persons who complain of the heart being a source of disturbance have usually some neurosal affection of the heart; at other times it is palpitation due to some other cause which leads them to complain. The patient who has got organic disease usually complains of some outcome thereof, as shortness of breath on exertion. Often disease in the valves of the heart is discovered by the usual examination of all patients, and has existed some time unsuspected. But when the nervous mechanism of the heart is disturbed, then the patient is usually acutely conscious that something is wrong, and not rarely becomes much alarmed thereby: alarmed out of all proportion to the seriousness, or rather absence of seriousness, of the case. Perhaps of all patients who have neurosal affections of the heart, medical men are the most unsatisfactory patients who present themselves to a physician. Unfortunately for their peace of mind, they are but too familiar with the insidious approach of some forms of heart disease, and therefore cannot dismiss from their minds their fears and apprehensions as to the interpretation of their symptoms. The ordinary patient is only too glad to take the physician's word for it that there is no disease of the heart—that it is a mere disturbance—and rejoices thereat; for it is a characteristic of humanity that it readily believes what it wishes to believe. But the unfortunate doctor himself is not so well satisfied, and thinks the subject over and over by the light of possibilities, until all his comfort is gone, and he has worked all his dreads and doubts into full action again. The consequence is, he is no better for the consultation for longer than a couple of weeks or so, but relapses into his old position; he is no better, and the physician achieves no credit. Such, at least, has been too much my experience, though not invariably the case.

The neurosal affections of the heart are of various kinds, and need some study for their full comprehension. There are those which arise in the cardiac ganglia themselves, and those which are of cerebral origin, and again those which are of reflex origin. Palpitation, irregularity (a disturbance of rhythm), and intermittency (a distinct halt), are the three forms of abnormal action.(b) The heart is disturbed, too, by the emotions in a manner which puts emotional disturbance outside any single one of these divisions, and places it partly in all. We know that emotion will affect the circulation very markedly. In joyous emotion we have an excited action of the heart with full bloodvessels and warm extremities. On the other hand, when in dread or in anxiety the arterioles are contracted and the extremities are cold, while there is a rise of arterial tension producing a decided increase in the renal secretion, as is well known to those who are undergoing their examinations and are nervous as to the result. The frequent retirement of candidates for examination in order to empty the bladder has given rise to a peculiar and well-known expression familiar to all, but one which cannot very well be introduced here. This condition of the vascular system is identical with that which exists in hysterical attacks, when the arteries are contracted and the renal secretion is active. This alteration of the bloodvessels by emotion has not escaped the keen observation of our writers. Thus Charlotte Brontë makes Mr. Rochester feel Jane Eyre's pulse when he wishes to make sure that she will not flinch or turn sick at the sight of blood. "'Just give me your hand,' he said; 'it will not do to risk a fainting fit.' I put my fingers into his. 'Warm and steady,' was the remark." There was no palsying terror there. The circulation was free and undisturbed.

When the peripheral vessels are dilated, as is the case when the extremities are warm, the blood-pressure in the arteries is low and the heart is not disturbed. On the other hand, when terror leads to contraction of the peripheral vessels—probably from the ordinary inhibition of the vasomotor centre being withdrawn,—then there is a rise in the arterial tension, the ventricle has more obstruction to overcome, the internal pressure on the heart-walls is increased, and then palpitation follows. The beating heart of dread is thus probably rather a secondary condition, consequent upon changes in the blood-pressure in the arteries, than a primary emotional disturbance of the cardiac centres.

The blush, the *Schamroth* of the German, is also an emotional disturbance of the vascular system, and extends over the surface generally. It is not confined to the face merely, though on account of the great vascularity of the face it is most pronounced there, as well as being most visible there, the rest of the body being covered with clothes. It extends over the body, and Dieffenbach found a blush to extend over the nates and thighs of a female patient whose genitalia he was examining. When the blood-pressure in the arteries is suddenly lowered, the rhythm of the heart is momentarily disturbed; and the blush in girls is usually accompanied by excited action of the heart. In these emotional conditions the sympathetic nerve connexions of the heart are involved.

But there are other conditions where we must suppose the vagi to be the means by which the cardiac disturbance is induced. We know that the vagi exert a controlling or inhibitory action over the cardiac ganglia: that irritation of the vagi slows the heart's action; indeed, if the irritation be sufficiently pronounced, the heart's action can be completely arrested. A voluntary control over the heart can thus be effected by persons who possess the requisite strength of will. This is seen in the steady hand of the practised rifle-shot. If he could not control his emotional disturbance of the vascular system, the shock of the bounding pulse would shake his left arm and disturb his aim. This quality is popularly called "coolness." So great is the voluntary control that can be exercised over the heart, that some persons can actually arrest the heart by an effort of will. Such was the case in the well-known Lieut.-Colonel Townsend, who did not, as is often said, kill himself by the exercise of this power. A well-known physiologist in this country can do the same thing to a surprising extent, but he does not practise the power unduly. Disturbance of the rhythm of the heart is a well-known consequence of some forms of cerebral disease, as hydrocephalus, and is of bad prognostic omen. The heart's action is rendered irregular and unrhythmical in cases of compression of the brain, and in inflammation of it (Marshall Hall). A curious instance of disturbance of the rhythm of the heart came under my notice lately in the person of a medical student. He was a tall, stalwart young man of good family history, but whose heart had acquired the trick of beating somewhat irregularly. While examining him one day I asked him a question, my ear being still on the stethoscope; he had to think a moment, and in doing so his heart's action became slowed and intermitted. This was often repeated on other visits; and whenever a question was asked involving thought for its answer, the disturbance of the rhythm of the heart was observed: questions not requiring thought for their answer did not produce this cardiac irregularity.

Disturbance of the heart is also produced by pressure on the vagus. The famous Czermak of Prague, the introducer of the laryngoscope, had a tumour in the neck, over which lay the vagus. On pressing the vagus upon this tumour the heart could be slowed and arrested. A well-known case is that related by Romberg in his work on Diseases of the Nervous System (vol. ii.). It occurred in Heine's wards in Vienna. Here the heart stood still for a distinct interval, the man during the time of the halt suffering intense agony. A tumour involving the vagus was diagnosed by Heine and Skoda, and found by Rokitansky on the necropsy.

Neurosal angina pectoris is an affection of the nervous mechanism of the heart; but a more exact definition is not

(a) A course of Clinical Lectures delivered at the West London Hospital.
(b) Syncope need scarcely be considered here.

yet possible. In my own experience it has chiefly occurred in women at or near the menopause. In pronounced cases the agony induced is very great. True neurosal angina must be discriminated from that slight form of genuine angina found in gouty persons, where the heart is temporarily embarrassed by a sudden contraction of the arterioles raising the blood-pressure in the heart, and so rendering it more difficult for the ventricle to contract and overcome the obstruction so offered.

The usual symptom of neurosal disturbance in the heart is palpitation. It is found so associated most commonly in women. Here the heart is affected by paroxysms at intervals, the rhythm being normal during the interval; or there is a more or less persistent excited action of the heart. In some cases the action of the heart is excited, and it thumps against the chest-walls in a manner which is very distressing to patients, interfering with their work and causing them much annoyance, as preventing them from falling off asleep, or awakening them suddenly and alarming them. Of course, in such a persisting condition there are paroxysms which are very disturbing. Such a heart might be designated "a badly behaved heart," for its behaviour is very bad indeed. It is a troublesome condition to treat, and requires time for the treatment to be successful. A well-marked instance of such a case is to be found in one of the out-patients of this hospital, a girl, whose mother also has a heart of like character. The mother has become practically cured for the time by a course of quinine and hydrobromic acid; but the daughter's case is a more troublesome one than the mother's. Another case, a Jewess, a tailoress, was a patient at Victoria-park Hospital. Being also anæmic, bromide of potassium with iron was prescribed for her. After several weeks, during which no relief even was afforded by the treatment, improvement suddenly set in, and her heart once more beat like other people's hearts. In these cases it seems that the heart is swung in a delicate nerve balance, so that it is readily disturbed by what would cause no perturbation in other hearts. This must be borne in mind in neurosal affections of the heart; just as we know that with some persons the liver is easily disturbed, in others the stomach, and in others again the brain, so there are people who possess hearts that are easily perturbed.

Palpitation is a phenomenon about which it is very desirable to have clear ideas. And in order to have clear ideas it is necessary to be familiar with the circumstances under which palpitation is induced. It may be neurosal, or it may be due to muscular embarrassment. For successful treatment it is essential to be accurate as to which form we have to deal with.

We will take the muscular form first, and get rid of it. It was stated in the second lecture that hypertrophy of the heart was due to increased internal pressure upon the heart-walls, and that more rapid and powerful discharges of the cardiac ganglia were induced by this increased internal pressure. This is achieved by the sensory nerves of the heart conveying the impression to the cardiac ganglia. We there saw that increased motor activity was accompanied by a dilatation of the bloodvessels carrying more nutritive material to the functionally active muscle. Now, the palpitation of muscular inefficiency stands in a most suggestive relation to hypertrophy, and the view of its causation expounded in these lectures. Palpitation, or an excited condition of the heart's action, differing from it in but degree, is induced in most persons by rapidly ascending several flights of stairs. We know that in such effort the blood-pressure in the arteries is greatly raised. We know that an aortic cusp is occasionally torn down by the high blood-pressure of violent effort. Observations made on rowers show that the blood-pressure during one portion of the stroke is enormously raised, though it falls again at another part. We are familiar with the fact of effort producing aortic valvulitis and hypertrophy. Very well, then, we can comprehend that when the heart is suddenly embarrassed by effort, and the blood-pressure in the arteries rises, the heart is not completely emptied: a portion is left behind on each systole, the blood rushes in from the veins behind, and the internal pressure on the muscular chamber is increased; consequently the condition of temporary distension of the heart is produced. This distension, through the sensory nerves of the heart, leads to more rapid and more powerful discharges of the cardiac ganglia; and thus palpitation or more energetic muscular contraction is set up, and the heart recovers itself. Under such circumstances palpitation is an indication of muscular embarrassment. In a dilated heart palpitation is readily induced by slight causes; it is then an active sign of debility in the heart. This corroborates what was said at the second lecture, that dilatation is a low form of a new equilibrium limiting the powers of the patient. Such palpitation, induced by effort, requires its own treatment. Here rest, limiting the demand upon the heart, is the first point to be attended to. Then it is well to give an agent like digitalis, which excites more energetic ventricular contractions, and so enables the heart-walls to meet the increased internal pressure within them. Such palpitation may often be utilised in practice; and a few turns sharply round the room will often reveal the debility of a heart which beats steadily and rhythmically while the patient is quiet.

Then again, there is the palpitation common in those who are the subjects of gout, or of chronic Bright's disease; and especially women, where, as said before, the hypertrophy is usually blended with dilatation. Here any sudden variation of the calibre of the peripheral arterioles is accompanied by a rise in the blood-pressure in the arteries, the ventricle is embarrassed, and palpitation is the consequence. As said before, the sensory nerve of the heart is also the vaso-inhibitory nerve, and dilates the peripheral arterioles when the blood-pressure within the left ventricle is high. The best method of treating such palpitation is to follow the natural indications, and to dilate the peripheral arterioles with amyl. This drug dilates the terminal vessels just as they dilate in a blush, and so lowers the arterial tension and the blood-pressure within the heart. I made a series of observations on the out-patients of this hospital recently as to the action of amyl. The slow, steady stroke of the hypertrophied heart, and the tense vessels, were at once exchanged for a rapid, light stroke of the heart, with compressible arteries; indeed, a condition of the vascular system like that existing in pyrexia was induced. In the paroxysms of palpitation in lithiasis, amyl promises to be most useful, relaxing arteriole spasm. The palpitation of hysteria, also due to arteriole spasm, would probably be equally benefited by the inhalation of amyl, a perfectly safe agent in medicinal doses. Of course, the preventive treatment of the palpitation of lithiasis is that given for that condition in the last lecture.

As to the relations of palpitation to a high blood-pressure, the letter I read in my first lecture, from an old patient, a Westmoreland peasant with old-standing mitral disease, contains a most pregnant and suggestive remark. He writes: "I have frequent attacks of palpitation, followed by a feeling of suffocation, continuing from ten minutes to half an hour; they then pass off, leaving nothing disagreeable. I am suffering from a cold I got three weeks ago, and what is most singular, I never have palpitation when in that state." In the pyrexia of a cold the blood-pressure in the arteries is lowered by dilatation of the peripheral vessels; and the square-headed sphygmographic tracing of high blood-pressure in gouty conditions is changed by a cold to the acutely-pointed tracing of pyretic states with low arterial pressure. Now, without supposing that there is nothing more complex in this matter than the variation in the arterial blood-pressure produced by a cold, this fact of no palpitation during a cold is very suggestive as to the cause of palpitation in muscular embarrassment. The peripheral arterioles are dilated, the blood-pressure in the arteries is lowered, and then the crippled heart can contract and expel its contents without difficulty, and so no palpitation occurs. In addition to this there is of course quiescence during the enforced rest of a cold, and thus the heart is not taxed by muscular effort. Taken altogether, this statement is exceedingly suggestive as to the relations of palpitation to a high arterial tension, and the effects produced by the lowering of the pressure in the arteries. Indeed, it would suggest that in some states of palpitation where there is valvular disease, the lowering of the arterial tension by the inhalation of amyl nitrite is likely to relieve the heart and do away with the palpitation.

These two forms of palpitation must then, for practical purposes, be distinguished from that form of palpitation which seems a neurosis of the cardiac ganglia. This is the form commonly seen in girls. It is distinguished from the palpitation of muscular incapacity in that effort does not affect it. It is distinguished from the palpitation of lithiasis in that it is not accompanied by any atheromatous changes in the bloodvessels, and the pulse is not firm and incompressible.

Broadly speaking, too, it occurs in the sex or at the time of life which are not those of the other two forms. Certainly it is not uncommon at the menopause, especially in women who are of plethoric habit, and who have dilated hearts. It is often seen well pronounced in girls where there is no history of fright or excitement to account for it, and where one is driven to the conclusion that it depends upon a susceptible condition of the cardiac ganglia—a true neurosis indeed. As such must it be treated. It is necessary to give bromide of potassium or hydrobromic acid, the latter going well with quinine. If the patient be also anæmic, it is well to combine the bromide of potassium with the tincture of the muriate of iron. This combination has, however, a marked tendency to produce constipation in many persons, and so the addition of a little sulphate of magnesia may be indicated. Of course the avoidance of all forms of excitement is desirable. The aggravation of the condition of such patients by a thunder-storm is very pronounced. In almost all cases of palpitation a belladonna plaster over the heart does good.

Closely allied to this form of palpitation is that which must be termed "reflex"—as, for instance, the palpitation associated with a prolapse of the womb, and which is at once relieved by the restoration of the womb to its position by proper surgical measures and appliances. It is found in other forms of uterine disturbance than prolapse. It is also commonly associated with ovarian disturbance, in married women as well as single. Conditions of ovarian congestion, or even of neuralgia, without increase of vascularity, cause a variety of reflex disturbances. We may find it at the bottom of persisting conditions of gastric irritability and dyspepsia, and may consequently formulate the term "an affectionate dyspeptic." Or it may cause a neurosal cough, or disturbance in the heart, as reflex palpitation. It is the common cause of the intercostal neuralgia so frequent with women. Nor does such reflex disturbance present any difficulty as to the comprehension of its *modus operandi*. Recurrent waves of nerve-perturbation arise or are set up in the ovary; they traverse a series of nerve-fibres until they terminate ultimately where the disturbance is felt. Just as when a row of ivory balls are hung in contact with each other in a line, and the end one is struck, it is the last one at the other end which flies from its place. So perturbations arising in the ovary may reach their terminal *locales* in the nerve-endings in the gastric walls, or in the cardiac ganglia, where they cause palpitation; or in the respiratory centre, where they cause a neurosal cough; or in the peripheral endings of the intercostal or facial nerves, where they are felt as gusts of neuralgic pain. This form of palpitation is the most common of the neurosal forms of palpitation, and should always be kept in mind in forming a diagnosis. As to the treament, it is founded upon the pathology of the affection. The ovarian condition must be attended to by purgatives, especially salines, and blisters over the affected ovary—for more often one than both are affected. Then those nerve-tracts must be influenced along which the impulses travel, and this is most effectually done by giving bromide of potassium in scruple doses.(c) By such treatment combined relief is soon furnished, except in those cases where the heart is naturally excitable; and in such cases more time must be allowed for the successful treatment, and a less perfect result be looked forward to.

The heart as the seat of the emotions, as the older physiologists placed it, is intimately related with the reproductive organs and the passions. The exercise of the nuptial rite is not uncommonly productive of disturbed action of the heart—not palpitation only, but unrhythmical action accompanied by loss of power. In many cases this does not necessarily involve over-indulgence; but merely that an unusually susceptible heart is perturbed by what in others causes no disturbance. Such is not uncommonly the explanation of a disturbed cardiac action inexplicable in every other way. Many men who live in the country under the most favourable circumstances—clergymen, for instance—suffer from disturbed cardiac action, with a feeling of not being quite well, which has no ready explanation. On accurate analysis it will be found that it is not the discharge of their social, nor yet of their parochial, but rather of their spousal, duties which is telling on them. Of course in these cases the causation must be borne in mind in the treatment, which is usually unsatisfactory. It is a matter too in which the medical man, especially a young one, will do well to tread warily, as the carrying out of his advice too strictly may lead to unfounded suspicions and domestic unhappiness.

Having eliminated these reflex conditions of neurosal palpitation, there remains finally a form of palpitation which is as truly neurosal as whooping-cough. Whooping-cough is a neurosal disturbance of the respiratory centre—an explosive discharge of the centres which preside over the respiration. In the same way we may have neurosal disturbance in the cardiac centres manifesting themselves in bouts of excessive nerve-discharges leading to violent paroxysms of palpitation. Here the action of the heart is very violent for the time, but the pulse is not affected, and the tumultuous excitement of the central organ is not communicated to the rest of the vascular system. In such cases as these the line of treatment to be followed must, in the present state of our knowledge, be truly tentative. It may be found in some cases that tonics—steel, quinine, or strychnia—are indicated; while in others, sedatives, as bromide of potassium, are rather suggested. In prescribing for whooping-cough and asthma we now study the condition of the respiration betwixt the paroxysms; so, in genuine neurosal palpitation, we shall probably find that careful observation of the condition of the vascular system ordinarily will suggest the appropriate treatment for the neurosal paroxysms.

Where the heart's action betwixt the paroxysms is excited, then probably bromide of potassium is the drug most likely to be of service. On the other hand, if during the interval the pulse is compressible, and the heart's action quiet and steady, then belladonna or strychnia, with or without a little digitalis or iron, seems rather to be indicated. In the production of these intermittent attacks of palpitation we do not yet know what part is played by the vaso-motor nerves. It seems probable that in some cases of neurosal palpitation, the starting-point may possibly not be so much in the cardiac ganglia as in the alteration of the calibre of the small arteries from vaso-motor disturbance. A sudden alteration in the blood-pressure within the arteries from arteriole spasm would, we can conceive, be very likely to alter the heart's action from the obstruction offered to the complete contraction of the ventricle in systole. We all know that there are two neurosal conditions in which excited and not rarely violent action of the heart is found. These are chorea and Graves's disease. In both of these affections the heart will beat in such a manner as to cause a tremendous impulse in the thoracic walls; indeed, the Germans use a word corresponding to our word "shattering," because the violent action of the heart suggests the idea that it will shatter off the chest-walls over it. As to how the heart becomes thus affected in these two maladies we do not yet know. Whether there is a loss of control of the higher centres, some paresis of the vagus and loss of that inhibitory or controlling action of this nerve over the discharges of the cardiac ganglia, or not, cannot yet be affirmed; or whether there is a neurotic condition of the cardiac ganglia, so that they for the time escape from the control of the vagus, may not yet be dogmatically stated. Trousseau describes Graves's disease as "a neurosis of the sympathetic," suggesting the idea that the malady starts in some disturbance of the sympathetic nerve and its ganglia, rather than in any modification of the control exercised by the vagus.(d) Certain it is that in palpitation associated with chorea, bromide of potassium combined with iron gives the best results, perhaps, of any plan of treatment. In Graves's disease no treatment is very satisfactory, as it is a most intractable condition; and, probably, of all forms of palpitation, that associated with Graves's disease is the one for which we can do least, and where any temporary good achieved is most fleeting and least durable. The treatment of the palpitation in these conditions is the treatment of the general state, and for that each case must be studied separately and therapeutically approached according to its individual indications.

(To be continued.)

(c) In a case of palpitation due to a floating kidney, Botkin found the nitrate of silver useful.

(d) While Niemeyer holds that in this affection the vaso-motor nerves of the coronary vessels are specially implicated.

THE QUEEN has been pleased to confer the honour of knighthood on James Salmon, M.D., Inspector-General of Hospitals and Fleets.

LECTURES ON SYPHILIS OF THE LARYNX.

DELIVERED AT THE HOSPITAL FOR DISEASES OF THE THROAT AND CHEST, LONDON.

By W. MACNEILL WHISTLER, M.D., M.R.C.P.,
Physician to the Hospital; Honorary Physician to the National Training School for Music, etc.

Lecture II.

RELAPSING ULCERATIVE LARYNGITIS OF THE EARLIER AND INTERMEDIATE PERIODS.

(*Concluded from page* 537.)

In relating to you the clinical histories of the cases I have brought before you, I have noted the treatment in each individual one. I will now sum up these notes in a few general remarks on the treatment of the affections I have so far described, before passing to the consideration of tertiary affections of the larynx. These cases require both constitutional and local treatment. None of them can be relieved without the former, while local applications are not only very important, but they are often indispensable means to complete the cure. The drug which ranks above all others in the earlier affections is mercury. It controls and removes symptoms more speedily and effectually than any other remedy; and it is, I think, the only reliable one to use where our object is to arrest the disease as soon as possible. I feel sure that many cases of syphilis may even escape laryngeal complications through its use; certainly when such manifestations show themselves no time should be lost in having recourse to this remedy. So far as concerns the form of the medicine you may select, or the particular mode of its administration, you will be guided by the peculiar features of the case. The manifestations of syphilis in the larynx do not call for any special preparations of mercury; still, you will have to vary the treatment in this respect from time to time, owing to a tolerance becoming established, or on account of urgent symptoms arising, or because of idiosyncrasies of the patient, etc. The same rules that would be your guide in the general management of syphilis will direct you here. Remember, however, that in treating syphilis of the larynx you should more than ever try to avoid salivation, on account of the irritation to the throat it produces. Therefore, stop the mercury the moment your patient complains of tenderness of the gums, or you yourself detect the commencement of such an accident. When this stomatitis has passed off, begin the mercury again, but in smaller doses at first; then gradually increase the dose until you reach the same strength as before, and so keep the treatment up until the lesions have disappeared. Push the remedy a little further, and, after this, rest from mercury for a few weeks. Commence with it again (in smaller doses should there be no relapse), and continue these for a month or six weeks; then desist from mercurial treatment until further symptoms may arise.

In the early laryngeal catarrhs, with or without mucous patches, small doses of blue-pill, one or two grains combined with opium, three times daily, will give you very good results. This is a mild form of mercury; and in the out-patient department here I prefer it to any other because of this quality. Patients may take it without becoming rapidly salivated; and, if you do not see them every few days, this is a matter to be considered. You may give the protoiodide of mercury in more stubborn cases of ulcerated patches of the larynx, where there is a tendency to much thickening, especially if there be much glandular enlargement about the patient, associated with papular and squamous eruptions. It may be administered in one-grain doses combined with two of pil. saponis comp., or quarter of a grain of extract of opium, morning and night. Given in this way, this preparation may be taken for some time without much fear of producing stomatitis. Owing to the liability of this complication arising from its use, and with the view of obtaining a local curative action, Dr. Créquy of Paris proposed some few years since to combine the protoiodide of mercury with chlorate of potash, in the form of a pastille or lozenge. His formula was—protoiodide of mercury, and iodide of potassium, of each three-quarters of a grain, and chlorate of potash three grains and a half, made into a mass with sugar and gum, and flavoured with oil of peppermint. This lozenge was allowed to dissolve in the mouth, morning and night, and by this means stomatitis was avoided, and the mucous patches of the mouth were cured sometimes in a fortnight. These lozenges might be well adapted to the treatment of the syphilitic lesions of the larynx I have brought before your notice, but their disagreeable taste makes them somewhat objectionable to patients. Bichloride of mercury acts also very beneficially. One drachm of the liquor hydrarg. perchlorid., given three times daily, sometimes arrests laryngeal inflammation very speedily in these cases. It is apt, however, to produce gastric irritation and diarrhœa, and cannot be kept up for any length of time. When combined with iodide of potassium you will find no better remedy in those affections of the larynx associated with ulceration and thickening about which I have spoken to you to-night. I read you a case this evening where all traces of a most persistent affection of this nature were removed after two months of such a treatment, when other preparations of mercury had failed to accomplish a cure. In these deeper lesions, as in some of those belonging to the tertiary period, the combined treatment by mercury and iodide of potassium is the quickest and most certain.

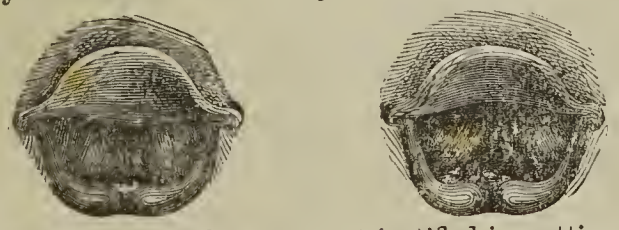
Mercurial frictions I can recommend to you very highly as having given me the best results; but this method has the disadvantage of being somewhat troublesome, and patients look upon it as an unpleasant remedy. For this reason you can often resort to it only when the effects of other treatment flag, or to meet emergencies. It has the advantage of not causing gastric irritation or speedy salivation; and it produces all the curative effects of mercury more quickly and surely than when this drug is taken into the stomach. Patients will often keep up the use of these frictions for weeks with no irritation of the mouth, especially if you direct them to use, in the meanwhile, an astringent mouth-wash. A teaspoonful of alum to a tumblerful of water is as good as any; much better than chlorate of potash. In this way the lesions of the larynx will entirely disappear, sometimes after twenty or thirty frictions. The calomel vapour bath of Mr. Lee is a nicer way of applying mercury to the surface of the body than the method by inunction, but its effects are not always so rapidly realised, so far as my experience goes. It is very well adapted to certain cases of chronic syphilitic laryngitis where it is desirable to keep up the use of mercury for a long while. Inhalation of the vapour, with the view of obtaining a local effect on the larynx, is not advisable owing to the irritation to the air-passages it is liable to produce if this method be at all constantly carried out. The administration of mercury by inhalation has been tried, but this mode has not been followed by as good results as were looked for, owing to the accident I speak of and the uncertainty in regulating the dose. Many experiments of this kind were made at the St. Louis Hospital in Paris by Dr. Panas. In some cases the inhalations were administered by special apparatus; in others, frictions of mercurial ointment were made over the upper part of the chest before the patient went to bed, in order that he might breathe in during the night any vapour arising from the mercury. The mercury was administered in this way rather as a means of obtaining more ready absorption than as a topical agent.

Hypodermic injections of corrosive sublimate, ever since their prominent introduction to the notice of the profession by Lewin of Berlin, in 1865, have been employed against almost every manifestation of syphilis. Lewin obtained some remarkable results, causing the disappearance of secondary symptoms in from fifteen to twenty days; and this method was offered as the most speedy and an almost infallible remedy for eradicating the disease. When, however, all the hopes that it raised were not realised it fell into some disfavour; so, like all other remedies, it had strong supporters and determined opponents, and its merits were hotly contested upon the Continent, where it was more extensively tried. Lewin's solution contained one-tenth of a grain of sublimate for each injection, which strength was found liable to produce abscesses. Liégeois, of the Midi Hospital in Paris, who tried this method very fully, reduced the quantity in each injection to one-thirtieth of a grain, and he obtained such results from these small doses that he became the most zealous supporter of hypodermic injections. He made his injections morning and evening, and these were followed by very slight irritation, while abscesses were very rare complications. From his experiments, Dr. Liégeois estimated that from 100 to 120 injections would cure patients of their lesions.

In this country Mr. Berkeley Hill introduced hypodermic

injections of sublimate into the treatment of syphilis, and they have been used with success by many since. Dr. Walker of Peterborough published some years ago an account of fourteen cases of secondary syphilis very successfully treated in this way. But the difficulty of carrying out a plan of treatment which requires the personal supervision of the medical attendant, sometimes twice daily, makes this method impracticable for ordinary cases, not to speak of the objection of patients to the pain and annoyance of this proceeding. From its rapid action it is specially suited to certain grave affections, and among them laryngitis threatening suffocation. Fortunately, imminent symptoms of dyspnœa are more rare complications in the early syphilitic affections of the larynx, as I have pointed out to you. Looking to my own practice, I have not met with any cases at this stage that called for very active measures for relief. Among the class of cases which have been the subject of my lecture this evening, I have met with a few where difficulty of breathing has been a distressing symptom, from which the patient has been in a dangerous condition. By perfect rest in bed, however, and under the administration of biniodide of mercury and iodide of potassium, they have been cured. The following was a case of this kind:—

M. F., aged forty-eight, a lockmaker's wife, applied here on April 5, 1876. Her breathing was stridulous and very much embarrassed. She had a distressing cough, which added to her trouble and brought on most painful paroxysms of suffocation. Her voice was reduced to a harsh whisper. Her pharynx was congested, but presented no special signs. The laryngeal appearances were these:—Swelling of the ventricular bands and inter-arytænoid fold, the former meeting in the central line for fully one-half of their length anteriorly, hiding the vocal cords. The interior of the larynx was greatly diminished in size, funnel-shaped, with a small triangular opening at the posterior part. At the base of this triangle there was a projection of thickened membrane from the inter-arytænoid fold, covering the rima glottidis behind. The whole mucous membrane was deep dusky red. No history of primary or secondary lesions could be made out clearly. She said that she had had painful swellings on her collar-bones four years previously, and, latterly, much rheumatic pain in her legs at night. Four months previous to her coming to me (in December) she had a bad sore-throat. For the last two months her breathing had been affected; she had lately taken cold, and this had brought her to the condition she was in. I ordered her to go at once to bed, to inhale vapour of benzoin every four hours, and to take, at the same intervals, half a scruple of iodide of potassium, with one drachm of liquor hydrargyri perchloridi in water. She felt much relieved after two or three days. In one week the swelling in the larynx was much reduced, the cough was better, and her breathing was greatly relieved. There was a marked gain upon this after another week's treatment; and at the end of the third week the glottis was fairly open, and she was breathing very comfortably. The left vocal cord was plainly visible. It was thickened, roughened, and dusky red. In colour it could scarcely be distinguished from the ventricular band. The right cord was still hidden by the ventricular band of that side, excepting a small portion close to its posterior insertion, which was destroyed to a considerable extent by ulceration. From this date she steadily improved; neither her breathing nor cough distressed her, but her voice remained impaired. She continued under treatment until the autumn. The mercury was discontinued at intervals, and from August iodide of potassium alone was administered in ten-grain doses three times daily, together with the use of a spray of chloride of zinc to the larynx, until early in November. At this date there was very little thickening remaining in the larynx. The left vocal cord was smooth and white. There was redness and immobility of the right one. Her voice was permanently destroyed. I will show her to you this evening.



It may be thought that I am not justified in putting down this case as a syphilitic one, owing to the absence of history and scarcity of other signs of the disease. The appearances of the larynx, however, which are exceedingly well shown in these drawings, were so characteristic, I had no doubt in my mind of its nature; and the prompt effect of the treatment, I cannot but think, confirmed the diagnosis.

This patient was not treated in the wards of the hospital, so that she had no special nursing, but merely kept her bed at home, and yet this severe laryngitis was under control after two days' treatment.

Now I will give to you the short notes of a case treated by hypodermic injections. It is reported by M. Le Moaligou in his thesis on "Subcutaneous Injections of Sublimate in the Treatment of Syphilis" (Paris, 1873). It occurred in the service of Dr. Liégeois, at the Midi Hospital. A painter was admitted there for a urethral discharge of five months' standing. On the fourth day after admission he complained of much pain in his throat. This showed the signs of acute tonsillitis, and it was treated as such. He grew worse, and on the next day he could hardly swallow, and his breathing was laboured. In twenty-four hours more there was orthopnœa. The saliva was running from his mouth, and his case was desperate. The tonsils were highly inflamed, and blocked up the whole pharynx. Their surface was now found covered with ulcers, which resembled mucous patches, and led to a suspicion of syphilis. This suspicion was confirmed by finding a commencing roseola on the chest, abdomen, and shoulders. Hypodermic injections were resorted to: two milligrammes of sublimate every six hours, and tincture of iodine applied to the tonsils. This was on April 13. He slept a little during the night; but his breathing being still embarrassed on the 14th, the injections were made every four hours. 15th: Breathing better. 16th: Dyspnœa and dysphagia steadily passing off. The tonsils were still swollen and covered with mucous patches, and there were many of these also on the velum and scattered over the mucous membrane of the mouth. The roseola was well out on the skin. The injections were reduced to two a day. On the 19th there remained only a few squamous papules on the shoulders, back, and forehead. The throat was well. This affection was completely cured in seven days with twenty-four injections.

The intense dyspnœa occurring at so early a stage of syphilis is an interesting point in this case. As there is no account of the laryngoscopic appearances, one is left somewhat in the dark as to whether the dyspnœa was caused by laryngitis. The pharyngeal inflammation, with the tonsils meeting in the median line, is sufficient to account for it. It looks more like an outburst of secondary syphilis and acute tonsillitis; still, it is cited as a case of acute laryngitis cured by injections. Let us take it as such, and compare the immediate effects of this treatment with the treatment by biniodide of mercury given internally, in my case which I have just stated. In Dr. Liégeois' case the breathing was not much improved before the third day: in mine the patient was relieved just as soon. In the case treated by hypodermic injections the affection was cured at the end of a week: in the other one the patient was breathing comfortably at the end of the week also, but as there was grave disorganisation of the larynx, the process of subsequent restoration was slower.

However, sometimes at this stage of the disease, as at a later one, urgent cases of laryngitis may arise, that admit of no delay, and are not amenable to internal remedies. Then they may be controlled by inunction or hypodermic injection. I used this last method not long since on an in-patient here, who was suffering from stenosis of the larynx, associated with deep ulceration and œdema. It checked the disease for five days, but failed to cure it, and I was obliged subsequently to perform tracheotomy. When, however, cases are so far advanced, they very frequently run on to operation in spite of all treatment. Dr. Liégeois says that hypodermic injections of mercury are of questionable value in deep ulcerative lesions of syphilis, and that in some in which he used them the injections seemed rather to stimulate the ulcerative process into increased activity. They did not produce this result in this case or in any that I have used them in. In this case of stenosis of the larynx, though I used these injections at last every four hours, there were no abscesses formed at the points of injection, and there was only a very slight amount of tenderness of the gums at the end of sixteen injections.

Some of these cases of impending suffocation are accom-

panied and induced by œdema. Should this be the case, you have another important and most effective remedy, viz., scarification of the larynx. These scarifications should be freely made, and repeated every few hours if necessary. Patients are often greatly relieved by the first one; and this means has saved many a case from tracheotomy. If I have mentioned it last, it is not because I consider it of less potency than the other remedies. On the contrary, it is the most prompt of all measures under such circumstances, and should be resorted to first. Inunction and injection may be associated with this treatment, but after scarification you may get such relief that you will have plenty of time for the internal administration of mercury.

As regards the local remedies most suited to these earlier cases of syphilis of the larynx, they comprise the various astringent applications I have alluded to in the individual cases. For the more superficial congestions you will find a solution of chloride of zinc, fifteen or thirty grains to the ounce of water, a very serviceable application. It should be applied to the larynx every third day in ordinary cases. Sulphate of copper, fifteen grains to the ounce of water, acts very beneficially in cases of mucous patches of the larynx; so does a solution of nitrate of silver, five grains to the ounce. A strong solution of this salt, one drachm to the ounce of water, gives the best results in chronic ulcerations with thickening; but it must be applied with care, and not too often; as a rule, once a week is quite enough. Iodoglycerine is sometimes very useful also in these last affections. Iodoform may be applied with benefit to the ulcerated surface in relapsing syphilitic laryngitis, either in combination with glycerine or by insufflation. These applications, as they require to be made by the physician, can only be occasional; and no doubt more good could be obtained by using this remedy in any form that would bring it into more frequent and repeated contact with the diseased surface. For this purpose I am now trying it in the form of pastilles—two grains of iodoform to each pastille, made up with gelatine basis. These pastilles, which have been made for me by Messrs. Bullock and Co., have the great advantage of being soft and flexible, and do not irritate the tongue, which in these patients is apt to be tender. One of these is allowed to dissolve slowly in the mouth three times daily, and in this way the patient may derive benefit from the medicine both locally and constitutionally. I anticipate from their use very good results in mucous patches of the mouth also, which are among the most intractable lesions of this stage of syphilis. I am using at the same time a solution of iodoform with Siegel's spray-producer, of which the following is the formula:—Iodoform, two grains; ether, sixteen drops; Cologne water and rectified spirits, of each two drachms; glycerine to one ounce. This solution does not precipitate the iodoform, and its advantages are that the unpleasant smell of the drug is in a great measure disguised, and that it is not irritating to the fauces. I use two drachms, containing one-half of a grain of iodoform, in the steam spray-producer for each inhalation. Medicated atomised fluids are valuable remedial agents in these affections of the larynx. Those which you will find most useful are the solutions of chloride of zinc, sulphate of zinc, and perchloride of iron, two to three grains of each, or five to eight grains of alum, to the ounce of water. These sprays should be administered once or twice daily.

Pain and cough, although not frequent symptoms of secondary syphilis in the larynx, may sometimes be a source of trouble to your patients, in which case insufflations of morphia afford a good deal of relief. You may blow into the larynx, by means of a laryngeal insufflator, a powder containing one-quarter of a grain of morphia with one grain of powdered starch, morning and evening.

Beyond all these curative means, no measure that tends to invigorate the patient should be overlooked. Tonics—iron, quinine, cod-liver oil, all find their place in the treatment. Early hours, plenty of rest, and good air, should be insisted upon. Great care should also be taken to avoid all exposure to cold, especially night-air and sudden changes of temperature. Smoking should be discarded altogether; loud talking or singing prohibited. Keep the larynx, in fact, as much at rest and shielded from irritation as possible.

This gives a cursory view of the treatment that is best adapted to these cases. If I have insisted much upon the use of mercury, it is because I believe it to be the only radical treatment. I have not had the time to enter into the discussion of the treatment of secondary syphilis of the larynx by iodide of potassium alone, or by the expectant method of tonics and local applications. There may be, and there undoubtedly are, mild cases of syphilis which, from the few slight, scattered symptoms they evince, pass so lightly over the individual that they seem hardly to require treatment at all. Syphilis does not differ from other diseases in furnishing cases such as these; but cases involving so delicate and important an organ as the larynx cannot be numbered among them. The former may possibly be watched, or treated locally. If you use this method in these cases you will fail, and have cause to regret your want of energy. If you rely upon iodide of potassium alone, I fear you will at best only relieve, and not cure, your patient.

ORIGINAL COMMUNICATIONS.

THE STRUCTURE AND FUNCTIONS OF THE NERVOUS SYSTEM.

By JAMES ROSS, M.D., M.R.C.P. Lond.,
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THE ENCEPHALON.

(*Concluded from page* 409.)

Mr. Spencer subdivides all mental states into volitions, cognitions, and feelings; and the first of these subdivisions may be disposed of in a few words. "Will," says Mr. Herbert Spencer, "is a simple homogeneous mental state, forming the link between feeling and action, and not admitting of subdivisions." We have already remarked that the voluntary impulses are conveyed outwards through the pyramidal fibres; but the sense of effort which represents the will is derived not from the centrifugal currents, but from the impressions which are conveyed inwards through the afferent nerves of the contracted muscles. Dr. Ferrier's remarks on this point are exceedingly interesting and instructive.

"*Cognitions,*" says Mr. Spencer, are those modes of mind in which we are occupied with the *relations* that subsist among our feelings." They are divisible into four great sub-classes.

"*Presentative cognitions,* or those in which consciousness is employed in localising a sensation impressed on the organism."

"*Presentative-representative cognitions,* or those in which consciousness is occupied with the relations between a sensation or group of sensations and the representations of those various other sensations that accompany it in experience" (perceptions).

"*Representative cognitions,* or those in which consciousness is occupied with the relations among ideas or represented sensations, as in all acts of recollection" (concrete ideas).

"*Re-representative cognitions,* or those in which the occupation of consciousness is not by representation of special relations that have before been presented to consciousness, but those in which such represented special relations are thought of merely as comprehended in a general relation—those in which the concrete relations once experienced, in so far as they become objects of consciousness at all, are incidentally represented along with the abstract relation which formulates them" (abstract ideas). "It is clear," Mr. Spencer adds, "that the process of representation is carried to higher stages as the thought becomes more abstract."

Feelings, or those modes of mind in which we are occupied, not with the relations subsisting between our sentient states, but with the sentient states themselves, are divisible into four parallel sub-classes.

Presentative feelings are those in which a corporeal impression is regarded as pleasure or pain (sensations).

Presentative-representative feelings are those in which a sensation or a group of sensations arouses a vast group of represented feelings (emotions).

Representative feelings, comprehending the ideas of the emotions when they are called up, apart from the appropriate external excitements, such as the emotions excited by a vivid description.

Re-representative feelings are those more complex sentient

states that are less the direct results of external excitements than the indirect or reflex results of them, such as the love of property, which consists of the represented advantages of possession in general, which is not made up of certain concrete representations, but of the abstracts of many concrete representations.

"The classification," Mr. Spencer proceeds, "here roughly indicated, and capable of further expansion, will be found in harmony with the results of decided analysis aided by development. Whether we trace mental progression through the grades of the animal kingdom, through the grades of mankind, or through the stages of individual growth, it is obvious that the advance, alike in cognitions and feelings, is, and must be, from the presentative to the more and more remotely representative. It is undeniable that intelligence ascends from those simple perceptions in which consciousness is occupied in localising and classifying sensations, to perceptions more and more compound, to simple reasoning, to reasoning more and more complex and abstract, more and more remote from sensation. And in the evolution of feelings there is a parallel series of steps. Simple sensations; sensations combined together; sensations combined with represented sensations; represented sensations organised into groups in which their separate characters are very much merged; representations of those representative groups, in which the original components have become still more vague. In both cases the progress has necessarily been from the simple and concrete to the complex and abstract; and as with the cognitions so with the feelings, this must be the basis of classification."(a)

If we take these profound remarks in connexion with another principle insisted upon by Mr. Spencer, namely, that the nervous excitement present to consciousness—as feeling, whether pleasurable or painful—tends to find a vent in action, this will help us to associate a large number of psychological phenomena with the leading features of the structure of the brain.

The correlative of presentative feelings will be the excitation of the cells in the cortex which are in immediate relation with the terminations of the centripetal nerves in the crests of the convolutions of the posterior area of the cortex. If the excitation passes out immediately along the centrifugal fibres which connect these convolution with the corpus striatum, this gives rise to sensori-motor movements or to doubly compound reflex action. If the excitation, instead of passing outwards, passes from the cells in connexion with the termination of one bundle of centripetal fibres to those in connexion with the termination of another bundle, so that the relation between the two excitations comes into prominence, then a presentative cognition is formed. When, for instance, the centripetal impulse received in a convolution from the irritation caused by a thorn in the finger is brought into connexion with the impressions received through the optic and other centripetal nerves, and which, on reaching the cortex, becomes the correlative of the consciousness of the finger itself, then a cognition of the relationship of presentative feelings is formed. Now, a presentative cognition does not usually, like a presentative feeling, immediately result in action. This excitation expends itself in producing excitation of other groups of cells in the cortex, the transition from one group to another giving rise to other presentative and representative cognitions, until finally the motor area is reached, and the excitation passes out along the pyramidal fibres. Subjectively considered, the cognition of the thorn and finger would call up other cognitions connected with these by previous experiences, as that of a pin, and probably the highly representative cognitions of the general properties of the lever; until finally the pin is voluntarily grasped and rightly applied for the removal of the thorn. This action is very different from that which impels a dog to lick the foot in which a thorn is lodged with his tongue. The latter is a doubly compound reflex action, and in immediate relation with the cortical excitation which causes the feeling of pain; while the former results from a series of complex cortical excitations, some of which check the tendency to immediate action, until by-and-by complex actions result which are guided by wide experience and adapted to remote ends; and it may be concluded that the currents which cause the movements that are evoked in response to the feelings will pass through the corpus striatum, and that the currents which regulate the movements resulting after a succession of cognitions, both presented and represented, are voluntary and will pass through the pyramidal fibres. The movements which result immediately from the feelings have been called sensori-motor, percipio-motor, and ideo-motor, on the supposition that they occurred in response to the cognitions: but it would be better to call the movements which result from a presented feeling a doubly compound reflex action; that from a presentative-representative feeling, trebly compound reflex; and that from a representative feeling a quadruply compound reflex action; and so on in an ascending scale, according to the degree of the complexity of the feeling. When, however, a series of cognitions intervene in the mental operations between the feeling which prompts a movement and the movement itself, the resulting muscular adjustment is a voluntary one, and is regulated through the pyramidal fibres. When, for instance, Leverrier, prompted by the highly representative feeling of a desire for discovery, directed his telescope to a certain spot in the heavens, and discovered Neptune, the requisite muscular adjustments necessary for carrying out this action were preceded in his mind by a long series of involved and highly representative cognitions; and these muscular adjustments themselves were, to a large extent, voluntary. We have already noticed that one characteristic of a voluntary action is, that it is one which has not been frequently repeated in the experience of the individual nor of the race; and a second characteristic which we may notice is, that the voluntary movements are directed to the accomplishment of remote ends; while the movements which are the outcome of feeling are directed to produce immediate gratification, either by retaining a pleasurable feeling in consciousness, or by finding an escape from a painful feeling. It is evident, therefore, that the cortical excitements which are the correlatives of feelings and of cognitions find vent along different channels—the former passing through the corpora striata and the anterior root-zones of the cord, the latter through the pyramidal fibres; and consequently the feelings and cognitions are differentiated to that extent from one another in the cortex. There is no reason to believe, however, that the cognitions and feelings are localised in distinct centres in the cortex. During cognition the mind is occupied with the relations between feelings; hence the plexus of cells which, when excited, causes a feeling, will, when the excitement is transmitted to a neighbouring plexus, cause a cognition. The only localisation of the mental faculties which we meet with in the cortex, beyond that which arises from the differentiation of the inlets and outlets, is that which arises from the complexity of the cognition or feeling. The presentative cognitions and feelings may be supposed to be localised in the crests of the fundamental convolutions of the posterior area. The presentative-representative cognitions and feelings, being an integration of a small number of presented feelings and a large number of represented feelings, can only have a diffused localisation in plexuses of cells and fibres which have intimate connexions with two or more sensory centres. A patch of presented yellow colour may call up representative feelings of the taste, smell, touch, weight (muscular consciousness), of an orange; hence the plexus excited must have definite connexions with the terminations in the cortex of many different kinds of centripetal fibres. It is probable that the necessary connexions may be formed in the portions of the convolutions which bend inwards to form the sulci. The crests are the fundamental parts of the convolutions, since they alone have direct communication with the centripetal and centrifugal fibres, and the infolding is superadded in the course of evolution; hence the latter parts may be supposed to be the seats of more special actions than the former. The representative cognitions and feelings must be formed in plexuses in the cortex, in which a large number of the plexuses excited during perception are united. If, for instance, we come to think of the sweet taste of an orange, of a sweet apple, sweet sugar, and come by-and-by to abstract the quality of sweetness from its concrete manifestations, it is because the plexus excited when we have a cognition of the quality has intimate connexions with the plexuses which were excited during various concrete experiences of the quality; and similarly as we ascend to the higher cognitions, the plexuses excited during the representative cognitions must

(a) "Essays, Scientific, Political, and Speculative," by Mr. Herbert Spencer, vol. i., page 325.

have intimate connexions with a large number of the plexuses excited during the representative cognitions, as when from the cognitions of sweet, sour, hard, soft, hot, cold, we come to form the higher cognition of quality in general apart from any special quality. In passing, therefore, from the lower to the higher cognitions, there is no room for definite localisation of functions in the cortex. All that we need expect is a gradual transition from the one to the other, representing a diffused localisation. We have already seen that the structural correlatives of the presentative feelings and cognitions are to be found in the grey matter of the crests of the fundamental convolutions of the posterior area —of the presentative-representative feelings and cognitions in the infoldings of these convolutions to form the sulci; and we may now remark that the structural correlatives of the representative cognitions and feelings, which are almost entirely peculiar to man, will be found in the convolutions which are superadded to his brain in the course of evolution from the lower animals; or, in other words, in the accessory convolutions which are only connected with the centripetal and centrifugal fibres by the intermediation of arcuate fibres. The grey matter of the accessory convolutions which are in immediate relation with the posterior area, as the annectant convolutions, will be the correlatives of the lower forms of representative cognitions and feelings; while the convolutions of the frontal lobes which are most remotely connected with the centripetal fibres will be the correlatives of the higher forms of representative cognitions and feelings.

There has been a widely spread belief that the large development of the frontal lobes is peculiarly characteristic of the brain of man; but some years ago Dr. Carpenter drew attention to the fact that in the lower forms of animals the cerebellum is entirely uncovered by the cerebrum, that it is only partially covered by the posterior lobes in the more intelligent animals, as the dog and the monkey; and that it is in man alone that the posterior lobes of the cerebrum completely overlap the cerebellum. Dr. Carpenter argued from this that the increase of the posterior lobes is more characteristic of advance in development than increase of the anterior lobes. But this argument rests upon superficial appearances, and entirely neglects the fundamental facts of development. If we take the fissure of Rolando, or the central sulcus in animals, as the line which separates the frontal from the parietal lobe, it will be noticed how small a portion of the brain lies anterior to the sulcus in such

Fig. 10.

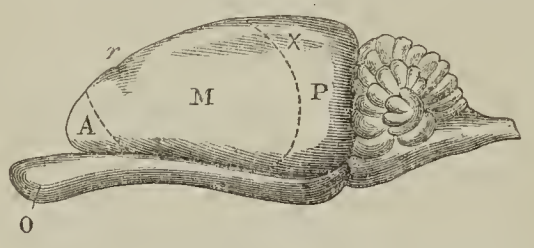

Fig 10.—Brain of Rabbit (modified from Ferrier). O, olfactory bulb. *r*, central sulcus. ×, parallel sulcus. M, motor area. A, anterior or psychical area. P, posterior or sensory area.

animals as the rabbit (Fig. 10, *r*), which is one of the lowest animals in which the sulcus is developed. Even in the dog and the monkey only a relatively small part of the brain lies anterior to this sulcus compared to the large mass which lies behind it. But if it be remembered that the anterior central convolution belongs to the so-called motor area of the brain, it will be at once seen what an exceedingly small portion of the brain of the rabbit (Fig. 10, A) represents what we have called the anterior area; and that it is not at all to be compared to the relatively large mass of the posterior or sensory area (Fig. 10, P). And a study of the development of the human brain shows that the occipital and parietal lobes increase rapidly at an early period in the development of the embryo, while the frontal lobes increase more rapidly in size during the later months of fœtal life. The portion which lies in front of the sulcus of Rolando in a six-months human fœtus (Fig. 11) is relatively small, while the sulcus itself is directed vertically upwards in a line with the anterior ascending limb of the fissure of Sylvius, the superior extremity being, if anything, somewhat anterior to the inferior extremity (Fig. 11, *r*). In the brain of the human adult (Fig. 6) the superior extremity of the sulcus of Rolando is pushed backwards, owing to the great increase of the frontal lobes, so that a vertical line drawn from it would pass through the posterior extremity of the horizontal limb of the Sylvian fissure. During the development of the human brain the superior extremity of the sulcus of Rolando therefore suffers a backward displacement in order to make room for the increasing size of the anterior area of the cortex; and similarly, in the evolution of the human from the Simian brain the occipital lobes have undergone a posterior displacement in order to make room for the relatively large increase of size of the frontal lobes; hence the covering of the cerebellum is not caused directly by an increased size of the occipital, but indirectly by an increased size of the frontal lobes.

Fig. 11.

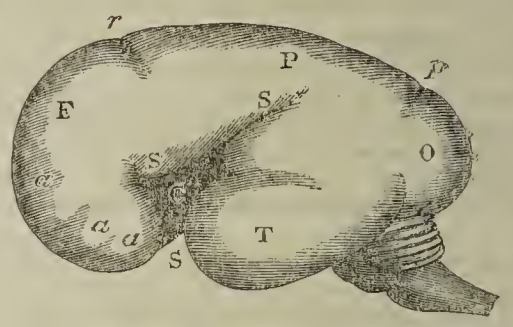

Fig. 11.—(From Quain, after Wagner). External Surface of the Fœtal Brain at Six Months. F, Frontal lobe. P, parietal lobe. O, occipital lobe. T, temporal lobe. *a*, *a*, *a*, slight appearance of the several frontal convolutions. S, Sylvian fissure; S', its anterior division. C, convolutions of the island. *r*, fissure of Rolando. *p*, external part of the vertical fissure.

The order of the development of the medulla of the white fibres of the hemispheres confirms the idea of the late development of the frontal lobes. In a nine-months human embryo at birth, the fibres which connect the central convolutions with the basal ganglia and cord are medullated; and a few days later, the fibres of Gratiolet, which connect the occipital convolutions with the cord, become medullated; but the fibres which connect the posterior end of the third frontal convolution with the basal ganglia and cord do not become medullated until fourteen weeks of extra-uterine life, and the fibres which connect the anterior extremities of the frontal lobes with these ganglia are a fortnight later before they show any sign of medulla. The arcuate fibres, which connect the accessory with the fundamental convolutions, do not become medullated until about fourteen weeks of age. But this subject requires to be more fully worked out yet. So far as at present known, however, the facts of development bear out the idea that the convolutions of the anterior area of the cortex only appear in a very rudimentary form in the lower animals, and that in the human brain they appear at a relatively late period of development, and that they are the last convolutions to be fully organised and connected with the basal ganglia and cord. And if this is the case, it confirms the conclusion already reached from other data, namely, that the highest mental operations are carried on in the convolutions of the anterior area; and consequently it is exceedingly useful for practical purposes to call this portion of the cortex the *psychical* area.

If now the highest mental operations are carried on in the anterior area of the cortex, this area will contain the plexuses of cells and fibres which, when excited, become the correlatives of the re-representative cognitions and feelings. But even the re-representative cognitions and feelings have a small, although a relatively small, presentative element. Suppose that I have at present an ocular perception of an orange, the presentative element is constituted by a vivid feeling of a yellow colour, and the representative by faint revivals of previously experienced feelings of touch and taste. I now direct my eyes from the coloured surface to the paper, and on seeing the word "orange" I experience a faint revival of the yellow colour and also of the other feelings of touch and taste which were associated with it in experience. The sight of the word has become the presentative element of the cognition, instead of the coloured surface; and it is quite clear that the spoken word would equally revive the representative cognition of the orange. Suppose now that the sensation of yellow colour had called up in the mind various other coloured surfaces, as red, green, blue, black, etc.; the vivid sensation of the yellow colour

constitutes the presentative element in the train of cognitions; and if I now direct my eyes to the paper, and see the word "colour," it suggests various coloured surfaces, and it therefore becomes the presentative element of the cognitions. And it is by what I may call the device of linking an artificial presentative element to the simpler concrete cognitions that the formation of the higher abstract cognitions are rendered possible; and the same may be said with regard to the representative feelings, since the sentiment of justice, for instance, could never have become highly developed in the absence of the artificial presentative element supplied by written, spoken, or acted language. As a presentative element in cognition, language, whatever may be its form, must have an ingress to the cortex through the fibres of Gratiolet, and must, like other presentative constituents of cognition, be connected by cells and fibres with the plexuses of cells and fibres which when excited call forth appropriate cognitions. And not only must it have an ingress to the cortex, but it must also have an egress from it by centrifugal fibres which must be so co-ordinated as to be adapted to produce the muscular movements which form the presentative element of the cognitions appropriate for reproducing the word or sign. But the wide subjects of the localisation of speech and of aphasia cannot be discussed here.

There can be no doubt that both centripetal and centrifugal fibres connect the cerebellum and the cortex of the cerebrum either directly or indirectly through the basal ganglia, but very little is known with regard to the course they pursue, and nothing at all with reference to the symptoms which are caused by their interruption in disease. The function of the fibres which connect the thalamus with the cortical convolutions remains to be considered. The fibres which constitute the optic radiations of Gratiolet connect, in all probability, the posterior or sensory part of the cord directly with the cortex without being connected with the thalamus; but even if they are connected with the thalamus they constitute only a small portion of the fibres which connect the latter ganglion with the cortical convolutions, and the function of the remaining fibres still remains an unsolved problem.

It is now well recognised that a large number of the actions which are usually regarded as psychical may take place in an unconscious manner. Leaving out of consideration the phenomena of dreaming and somnambulism, we may instance such a familiar fact as that a man may read aloud whole pages of a book while his mind is engaged in solving a difficult problem, and he is wholly unconscious of what he is saying; yet the muscular movements engaged in reading are co-ordinated in the cortex of the cerebrum. If during the process of reading under these circumstances the eye falls on an unusual word, consciousness is directed to it for a moment, and then the reading may go on unconsciously as before. This fact introduces us to the principle which underlies these unconscious actions. If the cell and fibre apparatus which connects the centripetal impressions with the centrifugal currents is thoroughly organised and connected by definite processes, then the action may take place unconsciously. Now, this organisation on the side of the centripetal impulses takes place in the thalamus. Groups of peripheral impressions, which have been frequently experienced in the same order, become first co-ordinated in the thalamus; and the impulses on ascending to the cortex are so reduced to order that they pass through definite channels, and so are either wholly unconscious, or only attended with very little consciousness. It is the impressions which are grouped in unusual ways, and which occur with unusual intensity, that have to make their way to the cortex through the fibres of Gratiolet, and it is these which are attended with the highest consciousness. Another conclusion which is forced upon us by various considerations is, that it is the excitation of the small cells, without definite connexions, which is correlated with the highest consciousness; while the excitation of the large cells, with definite connexions, is unaccompanied by consciousness, or only associated with it in a very inferior degree.

It is known from experiment that section of the fibres of Gratiolet will cause hemianæsthesia of the opposite side; and the most reasonable explanation of the hemianæsthesia of hysteria is, that it is caused by temporary loss of the conductivity of these fibres. Is it not possible that cases may occur in which there is temporary loss of the conductivity of these fibres on both sides instead of on one side, giving rise to complete anæsthesia? If such a case were to occur there would be complete loss of all forms of sensibility—sight, hearing, smell, taste, touch, pain, muscular sense, would be completely lost. If a person under such condition walked, he would not know that he moved; if he spoke or sang, he could not be aware of it, since he would not hear his own voice, and could not from the absence of muscular consciousness feel the muscular movements concerned in the actions. Notwithstanding this, the grey matter of the cortex would be readily accessible from the surface of the body. Impressions made on the periphery would reach the cortical convolutions through the thalamus; and we have seen that the thalamus is adapted to transmit groups of impressions which have been frequently repeated in experience. Hence it appears to me evident that such impressions might evoke complicated actions entirely unknown to the patient. If a person in this condition were placed on his feet, it appears to me that he would immediately walk and avoid obstacles; that if a pen with ink were placed in his hand, supposing he were previously a good writer, he would write, or might even indite a sensible letter; that if a pipe were put in his mouth, supposing him to have been a smoker, he would immediately begin to smoke, but would be wholly indifferent whether he smoked tobacco or shavings or any other article that might be put in his pipe. This case is not wholly imaginary, as may be seen on referring to a case of a French soldier, copied from *Galignani* by Dr. Wilks in his recent work on the Nervous System. The mesmeric condition seems to me to be closely similar to the condition which would be induced by double lesion, either temporary or permanent, of Gratiolet's fibres. If this is the case it will bring the unilateral condition which occurs in hysteria into close relationship, from a psychical point of view, with the mesmeric condition, as they are already closely related from an emotional point of view, and the results obtained by metallotherapeutics in the former will be more or less assimilated to the effects of the mesmeric passes.

THE COLLÉGE DE FRANCE.—The following are the lectures which are to be delivered twice a week during the winter session 1878-79:—1. Celestial Mechanics, M. Jordan. 2. Mathematics, M. Liouville. 3. General and Mathematical Physics, M. Maurice Lévy. 4. General and Experimental Physics, M. Mascart. 5. Mineral Chemistry (Experimental Methods in Chemistry), M. Schutzenberger. 6. Organic Chemistry (Chemical Philosophy), M. Berthelot. 7. Medicine (the doctrines relating to the principal actions of the nervous centres), M. Brown-Séquard. 8. Natural History of Inorganic Bodies, M. Fouqué. 9. Natural History of Organised Bodies (Pressure of the Blood in Man and Animals), M. Marey. 10. Comparative Embryogeny (Fecundation, and the Earliest Phenomena of Development in the Vertebrates), M. Balbiani. 11. General Anatomy (the Tegumentary System and Sensitive Nervous Terminations), M. Ranvier.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN NOVEMBER, 1878.—The following are the returns (by Dr. Meymott Tidy) of the Society of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, etc.	Nitrogen: As Nitrates, etc.	Ammonia.		Hardness. (Clarke's Scale.	
				Saline.	Organic.	Before Boiling.	After Boiling.
Thames Water Companies.	Grs.	Grs.	Grs.	Grs.	Grs.	Degs.	Degs.
Grand Junction ...	21·90	0·061	0·195	0·000	0·011	14·3	3·3
West Middlesex...	21·00	0·057	0·150	0·000	0·010	13·2	4·6
Southwark and Vauxhall ...	19·90	0·073	0·135	0·000	0·007	14·8	4·2
Chelsea	19·00	0·007	0·165	0·000	0·009	14·3	2·8
Lambeth	22·00	0·069	0·150	0·000	0·010	14·3	3·7
Other Companies.							
Kent	24·40	0·003	0·450	0·000	0·001	18·2	5·1
New River ...	20·40	0·017	0·180	0·000	0·005	13·7	2·8
East London ...	21·50	0·034	0·105	0·000	0·007	13·7	4·2

Note.—The amount of oxygen required to oxidise the organic matters nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours.

The water was found to be clear and nearly colourless in all cases but the following, when it was slightly turbid—namely, the Grand Junction and the West Middlesex.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

HOSPITAL FOR DISEASES OF THE THROAT AND CHEST.

FIBRO-CYSTIC GOÎTRE CONSTRICTING THE ŒSOPHAGUS—APHAGIA—DEATH.

(Under the care of Dr. MORELL MACKENZIE.)
[Reported by Mr. T. Mark Hovell, Resident Medical Officer.]

E. B., aged thirty-four, weak and greatly emaciated, was sent to the hospital on April 12, 1878, by Dr. Lycett, of Wolverhampton. She stated that she was quite strong and in good health, and could swallow as well as ever until August, 1877, when she first noticed a little difficulty with her food. The dysphagia gradually increased until she could not get down bread, nor potatoes, nor indeed any solid substance. For the last two months she had experienced difficulty in swallowing liquids, and had been quite unable to take solids. On examining her neck, a small, hard, fibrous goître was seen. She stated that it had existed for the last ten years, and had not increased in size. It appeared to extend deeply into the tissues of the neck. On the right side it was about the size of half a hen's egg, and on the left seemed to be about the size of a chesnut. Her family history was good.

On April 14 an attempt was made to pass bougies (from No. 12 to No. 3), but the instrument was always arrested just below the cricoid cartilage. Subsequently an attempt was made while the patient was under the influence of ether, but without success. She could only be fed by nutrient enemata; and on April 29, as she swallowed no better than on admission, and had been getting daily weaker, gastrotomy was urgently recommended. The patient declined the operation, and went back to Wolverhampton.

Dr. Lycett kindly furnished the following notes of her case after her return home:—"After fourteen days of complete inability to swallow, she suddenly became able to take liquids, and in my presence drank about a pint of milk slowly and without discomfort. She had previously tried several times a day to swallow, but without success. Just before she was again able to take liquids, she spat up, without coughing, a little blood, with a small quantity of, what she believed to be, matter. She rapidly gained flesh and strength, and in a few days opened the door to me, and went out of doors on several occasions. She remained unable to swallow solids. Improvement was only temporary; but she was able to get down a drop of fluid from time to time for the last eight days of her life, during which period she was unable to retain enemata. She suffered great pain in the stomach and bowels as her end drew near, and complained greatly of thirst. She remained free from delirium and convulsions, but occasionally wept bitterly at her pitiable state. She was conscious to the time of her death, which took place on June 28."

A section of the throat was permitted, but not a regular post-mortem examination. On opening the neck, a fibro-cystic goître was found surrounding the larynx and œsophagus. The right lobe extended superiorly to the upper margin of the thyroid cartilage, and down the side of the neck three inches and three-quarters, backwards to the median line, and anteriorly to the left lobe. On its anterior and inner surface was an oval cyst about two inches in its longest diameter, and not quite an inch in its short diameter. The left lobe was three-quarters of an inch in diameter. In the first instance no probe could be passed down the œsophagus, but after making an incision into its wall to the beginning of the stricture, it became possible, by passing one probe from above, and another from below, to make them meet, the difficulty in passing a single instrument being apparently due to the fact that at the narrowest part of the stricture there was an angular curve of the canal, which appeared to have been produced by the thyroid gland exercising greater pressure on the œsophageal canal at one spot than at another in immediate proximity. The stricture only occupied about a quarter of an inch of the length of the œsophagus, the portion of the canal above being only slightly narrowed. On transverse section, the gland-tissue was found macroscopically to consist of a hard fibrous-like structure, and the œsophageal canal just below the cricoid cartilage was seen to be reduced to the size of a pin's head. The thyroid gland occupied the space on each side of it; the intervals between the œsophagus and trachea, and between the œsophagus and spine, being filled up by a pale dense structure.

The following is Dr. Stephen Mackenzie's microscopic report on the specimen:—The thyroid body is permeated by dense bands of connective tissue, moderately vascular; the follicles are much enlarged in places, and filled with colloid matter. There are numerous extravasations of blood of different dates into the gland-substance, especially in the neighbourhood of the trachea. The œsophagus is so altered that it is impossible to differentiate its various coats. All trace of the muscular coat has disappeared, and the greater part of the substance which would correspond to the œsophagus consists of dense connective tissue. In places (at each side) there are collections of round cells having a lymphomatous or even sarcomatous appearance. In the dense connective tissue between the œsophagus and trachea there are invasions of round and oval cells in columns and rows, having a basis of granular protoplasm with several small nuclei cells, which suggest a sarcomatous or lymphomatous origin. The mucous glands of the trachea appear to be the seat of some changes; a few tubes of mucous glands are also met with in the meshes of connective tissue between the œsophagus and trachea, but whether separated from the main glands by intrusion of connective tissue, or outgrowths from them, it is impossible to say. The chief alteration of structure is the development of connective tissue in and around the thyroid body, with atrophy of the œsophagus. There is no evidence to show that the fibrosis is the result of changes in the glandular substance of the thyroid gland, and it remains possible that the pathological changes are of a fibro-sarcomatous nature.

GUY'S HOSPITAL.

CASE OF FRACTURE OF THE SPINE.

(Under the care of Mr. HOWSE.)

Charles C., aged six years, was admitted on October 25, a waggon-wheel having passed over him. On admission he was found to have sustained a fracture of the spine in the lower dorsal region. The spinous process of the tenth or eleventh dorsal vertebra was projecting, and crepitus could be felt just above it. There was complete paralysis of the lower limbs, with loss of reflex action. There was priapism, but no hyperæsthesia. A Sayre's bandage was applied on the morning of October 26.

October 30.—Urine very offensive; motions passed in bed. Temperature this morning is normal.

31st.—Temperature 99·7°. There seems to be a tendency to the formation of bed-sores, and patient has been put on a water-bed. Urine is alkaline.

November 1.—There is sensation above a line drawn two inches above Poupart's ligament. Sores have formed on each side a little above the folds of the groin, where there is no pressure, and there is a red patch on the inner side of each knee.

8th.—The Sayre's bandage was to-day taken off, and a bed-sore was found just about the seat of fracture. In other respects he is about the same.

12th.—An elastic catheter is now being kept in bladder to allow the urine to drain away. Some difficulty was experienced in passing it. His motions are still passed under him. He says he has slight feeling in the lower extremities, but is not able to localise sensations. He complains much of pain in his back; his temperature is about normal.

19th.—The sores are not spreading, but seem to have taken on more healthy action. There is some cystitis. Temperature is normal, and there seems to be no return of sensation in the paralysed limbs. A point of interest in the case is the presence of sores in places where no pressure could account for them. The healthy condition of the sores, and the general fair condition of the patient, give hope that the case may terminate in as favourable a way as can ever be looked for in fractures of the spine.

STRANGULATED INGUINAL HERNIA—GANGRENE OF GUT—ARTIFICIAL ANUS—RECOVERY.

(Under the care of Mr. HOWSE.)

A. L., a married man, aged forty-six years, was admitted on October 1, with an old-standing right inguinal hernia, which had descended the day before, and could not be reduced. Before applying to the hospital, a medical man had tried to reduce the rupture by taxis (applied for about five minutes without chloroform), but was unsuccessful. On admission there was a large swelling in the right inguinal region, not extending into the scrotum. The right testis could not be felt. The skin over the swelling was tense and livid; and the man had the usual symptoms of strangulated hernia. Immediately after his admission, Mr. Howse made an incision above Poupart's ligament down to the bowel. This was found to be gangrenous, and was left open in the wound; a quantity of fæcal gas escaped.

October 3.—The wound is being poulticed; some fæces have escaped through it; urine is passed well, and patient's condition is fairly good. He takes a grain of opium every six hours.

7th.—Temperature is about normal; diet is still restricted to ice and milk, and there has been no passage of motions per rectum.

14th.—A motion was passed per rectum this morning; patient is much better, and takes fish, beef-tea, and milk.

November 4.—Opium was discontinued on October 19; and there has been a daily passage of motions per rectum since October 31. The discharge from the artificial anus is now much less, and the sloughing bowel has all come away.

18th.—No fæces now pass through the wound; patient passes his motions naturally, without pain. A deep fissure, due to the adhesion of deeper parts to the skin, still remains over the seat of operation; but the edges of this are granulating healthily, and the wound is steadily closing.

INFLAMMATION OF THE EAR FROM BATHING.—Mr. Rudall, noticing (*Australian Medical Gazette*, April 1) an article on this subject by Dr. Sexton of New York, an abstract of which appeared in our pages (*Medical Times and Gazette*, June 8, page 627), states that he has also met with instances of this occurrence, although with by no means the frequency with which they are recorded by Dr. Sexton. He is disposed to attribute them to the lodgment of water in the meatus, and its subsequent evaporation; and although as a general rule this does no harm, yet under the influence of a draught of cold air, or when the bather is not in good health, a severe inflammation of the cavity of the tympanum may be set up. He recommends as a good precaution before bathing to fill each meatus well with a large plug of cotton-wool, inserted in one piece, so that, although well pressed in, it may be easily withdrawn entire when the bather has dried himself. If the weather is very cold, it is a good precaution to insert another piece of dry wool, and let it remain in for an hour or two. The bather, too, should not go into the water when he is cold or chilly.

BALFOUR TESTIMONIAL.—At a meeting of the general committee of the Balfour Testimonial, held in the rooms of the Royal Society, Edinburgh, on Friday, November 29, the Hon. Lord Curriehill in the chair, Mr. David Smith, F.R.S. Edin., the treasurer, gave an account of the proceedings of the acting committee, and said that their labours had been successful in securing a very fine portrait of Professor Balfour in his official robes, by Sir Daniel Macnee, the President of the Royal Scottish Academy, for the University; and a *replica*, in the garb so well known to every lover of botany for the last forty years, for the Professor's family. Sir C. Wyville Thomson proposed that Lord Curriehill be requested, on behalf of the subscribers, to present the portrait to the University authorities—a motion which was cordially seconded by Professor Douglas Maclagan, and carried with applause. His lordship agreed to do so, though, he said, the name of Sir Robert Christison was uppermost in his own mind. He also alluded to the unwearied efforts of Mr. David Smith in promoting the scheme, the success of which was mainly owing to his energy. It was arranged to make the presentation to the University during the Christmas recess, and that of the *replica* to the family of Professor Balfour at a future period, to be afterwards determined on.

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Medical Times and Gazette.

SATURDAY, DECEMBER 7, 1878.

THE HAMPSTEAD SMALL-POX HOSPITAL CASE.

THE "Hampstead Small-pox Hospital Case" may be said to have reached the termination of its first stage, inasmuch as that the jury last week returned a verdict which Baron Pollock pronounced to be in favour of the plaintiffs. The question left for the decision of the jury at the termination of the learned judge's summing up were—First, was the Hospital a nuisance occasioning damages to the plaintiffs, or any of them; and which, if any, *per se?* Second, was the Hospital a nuisance *per se*, or by reason of the patients coming to or going from it? Third, assuming that the defendants were by law entitled to erect and carry on a hospital, did they do so with all proper reasonable care and skill with reference to the plaintiffs' rights? Fourth, assuming that the defendants were by law entitled to erect and carry on this particular hospital, did they do so with all proper reasonable care and skill with reference to the plaintiffs' rights? Fifth, did the defendants use proper care and skill with respect to the ambulances? After an hour and a half spent in deliberation, the jury found that the Hospital was a nuisance occasioning damages to the plaintiffs *per se*, and also by reason of the patients coming to and going from the Hospital, As to the third and fourth questions, they found the defendants did not carry on the Hospital with all reasonable care and skill; and to the last, they replied that proper care and skill were not used with respect to the ambulances, as, in their opinion, these vehicles ought to have been disinfected before leaving the Hospital. In conclusion, they were unanimous in considering that everything was done that could be done relating to the *internal* management of the Hospital; and in this opinion the plaintiffs by their counsel entirely concurred. We have said that the first stage of the case had been reached, because, as was generally expected, notice of appeal was immediately given

by the defendants' counsel, and Baron Pollock remarked that, with regard to the question of the injunction claimed to restrain the defendants from using the Hospital for any infectious or contagious disease, there was plenty of time. The public will not have forgotten the prolonged discussion which preceded the building of the present Small-pox Hospital at Hampstead; nor can the managers plead ignorance, since, in the recent trial, the plaintiffs proved that they had warned the managers that if they built the Small-pox Hospital on the site of "The Bartrams," as it is called, they would materially injure the neighbourhood. Neither can it be pleaded that the managers, placed in a difficulty, had no alternative but to build on the present site a much-needed hospital, since other sites were offered, as easily accessible, and, pecuniarily speaking, possessing greater advantages. But, notwithstanding that the means of access to the present site were not good—as was illustrated at the trial by the statement that a block of ambulances sometimes occurred close to the entrance to Sir Rowland Hill's house,—and that the opponents of the scheme advanced objections which were too strong to be set down as fanciful, for some occult reason the managers determined that the Small-pox Hospital should be built on the present site; and certainly no stronger proof could have been given that the plaintiffs had faith in, and the courage of their convictions than their venturing to try conclusions with a powerful Government department. On the trial just concluded the jury have found that the Hospital is a nuisance; and if, on appeal, the legal right of the managers to erect the building is conceded, it will still remain to be decided whether they are justified in creating a nuisance to the prejudice of a valuable property in a previously existing and closely adjacent neighbourhood. The site was first used in 1868 for the erection of some temporary buildings for the reception of patients suffering from relapsing fever; and the necessity of any hospital for that purpose having ceased, the buildings were after a time converted into a small-pox hospital of very different dimensions. The difference between the two purposes is very great. The risk of contagion is small in relapsing fever; while small-pox is the most contagious of all the zymotic diseases, with, perhaps, the exception of scarlet fever. No one can wonder, therefore, that the conversion of the small relapsing fever hospital into a very large small-pox hospital excited the strong and determined opposition which has culminated in the action against the managers of the Metropolitan Asylums District, and a verdict against the defendants. Such a result is very much to be regretted, let the case end as it may, for it cannot but increase the difficulty of finding fit and proper sites for the establishment of hospitals for infectious diseases. We do not purpose to say much on the subject of the possible or unavoidable dangers of such hospitals now, for notice has been given of the intention of the defendants to move for a new trial, on the ground that certain findings of the jury were against the weight of evidence, or that there was no evidence to support them, and the case may therefore have to be tried over again. But we may observe, while insisting on the absolute necessity of hospitals for infectious diseases, for the public good, that the greatest possible care and consideration must be exercised in the selection of sites, and with regard to the external as well as the internal management of the hospitals. We, as a profession, have at present so little positive knowledge as to the exact distance to which contagion may spread, especially when large numbers of cases are collected together—and at one time the Hampstead Hospital contained 500 patients,—that it is, to say the least, unwise to insist that the public shall believe that danger absolutely ceases at a distance of five, ten, or even of thirty or sixty feet from the source of contagion. Even the medical witnesses for the defence differed on this point. Dr. T. Jarvis did not think that any danger arose from people visiting the Hospital, or from the ambulances passing along the road; while Mr. Bostock said that there would be danger from ambulances, and from friends and tradespeople going to and from the Hospital. Nor was it wise to urge the defence that an infectious disease hospital must be so placed that the patients sent to it shall not have to travel more than three miles. Nothing like such a hard-and-fast line can be insisted on in such a province of houses as London is; and the absurdity of it is shown by the fact that as soon as the stress of the epidemic of small-pox was over, the Hampstead Hospital was closed, and patients that would otherwise have been taken there were sent to the Hospital at Homerton. The effect of the Hampstead Hospital trial will be most deplorable and disastrous if in the end it interferes seriously with the establishment of hospitals for small-pox and other infectious diseases; but should its chief result be to insure the more careful exercise of more common sense and much consideration for the ignorance and prejudices of the public, as well as of advanced medical and sanitary science in the selection of sites for, and the external and internal arrangements and management of such institutions, some good will have come out of the dispute.

THE ALCOHOL QUESTION.

No. II.

Of the three articles in the *Contemporary Review* dealing with the Alcohol Question, one has been already noticed, but it remains to say a few words on the other two. The first of these is by Dr. Lauder Brunton, on the Action of Alcohol, and is hardly, we think, equal to the scientific reputation of the author; it fails, as it seems to us, in attempting too much, for there is a great deal in the article which is not scientific at all in the strict sense of the term, and the science itself is hardly of the kind we should have expected. Dealing, however, entirely with the more strictly scientific portion of the essay, we find that the first point discussed is the vexed question whether alcohol is to be considered as a food or as a stimulant merely. Dr. Brunton's verdict is, we think, a sound one—"If a substance pass through the body unchanged, it can hardly be called a food"; but if it is altered, and in its alteration produces force, we lack any other name for it. True, as Dr. Brunton says, alcohol may not be a convenient mode of taking food, just as sulphur is not a convenient kind of fuel; yet we fail to follow the closer analogy the writer would draw between the two.

Turning to the action of alcohol as a stimulant, Dr. Brunton lays it down that alcohol acts thus in two ways—reflexly through the stomach, and directly through the heart; and he proceeds to give us certain examples of this reflex action. We are sorry to say that some of these approach as nearly to nonsense as we could well conceive anything written by such a man. This is especially the case in that portion of his essay where he deals with the fifth pair of nerves, which surely have nothing very specially to do with alcohol! What shall we say to this passage—"It is a curious fact that people of all nations are accustomed, when in any difficulty, to stimulate one or another branch of the fifth nerve, and quicken their mental processes. Thus some persons when puzzled scratch their heads, others rub their foreheads, and others stroke or pull their beards—thus stimulating the occipital, frontal, or mental branches of those nerves. Many Germans when thinking have a habit of striking their fingers against their noses, and thus stimulating the nasal cutaneous branches; while in this country some people stimulate the branches distributed to the

mucous membrane of the nose by taking snuff. . . . Alcohol appears to excite the circulation through the brain reflexly from the mouth, and to stimulate the heart reflexly from the stomach, even before it is absorbed into the blood." This seems to us very poor stuff. The sum of it is that the ways of *fidgetting* are innumerable. We could give a good many which have nothing to do with the fifth nerve. Naughty boys have a way of putting their fingers to their noses, which is not intended except by a very roundabout process to excite the fifth nerve. Nor among all the fantasticalities of whimsical writers or thinkers did we ever read or hear of one who snuffed up alcohol by his nostrils or gargled his mouth with strong spirit to stimulate his imagination.

To Dr. Brunton's proposition that alcohol acts reflexly through the stomach, few men will take objection. The almost instantaneous effect of a dose of alcohol in relieving faintness cannot be accounted for by absorption; and the power which alcohol also undoubtedly possesses, of aiding appetite and favouring digestion, can only be accounted for on the theory of reflex action or direct irritation.

But taking it all in all, we think that Dr. Brunton has in his essay completely failed to grasp some of the most important characteristics of alcohol. Nothing, as it seems to us, is more striking than the effects of alcohol on the cutaneous capillaries. It is this which to a great extent causes the feeling of comfort yielded by alcohol to the cold and weary, though much more so in the former than in the latter case; to this too is due the flushing of the surface when any considerable quantities of alcohol are taken; to the same cause is due the free perspirations which may often be induced by alcohol; and if we are not greatly mistaken, this is one of the prime factors in the power which alcohol possesses of reducing bodily temperature. We perfectly agree, however, with what is said elsewhere, that for bodily weakness food is far better than alcohol; but here again, as it seems to us, Dr. Brunton appears to mix up bodily and mental fatigue. No one who has ever tried the two plans of, say, walking on food and walking on alcohol, could compare the two; indeed, it would be rare to find anyone adopt the latter plan. But when Dr. Brunton talks of a little warm beef-tea and a biscuit being the best thing for "a City magnate fainting under business but delighting in turtle, or for a belle sinking and languid during the intervals of dissipation," he is guilty of fine writing, or writing nonsense. It is not bodily fatigue which induces men at the present time to indulge in nips—it is the inordinate waste of brain-power. Black bread and fat bacon may have been a panacea for fatigue in the Tyrol—certainly alcohol would have been out of place,—but we do not advise Dr. Brunton to recommend them to his City patients. The great thing, moreover, which encourages the frequent use of stimulants is the fatal facility of obtaining them. Where, can Dr. Brunton tell us, is the City magnate or the sinking belle to get good beef-tea? Had he even said turtle-soup it would have been more to the purpose.

Though there are many points in Dr. Brunton's essay which are worthy of all commendation, yet there are many which betray imperfect workmanship. Though there are many which are good, we cannot help thinking that there are some which approach the ridiculous.

We now come to the last of these essays—that, namely, entitled "The Moderate Use of Alcohol, True Temperance." Their value seems to decrease in something more than geometrical ratio, and this last is really little more than laughable. We need not tell our readers that we completely agree with Dr. Bernays' position; but there seems to be so much irrelevant matter in his essay that we hardly know where to find an argument in support of his thesis. It presents, however, one redeeming quality: it contains a good, and, as far as we know, an original story, illustrative alike of the simplicity of the writer and the amenities practised by intemperate abstainers. "Once," says Dr. Bernays, "when, in my innocence, I imagined I was forwarding the temperance movement in giving a gratuitous lecture on Alcohol, I was asked by an ardent teetotaler whether I believed that the miraculous wine at the feast of Cana contained alcohol? I said 'Yes.' 'Then you are a liar!' was the immediate reply given in public." The anecdote is striking in more ways than one. But as far as we can see, the former part of the article is mainly made up of somewhat hysterical outbursts on the badness of London water. "Not," says the writer, "that the water-supply of London is generally bad: far from it. But the poor, the ill-fed, and ill-clad, among whom alcoholic intemperance is common, have no better provision." What this may mean it would be hard to say—but there is much in the essay which we do not pretend to understand. However, here is a sentiment in which we cordially join—"Obviously, then, water should be the basis of all drinks." Quite so. We involuntarily turn round and ask who on earth denies it. But when the writer goes on to say that "water which has gone through some form of preparation, especially through some form of cooking, as in beer, is generally better suited for meals than water itself," we part company in a fog which we cannot penetrate; nor can we say that we have found our way again, when a little farther on the writer speaks of the "pleasant anæsthetic effects of a single glass of good beer." *Corpo di Baccho!* that must be potent stuff! However, we get quite reconciled to our guide, counsellor, and friend, when yet a little farther on he tells us that "the intemperance due to beer is very considerable, *owing mainly to the quantity imbibed.*" The italics are ours, but such a profound apophthegm deserves the dignity of italics. Yes, no doubt it is the quantity that plays the mischief. It is cheerful to follow such a light and discursive author, for the next interesting passage we shall quote begins thus—"Who shall measure the strength of the safety-valve which the public-house has been to the English Constitution? . . . Many publicans are equal to any men in the general community, and such might be increased in number by the judicious help of philanthropists." But here is the secret at last! "One great difficulty in the way of temperance in England is the prevalence of admixture, and of alcoholic drinks of uncertain strength." This is almost too absurd—that all alcoholic liquors, be they what they may, are to be reduced to a known or uniform strength: good old wine with a rough vintage, old ale and swipes to be made the same, is surely preposterous. Yet the writer admits that "it is not easy to estimate the difference between spirits new and old." We have little more space for what we can hardly comment: it is almost *verbatim* quotation. But one or two delicious bits should not be overlooked. Speaking of temperance, the writer says: "In winter time, if I come home after any worry, I should never hesitate to set myself right by taking my favourite and perfect remedy—five or six brandied cherries. In three or four minutes I find myself soothed and quieted, and I have never experienced any ill effects." Happy man! What a blessing! Would that a few brandied cherries could always have the same pleasing, delightful, and peaceful effect! Here is another *morceau*. Speaking of experiments in teetotalism, he says that they are very injurious, and should not be attempted by people over forty; but he adds, "I am not speaking of the intemperate; for such, even if death ensues, there is nothing for it but total abstinence." Hard, is it not, for people who cannot satisfy themselves with the "perfect remedy of five or six brandied cherries"?

PAYING PATIENTS IN ST. THOMAS'S HOSPITAL.

We elsewhere publish a letter, written by Dr. Bristowe, Senior Physician to St. Thomas's Hospital, and subscribed to by all his colleagues with a single exception. We may say at once that it reiterates and enforces the objections raised to the scheme by ourselves last week, but with that special knowledge which we did not at the time possess. Our readers can readily judge of the letter for themselves; but there are one or two points on which we think it our duty to comment. Those who read the published proceedings of the Court of Governors, in which the Treasurer developed his scheme, could not but infer from the narrative of the proceedings that the medical staff were in favour of the scheme. Indeed, the Treasurer, by the reports, distinctly said so; but Dr. Bristowe gives a very different version of the story. He says, "When I, in conjunction with a few of my colleagues, met you at your request . . . . I was, I need hardly say, altogether unprepared to learn that it (the scheme) had been so far discussed and settled in committee, that there was no doubt—as you told us—that a resolution to that effect would be carried at the General Court of Governors." Need *we* wonder that he adds, "I confess, too, that I was surprised that an arrangement which, presumably, could scarcely be carried out without our co-operation, should practically have been determined upon without previous conference with us"? This, then, is the kind of consent and co-operation which the Treasurer of St. Thomas's Hospital seeks from its professional staff!

Elsewhere, though accepting the determination of the Governors as a foregone conclusion, Dr. Bristowe expresses his willingness, "in the belief that the arrangement is temporary, and intended to bring money into the Hospital coffers," to do all he reasonably can to assist the Governors in their endeavour to make the plan a success. This, to our thinking, is but a lame conclusion, though it is hard to say what should be done by men so sore bestead.

However, on one point Dr. Bristowe does most energetically protest, and that is "the suggested misappropriation of No. 8 Block"—the Naboth's vineyard on which the Treasurer has fixed his eye. This he says was specially built for the reception of cases of infectious disease, at a greatly enhanced cost. And strange to say, though the Treasurer gave his hearers to understand that it was altogether unused, and quite an excrescence to the Hospital, its sixty beds contained, at the time of meeting, forty patients. Considering these were infectious cases, we should think the proportion quite enough in ordinary times.

We said at the beginning of this note that the views of Dr. Bristowe had been formally endorsed, as will elsewhere be seen, by all his colleagues save one. Anybody, by turning to the "Medical Directory," can see which name is wanting; and if we mention that of Dr. Stone, it is only with the hope of eliciting from him the reasons which have induced him, or the nature of the accident which has caused him, thus to appear, in the eyes of the public, at variance with his colleagues in their united action. It was due to the profession that the Physicians and Surgeons of St. Thomas's Hospital should as soon as possible rescue themselves from a false position, and we must say that they have fully done so.

THE WEEK.

TOPICS OF THE DAY.

A very influential section of the community has recently decided to support the efforts of the Charity Organisation Society. Baron Pollock last week presided over a meeting of members of the Bar, at the Inner Temple Hall, called to consider the claims which charity organisation has upon that profession. He briefly sketched the objects of the Society—namely, to bring about co-operation among charities and benevolent societies, and to make charity discriminating. He urged that there was no lack of charity in the country, but he grieved to say that there was a great deal of generous indiscretion which would be better for some overlooking. He pointed out that there were in London funds distributed every year in charity to the amount of more than four millions sterling, and he conceived that it would readily be seen that there was full scope for the operations of those who knew the workings of the various charities and institutions, and understood how easy it was for them to cover the same ground. He stated that, to his own knowledge, the action of the Society had been beneficial in regard to dealing with mendicancy, and, although it was stated that it spent all its money in organisation instead of charity, he assured his hearers this was not the fact; and he urged them, in their several localities, to give their co-operation to the work of the Society. Sir H. James, Q.C., M.P., then moved—"That this meeting is of opinion that the Charity Organisation Society is engaged in a work of the utmost importance, and urges all members of the Bar to assist it in the endeavour to make true charity more effective in promoting the welfare of the people." The resolution was seconded by Mr. Forsyth, Q.C., M.P., and supported by Mr. Watkin Williams, Q.C., M.P., and Mr. Osborne Morgan, Q.C., M.P., and carried unanimously.

A Local Goverment Board inquiry has recently been held at Frome relative to an application from the authorities to borrow £14,000 for the proposed new waterworks. Mr. Tomlinson, the engineer, gave evidence in support of the scheme, and the Government inspector has visited the springs at Egford, as also the reservoir, and has submitted his report to the official authorities, who will in due course make public their decision.

A special meeting of the Governors of the Queen's Hospital, Birmingham, was held last week, at the Midland Institute in that town, to consider the financial position and prospects of the institution. The Mayor presided; and on the motion of Alderman Chamberlain, M.P., seconded by Mr. J. S. Wright, a resolution was passed, pledging the meeting to make every effort to obtain the sum of £4500, the balance of the debt of the Hospital, and to secure an increase of the annual subscriptions by at least £1000 per annum.

Some details have recently been published respecting the working of the Improved Industrial Dwellings Company, and among other information it is stated that the number of tenants now amounts to 2302. This number cannot, however, be considered numerous, when it is remembered that the Metropolitan Board of Works have recently pulled down the houses of so many of the working-classes. The Company, nevertheless, have already taken steps for erecting more premises. The crowded state of the Company's dwellings again calls attention to the fact that the Board of Works, as the local authority for carrying out the provisions of the Artisans' Dwellings Act, has not, as required by that statute, let or sold a single plot of land for the reconstruction of dwellings in the place of those it has ordered to be destroyed.

A serious outbreak of diphtheria is reported to have occurred at Bedford, and Canon Brereton immediately communicated with the Local Government Board on the subject. On behalf of the Board, Mr. Terry, one of their inspectors, conducted a personal examination into the state of the town's drainage, and other matters, and his report has been submitted to the authorities in London.

The report on the Royston Hospital for 1876 and 1877, recently issued by Mr. Daniel Balding, Surgeon to that insti-

tution, shows that during that period ninety-six patients were admitted, of whom seven died—one each from typhoid fever, fracture of base of skull, cancer, Bright's disease, accidental burning; and two from the direct effects of habitual intemperance. All cases of operation known as "capital" have made satisfactory progress, and in none of these has the operation itself been followed by erysipelas or any similar complication. In a former report two formidable accidents were recorded from exposure to unprotected steam-engines in use in agricultural work, but during the past two years no such case has come under notice; it may therefore be inferred that legislation on this subject has begun to have the desired results.

At the meeting of the Metropolitan Board of Works, held last week, a report was presented from the Works and General Purposes Committee, stating that they had considered the application from Scott's Sewage Company, requesting that their works at Burnley might be inspected by the scientific officers of the Board; and they recommended that the Company be informed that there does not appear to be any sufficient reason shown why they should alter the terms of their former communications on the subject. This report was adopted. The same Committee then presented the following report on the subject of the prevention of floods from the river Thames:—"Your Committee have had before them the resolution of the Board of the 15th inst., referring it to them to prepare and submit to the Board a Bill for the prevention of floods from the river Thames. On the 15th inst. your Committee informed the Board that, under the authority of the resolution of the 8th inst., they had directed the issuing of notices which would cover the Bill of last session; and they have now to report that, after again carefully deliberating upon this question, they have arrived at the conclusion, which they beg to recommend for the adoption of the Board, that a Bill framed upon similar principles to that of last session be introduced as a private Bill." A long discussion followed, and an amendment was put and lost, after which the report was received and adopted.

At the anniversary meeting of the Royal Society, held on Saturday last, at Burlington House, Sir Joseph Dalton Hooker, C.B., D.C.L., resigned the office of President, and William Spottiswoode, M.A., LL.D., was chosen as his successor. The President, in his address, gave a *resumé* of the work done by the Society during the year, and particularised the subjects most worthy of attention. The medals in the gift of the Society for the year were presented as follows:—The Copley Medal to M. Jean Baptiste Boussingault, of Paris; a Royal Medal to Mr. John Allen Brown; a Royal Medal to Dr. Albert Gunther, F.R.S., of the British Museum; the Rumford Medal to M. Alfred Corun; the Derby Medal to MM. Louis Paul Cailletet and Raoul Pictet. The presentation was in each case preceded by a recapitulation of the scientific services for which the award was made.

The quarterly return of the Registrar-General for Scotland to September 30 last, shows that 17,344 deaths were registered during the period, being at the annual rate of 193 to every 10,000 of the population estimated to the middle of the year. The average mortality experienced during the corresponding quarter of the ten years immediately preceding was 198·3 out of every 10,000 persons living. The mortality of the quarter now under review has consequently been under the average of former years, though decidedly higher than that of the third quarter of the years 1876 and 1877. Of the eight principal towns, Paisley had during the quarter the highest, and Aberdeen the lowest mortality. One death only was attributed to small-pox; it occurred during the last week of July in Glasgow, in the case of a male child aged seven months. The Registrar of the district reports that the child was not vaccinated, vaccination having been postponed.

A second voyage for the purpose of testing the condition of the river Thames below bridge was made on Saturday last by several members of the Metropolitan Board of Works, accompanied by their chairman, Sir James Hogg, M.P., and attended by Sir Joseph Bazalgette, engineer, and Mr. Keates, consulting chemist. Upon the previous occasion the state of the river was examined during the last of the flood and the first of the ebb tide, but on Saturday the departure of the steamer was timed so as to admit of the testing taking place during the last of the ebb and the first of the flood tide. If we are to credit the reports which have been published, the tests were as satisfactory as upon the former occasion; but, in spite of these assertions, it will take a great deal to convince the public generally that the river is as pure as the Board would make out. It will now be the turn of the Thames Conservancy to apply similar tests, with a view of refuting or confirming the experiments afloat of the Metropolitan Board of Works.

It is reported from Geneva that a young Swiss lady has just taken the degree of Doctor of Philosophy at Berne University, after a brilliant examination; and two other ladies, American and Austrian, have passed as doctors of medicine.

OVERCROWDING IN LIVERPOOL.

On the night of November 22, Ann Cameron, aged forty, a widow, and her six children, consisting of four girls and two boys, of ages ranging from seven to eighteen, retired as usual to rest in a room twelve feet in length by five and a half in width. They all lay on the floor. There was no door to the room, and to insure warmth a coke fire had been lighted in a bucket, which had been placed on an iron fender, and an oil lamp kept burning on the floor. In the morning the whole family was found dead from suffocation. The woman paid 2s. a week for the house, which consisted of the room in question and a cellar or kitchen beneath it; and, as was pointed out during the investigation, although the case was one of overcrowding of a most shameful character—seven persons sleeping in a cubic space which, if the tenement had been under the regulations applying to sub-let houses should only have accommodated one—and although adult males and females were herded close together, the sanitary authority had no legal control over it so long as there was no infectious disease and average cleanliness was maintained. An extension of power to meet such cases seems certainly desirable. The remote cause of the calamity was that fruitful cause of so much of our social misery—drunkenness. The children earned good wages, which the mother spent in drink; hence the miserable room and the miserable end. The jury found—"That the family lost their lives through the use of a coke fire in a small bedroom where there was no ventilation, they not knowing the fatal effects of the fumes of the coke. But we think it unfortunate that there should not be some power to ascertain that such misery exists, and we further think such property should not be allowed to remain in its present condition; that when such manifold and great evils result from such overcrowding as has been proved in this case, we suggest that increased power be given to the Corporation to deal with all cases of a like kind."

PATHOLOGICAL SOCIETY OF DUBLIN.

The opening meeting of the session of 1878-79 took place on the afternoon of Saturday, November 30, in the Anatomical Theatre of the School of Physic, Trinity College, Dublin. Mr. Edward Hamilton, the outgoing President, occupied the chair. The following were elected officers of

the Society for the ensuing session:—*President:* William Moore, M.D. *Vice-Presidents:* John T. Banks, M.D.; Samuel Gordon, M.D.; Thomas Hayden, F.K.Q.C.P; Henry H. Head, M.D.; George H. Kidd, M.D.; T. Jolliffe Tufnell, F.R.C.S.I. *Council:* Anthony H. Corley, M.D.; George F. Duffey, M.D.; Charles E. Fitzgerald, M.D.; Arthur W. Foot, M.D.; Edward Hamilton, M.D.; James Little, M.D.; T. Evelyn Little, M.D.; Robert McDonnell, M.D.; Benjamin George McDowel, M.D.; John William Moore, M.D.; John Mallet Purser, M.D.; William Stokes, M.D. *Secretary and Treasurer:* Edward H. Bennett, M.D. *Secretary for Foreign Correspondence:* Robert D. Lyons. *Committee of Reference for Reporting on Morbid Specimens:* Arthur W. Foot, M.D.; Reuben J. Harvey, M.D.; T. Evelyn Little, M.D. Dr. Wm. Moore having taken the chair, Dr. MacSwiney proposed, and Dr. Churchill seconded, a vote of thanks to the outgoing President, Mr. Hamilton. The resolution was carried by acclamation. Mr. W. J. Wheeler exhibited a specimen of fracture of the patella, in which true bony union had taken place. The patient was a man aged twenty-one years, driver of a milk cart. In September, 1875, he had been admitted to the City of Dublin Hospital, suffering from a transverse fracture of the patella—the fragments of bone were separated by an interval of two inches and three-eighths. He was treated by the application of ice, Mr. Wheeler's pad, and a starch bandage. When he left hospital, on December 13, there was no separation between the fragments. He subsequently resumed his occupation, and got up and down over the wheel of a milk-cart about 240 times a week. Symptoms of phthisis set in, and finally he succumbed to that disease. During life there was no perceptible diminution in the volume of the quadriceps muscle, the movements of the patella were not impaired, and there were no spasms of the quadriceps. Firm osseous union had occurred. Dr. Bennett, commenting on Mr. Wheeler's case, alluded to Dr. Gulliver's specimen of osseous union in a fractured patella. In Mr. Wheeler's patient the fibrous envelope or capsule of the bone had evidently not been preserved, as the fragments were so widely separated. Dr. Wheeler said there was only one true example of bony union in the Museum of the Royal College of Surgeon's, Stephen's Green. It had been placed on record by the late Mr. Kirby. Dr. Duffey showed for his colleague, Mr. E. S. O'Grady, a carcinomatous liver. The specimen was taken from the body of a woman aged fifty, mother of eleven children, the youngest of whom was born ten years ago.

CHARGES AGAINST A MEDICAL OFFICER.

In commenting in a recent number on the epidemic of small-pox in Irish towns, we mentioned that an inquiry was held on November 13 by Dr. Brodie, one of the Inspectors of the Local Government Board for Ireland, as to certain grave charges brought against the Dispensary Medical Officer of the Kilbeggan District, co. Westmeath. We learn from the *Freeman's Journal* of November 30, that at a specially convened meeting of the Kilbeggan Dispensary District Committee, held on the previous day, the issue of the recent Local Government investigation into charges of neglect against Dr. Barry was made known. Having taken into consideration the nature of the evidence and the report thereon, forwarded by Dr. Brodie, the Local Government Board saw no course but to recommend the Committee to call on Dr. Barry to send in his resignation. A lengthy discussion ensued as to what course should be adopted, the majority urging that the Local Government Board should be requested to reconsider their determination. It was finally agreed to adjourn the proceedings for further consideration before a formal decision is arrived at. The entire matter has created considerable interest in the town and district, where there is a strong feeling of sympathy for the medical officer, who has been in the district for the past eight years, and who in this particular instance is believed by most of the inhabitants to have erred more through want of tact than by wilful negligence. The district is worth about £140 per year, exclusive of vaccination allowances, which are considerable.

DYSPEPSIA.

At the meeting of the Medical Society of London, on Monday last, Dr. Leared read a paper on "A Neglected Proximate Cause of Dyspepsia," in which he argued that in a large proportion of dyspeptic cases the fault does not lie with the gastric juice *per se*, but with the muscular structures of the stomach. He considers that, owing to nervous debility, the peristaltic movements of the organ are either more or less diminished, or even arrested. The result is that the food, not being duly submitted to the action of its solvent, in part ferments, and the gas evolved distends the stomach. This distension tends to impair the tonicity of the muscular fibres still more, so that in some cases the stomach may be said to be paralysed. The remarkable way in which stirring aids the solution of soluble substances in water was adduced by the author in proof of his position. Although the revolution of the morsels of food had been graphically described by Dr. Beaumont from actual inspection, he had failed to grasp their importance in relation to pathology. Instead of the old division of (1) atonic dyspepsia, and (2) dyspepsia from gastritis, Dr. Leared proposed to divide the subject into (1) dyspepsia from impaired motion, and (2) dyspepsia from defects of secretion; and he maintained that by further subdivision all varieties of true functional dyspepsia might be ranged under these two heads. The difference in origin of the proximate causes was also pointed out, and the treatment of impaired peristalsis was explained at some length. Diet was held to be of the greatest importance, and amongst medicines strychnia was placed foremost. This drug, properly handled, the author alleged to be almost a specific for relaxation of the gastric muscular fibres.

THE GENERAL MEDICAL COUNCIL.

The Queen has appointed "Mr. Richard Quain, M.D., F.R.S.," to be a member of the General Council of Medical Education and Registration of the United Kingdom for the term of five years from November 27. This is Dr. Quain's fourth term of service as one of the Crown nominees, his first appointment having been made in 1863; and the Medical Council may well be congratulated on his willingness still to hold an appointment that brings him a large amount of hard work. Rarely absent from any of the sittings of the Council, his marked business capacities, especially for finance, have enabled him to render valuable service as a committeeman and as treasurer, which office he has held since 1864. For a long time he has been a very active member of the Executive Committee, and the profession are still more indebted to him inasmuch as he took the chief share in preparing and issuing the "British Pharmacopœia."

SOCIETY OF STUDENTS OF MEDICINE.

At a meeting of the above Society, held on November 28, in London, it was unanimously decided that a branch of the Society should be established in London. The following office-bearers were elected:—*Vice-President:* Mr. Thomas Dutton, L.R.C.P. *Hon. Secretary and Treasurer:* Mr. James Gilbert, of the Charing-cross Hospital. Gentlemen wishing to become members are requested to apply to the Hon. Secretary (Mr. James Gilbert, Charing-cross Hospital, Strand), from whom all particulars can be obtained. All

gentlemen that are members of the provincial branches of the Society, and are now residing in London, and who may be desirous of joining the London branch, are asked to inform the Hon. Secretary. The next meeting of the Society will take place on December 12, at 8 p.m.

A NATIONAL MUSEUM OF HYGIENE.

We have received a circular letter with the above heading, signed by Sir Wm. Jenner as chairman, and by Drs. Gowers and Poore as honorary secretaries, of the Executive Committee for promoting the equipment of the Parkes Museum of Hygiene, in which they appeal for support in their undertaking. They point out that it is intended to extend the benefits of the Museum to all classes, and not merely to professional men. The Committee will thankfully receive not only subscriptions of money, but also books and pamphlets—and, in fact, anything illustrative of any branch of hygiene. The treasurer is Mr. Berkeley Hill, 55, Wimpole-street, W.; and any further information will be supplied on application to the Curator, Parkes Museum of Hygiene, University College, Gower-street.

MEDICAL TEACHERS' ASSOCIATION.

The annual general meeting of the Medical Teachers' Association was held on Friday, the 29th ult., in the Board-room of the Charing-cross Hospital. Mr. Jonathan Hutchinson was elected President in the room of the late Mr. De Morgan; and Dr. Julius Pollock and Mr. John Wood were elected Vice-Presidents in the place of Dr. King Chambers and Mr. Brodhurst, resigned. After the transaction of some routine business the Association adjourned.

MEDICAL SOCIETY OF LONDON.

The Council of this Society have determined to set apart one or more evenings during each session to microscopical demonstrations. Dr. Tilbury Fox is announced to give illustrations of the histology of various forms of skin disease on Monday next, the 9th inst., at 8.30 p.m. Microscopical specimens will be on view at the Society's House after 1 p.m. during the same day.

Employment of Carbolic Acid by Midwives.—The instructions for midwives in the Tyrol having been recently revised, the following directions have been added with respect to carbolic acid. The decree states that recent scientific investigations having proved that the much dreaded puerperal fever is an infectious disease that may be conveyed by the hands or by instruments which have not been properly disinfected, it is ordered that all midwives, whether examining or treating the healthy or sick pregnant or lying-in women, thoroughly disinfect their hands or any instruments they may use—such as catheters, enema-tubes, sponges, etc. For this purpose every midwife, when she visits a patient, must take with her a 5 per cent. solution of carbolic acid; and this, when she uses it for the above purposes, she must dilute in the proportion of one part to four parts of water. —*Allg. Wien. Med. Zeit.*, November 12.

The Thermo-Cautery for Erectile Tumours.—M. Fochier, Surgeon to the Charité at Lyons, after narrating some examples of the employment of the thermo-cautery, concludes with these words:—"These facts appear to me calculated to demonstrate that in future the use of the thermo-cautery will prove the best method for the radical cure of erectile tumours. It is an instrument which is obligatory when dealing with deep-seated tumours, and is more simple and its use less painful than that of the ligature or cauterisation for superficial tumours. The operation of course is performed during anæsthesia. It is an instrument enabling us to deal with angiomas hitherto only amenable to a palliative treatment; as, for example, deep-seated erectile tumour of the parotidean region. In the absence of very special indications it should, then, be preferred for the treatment of all erectile tumours.—*Lyon Méd.*, Dec. 1.

PAYING PATIENTS IN ST. THOMAS'S HOSPITAL.

Letter to the Treasurer.

We have received the following communication, and deem the subject so important that we publish it in its entirety. It is a letter addressed to the Treasurer of St. Thomas's Hospital by the Senior Physician, Dr. Bristowe, and runs as follows:—

Dear Sir,—When last Monday week, in conjunction with a few of my colleagues, I met you at your request, I was quite ignorant, excepting in so far as I was informed by the terms of the notice of meeting (received on the previous Saturday), that the subject of the admission into the Hospital of paying patients had been under the consideration of the Governors; and was, I need hardly say, altogether unprepared to learn that it had been so far discussed and settled in committee that there was no doubt (as you told us) that a resolution to that effect would be carried at the General Court of Governors to be held on the following Wednesday. I confess, too, that I was surprised that an arrangement, which presumably could scarcely be carried out without our co-operation, should practically have been determined upon without previous conference with us.

At the above meeting I, like others, was unprepared adequately to discuss the subject. But discussion at this stage would have been of little value. You will recollect, however, that I expressed serious doubts as to the expediency of the step about to be taken by the Governors, and that I pointed out what at the moment seemed to me grave objections, both to the scheme as a whole, and to such of its details as were placed before us. Further consideration has satisfied me of the justice of the criticisms which I then ventured to make.

The scheme, however, has now been accepted in principle by the Governors, and has been relegated to the Committee to settle its details and carry it out. Under these circumstances, it would probably be useless to discuss its general merits; but it becomes all the more important that I should point out clearly the chief difficulties which I foresee in the way of its accomplishment, and the chief objections which I recognise to some of the specific proposals which have been made.

1st.—You suggested to us when we met (and I find this suggestion was repeated at the General Court, so that I may assume that this is a point upon which you have formed a tolerably definite opinion) that Block 8, hitherto and now devoted to infectious cases, should in future be allotted to paying patients—the grounds of your suggestion apparently being that this block is only thinly occupied, that it is expensive in proportion to the number of patients that it benefits directly, and that such infectious cases as are received into it might be treated elsewhere in the Hospital, or be removed from St. Thomas's to other institutions. I am quite sure, sir, that this opinion has not been derived from your medical staff; and I do not hesitate to assert that it is utterly at variance with their views on the matter. The only pretence for going to the enormous expense of building the Hospital on the block system was that it should be able safely to accommodate patients of all kinds—infectious and non-infectious. This was fully recognised from the beginning; and not only so, but No. 8 block was, in the course of its erection, on the unanimous recommendation of the medical staff, reconstructed at a cost of some thousands of pounds, with the special object of adapting it for the ordinary reception of infectious cases. It is no doubt true that the wards of this block are usually less thickly peopled than the other occupied wards. And there has at times, and notably during the recent epidemic of small-pox, been a tendency on the part of the Treasurer and Governors to check the entrance into it of infectious cases from without. But notwithstanding this, the block has been of extreme value both to the Hospital and to the public; and, so far from being empty, it contained, at the very time when the General Court was sitting, forty patients, distributed amongst its sixty beds. But even if at times it were to be absolutely deserted, this would be no sufficient reason for discontinuing its use as a place for the reception of infectious diseases. Erysipelas and pyæmia must be purged from the surgical wards; cases of whooping-cough,

measles, scarlet fever, and diphtheria, must, when they break out in it, be taken from the children's ward; and cases of these diseases, of small-pox, and of other like disorders, must, if they appear in them, be removed from the general wards. Nor can there be any excuse, in a Hospital provided at great cost with special means of isolation, for neglecting the advantages which have been thus secured, and to allow, in spite of them, infectious cases to remain in dangerous contiguity with the general patients. As regards the suggestion to remove infectious patients to special institutions, it must be recollected that, apart from the danger to themselves and to the public of sending them through the streets, the Asylum Board Hospitals are for paupers, and no provision is professed to be made in them excepting for persons in actual receipt of parochial relief.

2nd.—I am not aware that any of the medical officers have been consulted as to whether, and on what terms, they would be willing to take professional charge of paying patients in the Hospital. It is quite clear that patients who are able to pay, and undertake to pay, for hospital treatment, would have an altogether different relation to the physicians and surgeons from those whose treatment is gratuitous. They would not be objects of charity at all; and it would, on principle, be unreasonable to require a staff that was elected for quite other purposes to give their gratuitous services to them. I presume that the two guineas a week, which each patient will be called upon to pay, represents the charge to be made by the Hospital in respect of board, lodging, nursing, and medicines, with a margin for profit; and the charge is by no means a heavy one for these advantages. It is altogether inadequate, however, if it be intended to include remuneration for medical and surgical attendance.

Yet, although I maintain that in a hospital established for the reception of paying patients the medical attendants ought not only to be paid, but to be paid adequately, I am free to confess that the objections to the medical staff of our Hospital receiving payment for such patients admitted within its walls are insuperable. If we consented to receive a salary or a payment at so much a head, or chose to ask half a crown or five shillings per visit to each patient, we should be justly laying ourselves open to the charge of competing unfairly with the general practitioners; if we were allowed to claim consulting fees, I need scarcely say that it would appear, and with good reason, that the department was established for our especial benefit; and in either case we should be abdicating the independent and high position in the Hospital which the medical staff ought to hold, and has hitherto held.

The proper principle to adopt is clearly that which has already been suggested, if not finally adopted, in regard to the institutions for paying patients, which are now in progress of realisation—namely, that the patients should employ and pay their own private medical attendants, or else that they should be placed under the charge of a resident medical officer, paid by salary, and with no other source of professional income.

There is another and very important view in which the attendance of the Hospital medical staff on paying patients would be objectionable. The Governors have probably not considered the heavy, and in a scientific aspect doubtless unremunerative, extra labour which they incline to impose upon us. It is not merely that half a dozen or a dozen patients would be added to each medical officer's charge—that not one of us would object to; but they will occupy different wards, so that instead of, as now, having to visit four or five wards, we should have to visit six or seven, scattered in different parts of the Hospital—a matter of no small importance in an institution built on such a plan as St. Thomas's. Moreover, the patients besides probably being particularly uninteresting in the sense above indicated, would certainly, from the fact of their paying for their accommodation, be unduly exacting of time and attention.

3rd.—The remarks just made in reference to the physicians and surgeons apply also in great measure to the resident staff. Are the house-physicians and house-surgeons, clinical clerks and dressers, to be required to attend on the paying patients without fee or reward? It might be remarked, perhaps, that then, as now, they would be gaining experience from the performance of their duties, and that, provided the Hospital were full, it would matter little to them whether the patients they had to attend to were admitted by payment or not. I am satisfied, however, that in practice the result would be different; that the paying patients would regard themselves as a class apart; that they would exact more attention than the other patients, and give less in return; and that ere long, if not at first, junior officers would decline, and I think rightly decline, to give them their gratuitous services.

4th.—Has any serious consideration been given to the kinds of patients to be admitted, and to the terms (not pecuniary) on which they should be admitted and treated? I believe it is contemplated that the paying patients will be furnished by the lower middle-class, and that some care will be taken to exclude persons of a higher and wealthier grade. And I assume it is intended that they shall, as far as possible, be such as are likely to be specially benefited by skilled medical or surgical treatment. But I venture to say that it will be very difficult to secure the admission of suitable patients, unless they offer themselves for selection in the usual way, and consent to be accepted or rejected on their merits. If they be admitted by Governors' letters, they will necessarily be unselected, and, in large proportion, unsuitable for hospital treatment; if they be received on the recommendation of private practitioners, they will certainly comprise an excessive number of old cases of dyspepsia, and other chronic or incurable cases; if the physicians and surgeons have much to do with their selection there is some reason to fear that sooner or later the department will be worked more or less in connexion with their private practice.

Although I am one of those who approve in principle of the establishment of hospitals or institutions for the medical and surgical treatment of certain patients who are able to pay, I have always felt that there were great difficulties in the way of putting it into practice; and have consequently been curious to see how, under Mr. Burdett's auspices, the experiment would answer. And I must confess that I had infinitely rather see the experiment made elsewhere than in connexion with St. Thomas's Hospital.

It seems to me, for an institution of this kind to succeed, that the patients should be admitted, not on account of the urgency or gravity of their cases, but simply because they require medical or surgical care and nursing; that they should not be treated by a staff who carry on exterior practice as well, and who are likely, therefore, to make these institutions subservient to their private practice, but either by their private medical attendants, or by a fully qualified and competent medical officer paid by salary, and by salary alone; that if they require to be seen by a consulting physician or surgeon, he should be called in in the usual way, and on the usual terms; and that such institutions should not be tacked on to the ordinary general hospitals, which are carried on with different objects and on different principles, and with the due working of which they are then only too likely to interfere.

I cannot pretend, therefore, to approve of the contemplated establishment for paying patients within the walls of St. Thomas's, or to believe that the result will be satisfactory. Yet, while not approving of it, and while pointing out the many objections to it which present themselves to my mind, I shall willingly, in the belief that the arrangement is temporary, and intended to bring money into the Hospital coffers, do all that I reasonably can to assist the Governors in their endeavour to make it a success.

But, so far as I can at present see, I am disposed to advocate the appointment of a special resident officer, or of special resident officers, to take the sole medical and surgical charge of the new establishment; and, under any circumstances, must record my respectful, but decided, protest against the suggested misappropriation of No. 8 block. I believe the most satisfactory solution would be to let one of the blocks, at a sufficient rental, to those who are now specially engaged in the movement for institutions for paying patients, and to let them carry out their arrangements independently of the rest of the Hospital.

I remain, dear Sir, yours very faithfully,

J. S. Bristowe.

11, Old Burlington-street, November 28, 1878.

To the above is appended the following:—

St. Thomas's Hospital,
London, November 29, 1878.

We, the undersigned members of the Medical and Surgical Staff of St. Thomas's Hospital, having read the letter addressed by Dr. Bristowe to the Treasurer on the subject of the admission of paying patients to the Hospital, decide that we adopt that letter as a complete exposition of our views on the subject; and beg to express our earnest hope that the representations

contained in the letter may receive full consideration from the Grand Committee. (Signed)

J. S. Bristowe, Sydney Jones,
C. Murchison, John Croft,
William M. Ord, W. Mac Cormac,
Henry Gervis, Francis Mason,
John Harley, Edward Nettleship,
J. F. Payne, Alexr. O. Mackellar,
W. S. Greenfield, H. H. Clutton.
Robt. Cory,

FROM ABROAD.

Professor Hardy on Pneumonia.

In a clinical lecture at La Charité (*Gaz. des Hop.*, October 15) on "The Signs by the aid of which we may diagnose the Passage of Pneumonia from the Second to the Third Stage," Prof. Hardy, after relating the case of a woman in whom such diagnosis had been verified by the autopsy, observed that among the symptoms by which, in certain cases, the passage of the lung from red hepatisation into grey hepatisation may be indicated, the character of the expectoration may be mentioned in the first place. In the third stage of pneumonia, in place of being coloured, viscous, and adherent to the vessel containing it, the expectoration consists of a whitish or greyish secretion, somewhat resembling pus dilated with water. Unfortunately, at this period of the disease, expectoration is often suppressed, so that this valuable element of diagnosis is wanting. As to the opinion held, that in this last phase of pneumonia the expectoration is of a plum-colour, that is an error, as this colour is also met with in the second stage as well. The cough presents nothing special; beyond that in general it is not strong or intense, and sometimes the time comes when it ceases altogether. The dyspnœa is very great, as expressed by a sense of suffocation as well as by the great frequency of the respiratory movements. But this is a sign of no great value, as it is also met with during the second stage when the pneumonia is very extensive. With respect to the general symptoms, one of the best characteristics which may aid our diagnosis is the occurrence of shiverings, not very intense, but well marked, and which are repeated two or three times within the space of several hours. It is especially in very bad cases that this phenomenon is observed. The fever is always very intense, the pulse oscillating between 130 and 150, and being also small and irregular. This sign, however, has no absolute value, for it is also met with during the second stage, when the disease is about to terminate fatally. The temperature also does not aid the diagnosis, it being during the third stage sometimes greatly raised and sometimes a little diminished. Upon the whole, it would seem, at this epoch of the disease, to tend towards becoming lower; and from 40° and 41° C., which it had been for some time in the present case, it descended during the last period of the patient's life to 38·9°. If this observation becomes confirmed by others, it will be of great value in establishing the passage of pneumonia to the period of suppuration. Sometimes the aspect presents quite a special character. Ordinarily, indeed, the features are changed, and the face is pale and leaden, resembling sometimes the appearance of patients during the last stage of heart disease. In some, this colour is contrasted by a bright red, limited to the cheek-bone of the affected side, and due to paralysis of the branches of the sympathetic. It is not uncommon also to meet with some amount of disturbance of the intellectual functions, a subdelirium generally existing.

These phenomena are far from being quite characteristic, and, with the exception of the repeated shiverings, the seropurulent expectoration, the frequency and irregularity of the pulse, and the change in the features, are of no great value. The physical signs are absolutely the same in the two stages, for in both the lung is solidified, and in both the solidification gives rise to identical phenomena.

University of Edinburgh.—The number of students matriculated in the Faculty of Medicine for the current year up to the present time is 1049, viz., students of the first year 340, second year 259, third year 189, fourth year 261.

REVIEWS.

On Asthma, its Pathology and Treatment. By J. B. Berkart, M.D., M.R.C.P., Assistant-Physician to the City of London Hospital for Diseases of the Chest. London: J. and A. Churchill. 1878. Pp. 264.

This work of Dr. Berkart's is carefully and well done, and shows extensive research into the literature of the subject. The history of the opinions of those who have written on asthma, contained in the second chapter, reveals an ingeniousness of speculative pathology which is very perplexing to the student; but no prospect is at present held out of its being sifted by accurate post-mortem observations. None such have as yet been recorded. There is no disease, however, whose symptoms have been more closely watched and more graphically described by physicians, in many instances themselves the victims of its paroxysmal seizures. And it may be said, broadly speaking, that four sets of opinions respecting asthma have been held, namely —1. That it is a nervous affection in which the pneumogastric and phrenic nerves are concerned, giving rise to bronchial and diaphragmatic spasm or paralysis, but most frequently the former, as the symptomatic phenomena. 2. That it is a pulmonary disease of a degenerative kind, traceable back to some past inflammation or some inherent defect of nutrition, and resulting in emphysema attended by occasional bronchial obstruction and excitement of the respiratory centres from the accumulation of carbonic acid in the blood. 3. Some regard the asthmatic seizure as having its origin in a pituitous or an exudative bronchitis, the products of which, containing in some cases mucin crystals, cause obstruction at parts of the bronchial tract. 4. Others look upon the dyspnœal paroxysms as due to hyperæmia of the bronchial tract from vaso-motor disturbance. The whole bent of Dr. Berkart's argument is directed against the idea of asthma being in any sense a neurosis, and in favour of the second hypothesis, with the occasional help of the third and fourth. Dr. Berkart, we think, too readily assumes that provided some organic change be found in the lungs, therefore the dyspnœic seizure is not of nervous origin. Undoubtedly catarrhal signs in some cases precede the asthmatic seizure, but in many other cases nothing is so remarkable as the suddenness and (we must be allowed the term) capriciousness of the attacks. Nothing can be more suggestive of a "nerve storm" than a sudden outbreak of asthma without any appreciable cause. Dr. Berkart does well, however, to direct greater attention to those persistent morbid states presented by asthmatics, and to insist that the disease, whatever its pathology, underlies its paroxysmal manifestations. In this respect it is indeed very comparable to epilepsy, in which the abiding conditions present are difficult to estimate, scarcely discoverable to pathology, but become more obvious as time goes on and seizures multiply; and these lesions, as in the case of asthma, are commonly regarded as the results, rather than recognised as the causes, of the symptomatic outbreaks. Dr. Berkart well points out that with the disease emphysema, which more or less markedly underlies the asthmatic phenomena, persons may have no symptoms, provided they encounter nothing and make no effort which shall call for those reserve respiratory powers in which they are partially or wholly deficient. The reserves have been already called out in emphysema, and any extra call upon them occasions dyspnœa. Dr. Berkart admits that the immediate exciting causes of asthma, numerous and of various kinds as they are, agree in being productive of one common result, viz., obstruction of the bronchi. He will not admit, however, that this obstruction ever arises from intrinsic spasm. And yet the experiments of Williams have never been refuted. Noxious gases, deoxygenated or befouled air, carbonic acid, organic and inorganic dust, etc., operate, the author thinks, as irritants directly affecting the muscular or ganglionic apparatus of the bloodvessels of the lungs and bronchi, causing turgescence and occlusion of the bronchioles. We must refer our readers to Dr. Berkart's work for information as to the mechanism by which this fluxionary hyperæmia is brought about. We do not see that it is simpler, and we do not know that it is more in accordance with facts, than the more ordinarily received nervous theory of bronchial muscular spasm. There are some difficulties, also, in the way of receiving the view that an

accumulation of carbonic acid in the blood, associated with emphysema, is sufficient to excite the respiratory centres or to produce the asthmatic paroxysm. True, most asthmatics are *more or less* emphysematous, but only a minute proportion of emphysematous people are asthmatic; and in the early stages of asthma, before the emphysema is very marked or confirmed, the paroxysms are quite as severe, sometimes even more so, than in the later stages. Again, if asthmatics are so sensitive to imperfectly oxygenated air, why do they often fly for relief to smoky, carbon-laden atmospheres, and seem only happy in small rooms, with every crevice closed, reeking with the fumes of nitre and burning weeds, which render the air almost irrespirable to their friends? We therefore do not think that the difficult questions as to the etiology and pathogeny of asthma are by any means as yet cleared up. Dr. Berkart's thoughtful work unquestionably throws some additional light upon the questions, and may suggest other directions of inquiry for their elucidation. It is evident from his criticism of the recorded signs of asthma, and especially in his careful statement of the principles which should guide us in the treatment of that disease, that Dr. Berkart recognises several more or less distinct varieties of the malady. We venture to think that in this direction the subject wants further working out, and that a careful grouping of his cases will compel Dr. Berkart to set aside at all events one class in which the nerve disorder is the most prominent etiological feature.

GENERAL CORRESPONDENCE.

INNOCENCE!

[To the Editor of the Medical Times and Gazette.]

Sir,—I take the liberty of writing to you, feeling sure that you have been grossly deceived and betrayed. That account sent to you of your London Board of Works going down the river Thames, and viewing, and tasting, and smelling the water at all the stinkingest places they could think of, is far too good to be true; it must be a nasty joke. Though I know something of dirty streams, I would not have joined such a party for a good round sum,—while you seem to say that they do it all for the love of the public. But no doubt you have been joking all the time; but if you were, sir, allow me, as an old subscriber, to say that the joke was not a nice one. Why, if the story were true, the Board of Works would be stultifying themselves, for always as they went farther down the river the water grew better and better, till below the sewage outfall, though, as you say, there was some filth floating on the surface, it was better than ever! Why, then, should you have a purer supply of water for domestic consumption, from the chalk and what not, when that which comes away from you is so very nice? The water below the outfall may contain a little more salt, and taste brackish—but what of that? the dissolved chalk would be left out. It is quite plain you Londoners, if you are not making fun all the while, should take your drinking-water from down below there. Do, sir, if the story is not all a joke, try to get some of these tasters to come down here; they will find something to try their metal, and if they could only get our folks to believe them—goodness! what an amount of money it would save. I am, &c., A West Riding Man.

The Faculty of Medicine of Bordeaux.—The second of the two new faculties of medicine (that of Lyons being the first) created in 1874 by the National Assembly, in conformity with the recommendation of the report of Prof. Paul Bert, has just been inspected with great ceremony at Bordeaux. The Inspector-General, Prof. Chauffard, delegated by the Minister of Public Instruction, delivered the introductory address, which is reported in the *Gazette Hebdomadaire*, November 29.

Professor von Langenbeck.—On November 9, the sixty-eighth birthday of this celebrated surgeon was celebrated with great festivity at the Berlin University, his portrait, together with an address, being presented to him by a deputation. He has now been attached for more than thirty years to the University. The successor of Dieffenbach, he continues at the head of German surgery, manifesting almost a juvenile freshness.—*Deutsche Woch.*, November 16.

REPORTS OF SOCIETIES.

THE CLINICAL SOCIETY OF LONDON.

Friday, November 22.

Dr. Greenhow, Treasurer, in the Chair.

Talipes Varus.

Mr. Bryant exhibited a patient who had been the subject of this deformity, and had been treated by the removal of a wedge of bone from the tarsus. This boy was twelve years of age. He had been under surgical treatment for the condition from infancy. When five years of age tenotomy had been performed, with some success; but as the Scarpa's shoe had caused pain, it was laid aside, and the deformity returned. On admission into Guy's Hospital the muscles of the leg were wasted, and the patient walked upon the outside of the foot, upon which had formed two large bursæ. Mr. Bryant removed a wedge-shaped piece of bone from the tarsus, as performed by Mr. Davies-Colley in October, 1875. An incision was made across the dorsum of the foot, from a point corresponding to the tubercle of the scaphoid to the outer border of the cuboid; and a second incision along the outer border of the foot—the two incisions forming a T-shape. The flaps were then turned back, and the tendons of the extensors divided. A spatula was introduced around the scaphoid bone, towards the sole of the foot, to protect the soft parts, and the lower section of the wedge of bone cut with a keyhole saw, one line of section extending across the dorsum of the foot from the scaphoid to the anterior border of the cuboid, the second bone-section being made higher up; and a wedge with its apex corresponding to the scaphoid bone, and its base to the cuboid, one inch long, was thus cut away. After the operation the anterior half of the foot was readily brought round into position, and horse-hair drainage was employed. The temperature rose to 102°, but on the third day was down to 99·7°, with a pulse of 80. A small quantity of pus was evacuated by a puncture made into the skin, in a position corresponding to the apex of the wedge, and in other respects the wound healed rapidly. The boy exhibited presented a foot of good form, with a flat sole, on which he walked with comfort. The foot was somewhat shortened after the operation. The tendo-Achillis had been cut, with the object of bringing down the heel, from which but little advantage had resulted. Mr. Bryant said that ablation of the cuboid had been suggested by Dr. Little in 1854, and practised by Solly in 1857, upon which the operation now under consideration was a great improvement. He considered it also much better than Mr. Lund's operation for the removal of the astragalus, which was performed in 1872, but which he thought might be useful where the equinus was worse than the varus.

Mr. Richard Davy congratulated Mr. Bryant on the case. Mr. Davy had operated in a similar way more frequently than any other surgeon. There was a class of confirmed and intractable cases of talipes that resisted all methods of treatment. In 1874 he reopened the subject of the removal of the cuboid bone, which operation had been once performed by the late Mr. Solly in 1854. Thus for twenty years the operation had not only lain dormant, but had even been condemned by leading orthopædic surgeons. During 1874 and 1875 he operated on five cases, and removed the cuboid; although the success resultant on this precedure was marked, yet it was not quite perfect. He had proceeded on strictly experimental methods, and had not felt justified in interfering with the astragalo-scaphoid joint until he had demonstrated that attacking the calcaneo-cuboid joint alone was insufficient. In April, 1876, he published his experience; and an abstract of a clinical lecture was printed. In October, 1876, Mr. Davies-Colley read his paper before the Royal Medical and Chirurgical Society. He had laid down the lines of operative procedure in a lecture published on December 15, 1877; and stated that the more closely those lines were followed, the better was the result gained. Mr. Davy showed the casts of his ninth patient, taken before and after the operation; and the result was very satisfactory. He considered that even now the operation was on its trial, and was opposed by many surgeons; but he was content to abide by results. Patients after the operation became absolutely plantigrades; the scar was small, and well out of the line of pressure; there was no possibility of

relapse, and a symmetrical foot took the place of an unsightly and useless member.

Iodide-of-Potassium Eruption.

Dr. Dyce Duckworth exhibited a patient suffering from a well-marked eruption produced by iodide of potassium. The case was that of a man, aged thirty-two, who was formerly intemperate, suffered four years previously from rheumatic fever, and was the subject of aortic valvular disease and chronic tubal nephritis, with some dropsy of the legs. On November 8 a mixture was prescribed for him containing some ammonio-citrate of iron, and two grains per dose of iodide of potassium thrice daily. On the 20th inst. an eruption appeared upon the face, and on the 22nd the patient came under notice. He was found to be suffering from coryza and general bronchial catarrh with hoarseness. The eruption was situated almost exclusively on the face and ears. Some portions were found on the back of the neck, and a few scattered spots upon the backs of the hands. The bulk of it was upon the left cheek, although it was fairly symmetrical. Two or three stages were observable in the course of the outbreak. On the forehead were seen numerous hard, spotty papules, becoming vesicular, not umbilicated. On the cheeks the highest point of vesiculation was reached, and here numerous coherent and confluent masses were seen. A vividly red arch extended around the individual and collective vesicles. The fluid was puriform in many of them. The patient was first seen on the third day of the eruption. There was no mass that could properly be called a bulla, and the eruption more resembled patches of herpes in some parts than anything that could be termed acne. Some of the vesicles occurred upon a piece of white scar-tissue on the forehead, where probably no sebaceous structures remained. There was no rash on the body. Some of the vesicles were found on the lips; none manifest on the tongue. The points of particular interest in the case, according to Dr. Duckworth, were, first, its occurrence as the result of small doses of the drug. It appeared that some months previously, in another hospital, a similar eruption had appeared after taking some medicine, and which passed away on discontinuing it. Secondly, the case was an additional one to certain others, which Mr. Morrant Baker and another observer had noticed, in which there was present chronic renal disease. It had been surmised that in such cases defective elimination occurred, and the drug was left longer in contact with the textures of the body than in the instances where the kidneys were healthy. Dr. Duckworth had published some observations upon the passage of iodide of potassium and other drugs through the kidneys in Bright's disease, in the *St. Bartholomew's Hospital Reports*, and shown that in some cases the iodide does not pass out by these organs. In this instance iodine was found abundantly in the urine. The contents of some of the vesicles were also examined, but the results were equivocal as to the presence of iodine. However, it was well recognised that both iodide and bromide of potassium rashes occurred in the persons of those whose kidneys were presumably healthy. Even in such instances there might be defective eliminating power. Thirdly, the nature of the eruption did not warrant the term acne being applied to it, and further observation was wanting to prove how far the sebaceous glands were the true seat of the inflammation. Dr. Thin's recent examination of a case went to prove the immunity of these structures.

Dr. Greenhow referred to a case in which a rash had appeared three times in the same patient. Here there was no albuminuria.

Dr. Farquharson drew attention to the smallness of the dose necessary to bring out the rash. He attributed this to the eliminating organs being more actively brought into play by large doses of the iodide.

Watery Discharge from One Nostril.

Sir James Paget read notes of this case. The fluid, about two ounces, shown to the Society, had dropped from the left nostril of a lady, aged forty-nine; and the author stated that similar fluid had been dropping, with rare intermissions, for eighteen months. The fluid looked like pure water, or like that from the pia mater, or that from an acephalo-cyst. There was no evidence of general ill-health, nor any appearance of any kind of local disease of the nose. The history was nearly as insignificant. In November, 1876, the patient had received a heavy blow over the left frontal sinus, but it seemed to have done no harm at the time. In January, 1877, she had one day of intense headache, but there had been no return of this. In February, 1877, she had a severe mental shock; and in May, 1877, the dropping began. From that time to the present the dropping continued. Except for a fortnight in May, 1878, when she had bronchitis and took morphia, and on one occasion when it ceased for a night, a small drop fell or ran down the lip every few seconds; and about four ounces had been collected in an afternoon and evening. The quantity was generally uniform, but was increased by much exertion or by straining. On long standing the fluid deposited a minute quantity of a greyish substance, in which nothing could be found but the chance materials washed off from the surface of the nasal mucous membrane. Dr. Russell, Professor of Chemistry at St. Bartholomew's Hospital, reported the fluid to be slightly alkaline, and to contain proteid matter (probably albumen), chloride of sodium, phosphates, and a slight trace of iron, but no grape sugar. The specific gravity was 1004. Mr. Taylor had found the specific gravity on another occasion to be 1009, when he analysed the fluid for Mr. Lawson, who had previously seen the case. After suggesting several theories to explain the case, Sir James Paget concluded by expressing his opinion, though speaking with much doubt, that the fluid was derived either from a frontal or ethmoidal sinus, or from the subarachnoid space, or the sac of the arachnoid membrane. He brought the case forward in the hope of hearing that similar cases had been observed, and that by collecting and comparing them we might gain some knowledge of their real nature.

Mr. Brudenell Carter had met with a somewhat similar affection in the case of a friend of his, in whom it began at the age of eighty, and who was also much troubled with gout in various forms. Here the fluid came from both nostrils.

Mr. Spencer Watson had seen cases of chronic catarrh of the nostril where the fluid was limpid, but at times became purulent. In a man aged thirty-four there was abundant discharge from one nostril when the head was lowered.

Mr. Lawson had seen the present case, and believed that it was cerebro-spinal fluid which escaped. During sleep very little came away. Was this because less was then secreted, or only because the fluid was swallowed?

Dr. Hewan had observed a somewhat similar discharge from the nostril of a phthisical young man, which had yielded to hypophosphite of soda; this was, however, of a catarrhal nature.

Dr. Althaus inquired as to the condition of the olfactory nerves.

Sir J. Paget replied that the sense of smell was perfect: his case differed essentially from the others quoted, in that the secretion was never purulent. It was doubtful, and even improbable, that the fluid was cerebro-spinal, and it was certainly not a catarrhal affection. In any cases which are hereafter reported, the amount of the secretion and its character should be most accurately stated

(*To be continued.*)

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, November 26.

Charles West, M.D., President, in the Chair.

Tracheotomy in Membranous Laryngitis.

Mr. R. W. Parker read a paper, in which he pointed out the indications for the adoption of the operation of tracheotomy in membranous laryngitis, and noted some special points in regard to its after-treatment. The author expressed his regret that the surgeon is only too often called in after all therapeutic measures have failed; the more so because these measures generally include the use of depressants, which, if not at once beneficial, greatly tend by their continued administration to increase the prostration so often a predominant feature of the disease. He regards recession of the chest-wall as a more important indication for tracheotomy than a loud clanging cough: for in the most urgent cases, voice and cough are all but abolished, owing to implication of the vocal cords. He advocated the administration of chloroform previous to the operation, and had never seen any ill effects therefrom. The higher operation was preferred as the more easy, especially in children, and the use of a tracheal dilator advocated in preference to the

immediate introduction of the canula. In this manner the tracheal wound was kept open. The author then advised, as a matter of routine in every case, that the trachea and glottis be thoroughly cleared of all foreign matters, whether membrane or mucus, before the introduction of the tube. For this purpose a feather was usually employed; but any other means might be adopted which the operator preferred. The feather might be passed downwards towards the trachea, and upwards into the larynx, and through the glottis. The presence, it was argued, of membrane or inspissated mucus in the larynx above the tube after tracheotomy was often an unsuspected cause of reflex irritation and cough. The surgeon therefore ought every now and then to clear out the larynx, so long as the patient was unable to do this for himself; and while he had to wear the canula in his trachea the patient would be unable to use the natural means—viz., coughing—owing to the fact that all air directed from the larynx passed through the tube. Mr. Parker advocated the use of the largest sized tube which could be got into the trachea without the employment of actual violence, and of the shortest consistent with safety; and he laid stress on the advantages of the tracheal part of the tube being freely movable. As regarded the curve of the tube, it was stated that the outline should approximate to the Gothic rather than to the Roman arch—in other words, tubes made in the form of quarter-circles (the usual forms were not recommended, for it could be shown that such tubes must almost necessarily impinge on the anterior wall of the trachea, and so produce mischief). He believed that a large proportion of the troubles which in past years had arisen from the use of "rigid" tubes had been caused by "ill-fitting" tubes. Speaking of Mr. Baker's "flexible tubes," the author was rather inclined to doubt the expediency of regarding "flexible" tubes as less likely to produce ulceration than "rigid" ones; for unless the flexible tubes were made of a suitable curve, they would most probably lead to ulceration, just as certainly as (though perhaps less rapidly than) rigid tubes. The great indication for operation having been the presence of a mechanical impediment to respiration, so the chief object of the surgeon in the after-treatment must be to prevent its recurrence. The use of a feather had already been referred to. Another important aid was the employment of steam; the amount varied with the individual case, but an excess was in all cases to be avoided. The ventilating croup kettle manufactured by Messrs. Allen and Son the author considered the most useful apparatus for this purpose; it supplied not only steam, but fresh and warmed air at the same time. The less there was of tracheal secretion, the more was steam needed, and the converse. Creasote, carbolic acid, benzoin, and other medicaments, might be added in order to meet the requirements of various cases. The use of "solvents" was strongly recommended, the most important of these being soda; it might be used in solution (ten or twenty grains to one ounce of water), and ought to be sprayed into the throat from time to time. It was thought to soften membrane and so help its removal, and also to render its re-formation less possible. The author had seldom seen cases in which a fatal result could be traced to the operation itself, pneumonia and collapse being the commonest causes of death. Bearing in mind that the operation was to be undertaken not as a curative measure, but simply with a view to relieve a mechanical impediment to respiration—seeing, nevertheless, the great frequency with which, after tracheotomy, the trachea and larynx on the post-mortem table were found covered, not to say choked up, with membranous exudation (specimens of which might be found in almost every anatomical museum)—the author, as a practical outcome of his paper, and with a view to raise a definite issue for discussion, felt justified in enunciating the following dictum: The presence of membrane in the trachea in a fatal case of membranous laryngitis after tracheotomy must be regarded as evidence of the want of due care on the part of the surgeon in charge, just as much as would the presence of a piece of gut in the inguinal canal after herniotomy, or a calculus in the bladder after the operation of lithotomy.

Case of Thyrotomy for Removal of a Membrane Completely Obliterating Larynx.

Dr. Semon brought forward this case, which he said was the third ever mentioned in which the operation was performed for the removal of a membrane completely obliterating the larynx. The membrane was formed after an attempted suicide. There was secondary union of the false vocal cords, and anchylosis of one arytænoid cartilage. The operation, although unsuccessful, had a great many interesting points, amongst which might be mentioned—(*a.*) The practical corroboration of Professor Störck's (of Vienna) statement, that the posterior wall of the larynx, and especially the inter-arytænoid fold, are apt to produce cough when touched, while the anterior and lateral walls of the larynx are not so irritable. (*b.*) The discovery that an excess of even equal pressure on the inner walls of the treachea may produce an intense asthmatic attack. (*c.*) The possibility of determining approximately by laryngoscopic examination the thickness of a transverse membrane *completely* occluding the larynx. (*d.*) The necessity for making in such cases a second examination from the tracheal opening (tracheotomy having been performed before), in order to see whether one has to deal with several membranes. (*e.*) The construction of a modified tampon-canula. (*f.*) The caution to be used in administering chloroform through a tampon-canula. (*g.*) The use of artificial light while operating in the cavity of the larynx.

Dr. Andrew commented on a point of interest in Dr. Semon's case—an asthmatic attack which occurred during the operation. Was it asthma in the general acceptance of the term? He suggested that possibly the introduction and inflation of the indiarubber bag might have produced some constriction of the larynx below.

Dr. Semple asked how many cases of membranous laryngitis had been under Mr. Parker's observation, and what had been the mortality. Mr. Thomas Smith had told him that every case in which he had operated, except one, had died.

Dr. Semon said that the asthmatic attack could not have been due to the narrowing of the larynx, as he had introduced a goose-quill as far down as the bifurcation of the trachea, and moved it about freely. The dyspnœa was both inspiratory and expiratory, but chiefly the former; all the muscles of the chest were firmly contracted. In some experiments of Cyon, in which a string was passed round the trachea, dyspnœa came on much sooner than could be accounted for by narrowing of the tube. Any explanation must, however, be purely hypothetical.

Mr. Morrant Baker suggested that the elastic bag might have had some connexion with the production of narrowing. With regard to the flexible tracheotomy-tubes, he thought that Mr. Parker's objection was very much that of those who had not used them. He would be glad to know the experience of those who had used the tubes.

Mr. Thomas Smith said that Dr. Semple's question was a very pertinent one. The whole gist of the subject lay in the after-treatment of the tracheal wound. He had had but one recovery after tracheotomy for diphtheria; but this statement was not applicable to all the cases of membranous laryngitis on which he had operated. He thought that Mr. Parker had advocated a real progress. Tracheotomy was too often a desperate remedy. He had had a case in which the patient died on the operating-table from the membrane blocking up the trachea, it being pushed down whenever the tube was introduced. He had, on the other hand, seen Mr. Parker treat an apparently hopeless case in a very energetic way, pulling out pieces of membrane, sucking them out by a catheter, etc.; and this treatment was justified by success.

Mr. Parker said that at the Children's Hospital there had been seventeen cases of tracheotomy for membranous laryngitis under his care and that of Mr. Howard Marsh, with eight deaths.

Mr. Napier was surprised that any surgeon should prefer a stiff tracheotomy-tube to a flexible one. He objected to silver tubes as being liable to oxidation, which would produce irritation. He was engaged in devising a flexible tube of closely twisted platina wire, which would not be subject to oxidation. The steam-apparatus referred to by Mr. Parker seemed to him to closely resemble that described some time ago by Dr. R. J. Lee.

Mr Holmes had had only one case of thyrotomy, and did not see any occasion for sutures in it. When he saw the patient, many years afterwards, the thyroid cartilage was perfectly united. It was superfluous to leave a portion undivided as Dr. Semon had done, and also undesirable, as it prevented the thorough exposure of the ventricles of the larynx and narrowed the space in which the surgeon had to work. The operation was a safe one, even before the use of the tampon was introduced. Mr. Parker's suggestion was very valuable. In performing tracheotomy, he had always abstained from touching the inner surface of the air-passage, from fear of producing irritation; but he hoped that in

future surgeons would deal more freely with the membranous exudation. The results obtained by Mr. Parker would induce one to adopt his plan if the trachea would bear it. He believed that the flexible tube had not been used by many. He had tried it in one case where the trachea was extremely irritable, and had found that the irritation which it caused was apparently greater than that produced by the metallic tube, although it was easily introduced. He had at last succeeded in enabling the patient to wear, for several hours daily, a tube having a round end and a window on each side. He could not understand why a tube of greater calibre than the glottis should be introduced; he did not think that the length of the tube made a difference in the facility of breathing.

Mr. Howard Marsh agreed very much with Mr. Parker as to the necessity of clearing the trachea of false membrane. Something of the kind had been done by Bretonneau, Bouchut, and others, but with less success. The favourable result in Mr. Parker's cases was very striking. He (Mr. Marsh) had operated in about fifty cases, and had had only eight recoveries. A question of much interest was, how far it was easy to separate the false membranes, which he would expect to be originally very adherent. The fatal pneumonia—to which there was a great tendency after operations for diphtheria—was, he believed, due to the sucking down of portions of false membrane into the bronchi. Removal of the membranes might avert this, but not in all cases. He thought that Mr. Baker's flexible tubes were a great improvement in surgery.

Dr. Ord agreed with Mr. Parker's remark as to the advisability of early tracheotomy. The operation was too often delayed until the patient was weakened by depressing remedies, and also by the prolonged dyspnœa. When there were signs that the lung was much collapsed, operation should be performed. The pneumonia was no doubt due to sucking in of morbid matter; and this was more likely to occur if the lung had been collapsed, and expanded after the operation.

Dr. Semon said that his object in not completely dividing the thyroid cartilage was not merely to preserve the cartilage, but to avoid injury to the anterior commissure of the vocal cords.

The President said that most of Mr. Parker's operations had been performed during his connexion with the Children's Hospital. He had looked as a critic on a large number of operations of tracheotomy: he never regretted that it was done early, but often regretted that it was done late. He believed that there was no indication for the operation so trustworthy as retraction of soft parts during inspiration. Mr. Parker's suggestions with regard to the operation were sound and wise. As regarded the size of tubes, he had seen great evil from too small tubes; it was more possible to err in having the tubes too small than too large. Trousseau was at one time accustomed to swab out the larynx after operating, but afterwards abandoned this practice. He had seen the canula, when introduced, push the false membrane before it. The chance of a successful result after tracheotomy was but small, unless there were an exceedingly competent nurse, able to deal with any emergency. He doubted whether pneumonia could be attributed to the tracheotomy. He had never tried Mr. Baker's tubes, but could conceive cases in which they might be useful.

Mr. Parker said that Mr. Baker's flexible tube ought to be judged on its own merits, and not by attributing evils to the rigidity of the metallic tube. As regarded the size of the tubes, if Mr. Holmes would breathe through tubes of different sizes for half an hour, he would find that there was a difference. He acknowledged the valuable aid which he had received in his operations from Mr. Marsh, as well as from the President. If pneumonia were due to the sucking in of the false membranes, this was an additional reason for removing them, so as, if possible, to prevent the lungs from becoming affected. He was aware that Trousseau had recommended the swabbing out of the trachea; but it had been necessary to omit some parts of his paper.

Italian-English.—Dr. Domenico Chiara has just published some folio plates illustrative of the process of spontaneous evolution sometimes observed in cross presentations of the fœtus. In order to render it more accessible to the English readers, he has accompanied it by a translation into our language. How far this rendering is idiomatical may be judged of by his translation of his title-page, "La Evoluzione Spontanea sorpresa in atte, mediante la Congelazione," which he renders "Spontaneous Evolution caught in act through Corpsy Congelation"!

NEW INVENTIONS AND IMPROVEMENTS.

STEAM SPRAY APPARATUS.

Messrs. Allen, of 64, Marylebone-lane, W., have (as we announced in our issue of November 16) just manufactured an excellent, and at the same time cheap, steam spray-producer. We now insert a woodcut which will give a good idea of its size and shape. It has been in use, we are told, for some weeks, and has proved itself an efficient and safe instrument. It is made of strong block tin; is provided with a safety valve;

and it will go on working for some time without refilling. We are far from saying that it is perfect—indeed, improvements might be suggested, especially in the lamp,—but at its price it cannot be excelled. It has been manufactured expressly with a view to economy, and in the hope of reducing as much as possible the initial cost of carrying out Lister's plan of dressing wounds. We can recommend the instrument to public institutions as well as to private individuals.

MEDICAL NEWS.

Apothecaries' Hall, London.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, November 28:—

Collier, Mark Percell Mayo, Turnham-green.
Gimlette, Thomas Desmond, Merton-road, Southsea.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Gilkes, Malin D'Ogley, Guy's Hospital.
King, Ernest Edward, Middlesex Hospital.
Seymour, John Rusby, London Hospital.
Shaw, William Wright, St. Bartholomew's Hospital.
Rigby, John, Guy's Hospital.
Wickham, Walter, St. Bartholomew's Hospital.

BIRTHS.

Church.—On November 29, at 130, Harley-street, the wife of W. S. Church, M.D., of a son.

Crew.—On November 24, at Higham-Ferrers, the wife of John Crew, L.R.C.P. Lond., of a son.

Cullimore.—On December 1, at Westgate-terrace, S.W., the wife of D. H. Cullimore, F.R.C.S. Ire., Surgeon Madras Army, of a son.

Debenham.—On November 14, at Heath House, Stepney, the wife of Robert Debenham, M.R.C.S. Eng., L.S.A., of a daughter.

Francis.—On December 3, the wife of William Francis, of the Manor House, Richmond, of a daughter.

Madeley.—On November 30, at Chatham, the wife of George Henry Madeley, M.R.C.S. Eng., Surgeon Royal Marine Infirmary, of a daughter.

Smith.—On October 7, at Auburn, South Australia, the wife of Arthur W. Smith, M.D. Lond., of a daughter.

Taylor.—On November 27, at Bovey Tracey, South Devon, the wife of A. Norton Taylor, M.R.C.S., of a son.

Thornton.—On November 21, at Brighton, the wife of J. H. Thornton, M.R.C.S. Eng., Surgeon-Major Bengal Army, of a daughter.

Wall.—On November 28, at 2, Burlington-road, St. Stephen's-square, the wife of Reginald Bligh Wall, M.R.C.S., of a daughter.

Watmough.—On November 30, at Christchurch, Hants, the wife of Wm. Watmough, M.R.C.S. Eng., of a son.

MARRIAGES.

Battesbury—Flower.—On November 27, at Codford St. Peter, George Henry Battesbury, M.D. Lond., of Wimborne Minster, Dorset, to Jessie, second daughter of Isaac Flower, M.R.C.S. Eng., of Codford St. Peter.

HARDY—TANNER.—On November 28, at Cork, Robert Henry Hardy, 11th Hussars, eldest son of the late Robert Hardy, Esq., to Lily, younger daughter of W. K. Tanner, M.D., of Lapps Island, Cork.

LEAKE—DUNNE.—On November 28, at Dublin, George Dalton Nugent Leake, M.R.C.S. Eng., Surgeon A.M.D., eldest surviving son of Jonas Leake, M.D., of West Kensington-gardens, W., to Annie, daughter of the late William Dunne, Esq., of Larch Hill, Co. Kildare.

WARWICK—IFOLD.—On December 3, at Highgate, William Rollinson Warwick, M.D., of Beckenham House, Hastings, to Charlotte, youngest daughter of the late William Ifold, of South Lodge, Campden-hill, Kensington.

DEATHS.

MULLER, FREDERICK S., M.R.C.S. (retired), at 12, Carlton-road, Maida Vale, on December 1, in his 71st year.

PAGE, MARY, wife of David Page, M.D., at Netherfield, Kendal, of peritonitis, on November 29, aged 30.

POOLEY, CHARLOTTE LOUISA, wife of Richard C. Mason Pooley, L.K.Q.C.P.I., L.R.C.S.I, at Townhead, Rochdale, on November 27.

SWEETING, THOMAS, M.D., of Basingstoke, at Bournemouth, on November 28, aged 44.

WALLACE, JOHN, M.R.C.S., L.S.A., late Staff Surgeon R.N., at 6, Claremont-villas, The Mumbles, near Swansea, on November 30, aged 52.

WRIGHT, MARGARET HILDA, daughter of Strethill H. Wright, M.D., M.R.C.P.E., at Highbank, Hartford, on November 22, aged 11 weeks.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BELGRAVE HOSPITAL FOR CHILDREN, 72, WINCHESTER-STREET, PIMLICO.—House-Surgeon. Applications, with testimonials, to the Secretary.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—House-Surgeon. Candidates must be Members of one of the College of Surgeons of Great Britain or Ireland. Testimonials to the Chairman of the Medical Committee, on or before December 10.

BRISTOL GENERAL HOSPITAL.—Physician's Assistant. Candidates must produce proof of a registered medical qualification, also satisfactory testimonials of ability and good moral conduct. Applications to the Secretary on or before December 7.

CARLISLE DISPENSARY.—Junior House-Surgeon. Applications, with copies of testimonials, stating age and qualifications, to Mr. J. H. W. Davidson, Hon. Sec., 8, Devonshire-street, Carlisle.

HULL GENERAL INFIRMARY.—Honorary Physician. Applications to the Chairman of the Board of Management, from whom further information as to qualifications, etc., may be obtained, on or before December 10.

INFIRMARY FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST, 26, MARGARET-STREET, CAVENDISH-SQUARE, W.—Visiting Physician. Candidates must be Members of the Royal College of Physicians of London. Testimonials to the Secretary.

METROPOLITAN FREE HOSPITAL, 81, COMMERCIAL-STREET, SPITALFIELDS.—Assistant House-Surgeon. Candidates must be qualified. Applications to be addressed to the Committee.

UNIVERSITY COLLEGE HOSPITAL, LONDON.—Surgical Registrar. Applications and testimonials to Talfourd Ely, M.A., Secretary, on or before December 10.

YORK DISPENSARY.—Resident Medical Officer. Candidates must be duly qualified and unmarried. Letters and testimonials to S. W. North, Esq., 84, Micklegate, York, on or before December 14.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population in computed according to the census of 1871.

RESIGNATIONS.

Hoxne Union.—Mr. F. W. Friend has resigned the Hoxne District; area 6988; population 1686; salary £42 12s. per annum.

Mere Union.—Mr. D. S. E. Bain has resigned the First District; area 19,008; population 4548; salary £105 per annum.

Woburn Union.—Mr. J. A. Macdonald has resigned the Workhouse; salary £35 per annum.

APPOINTMENTS.

Halifax Union.—John C. McLachlan, L.R.C.P. Edin., L.R.C.S. Edin., to the Northowram District.

Samford Union.—T. D'Oyly Pain, L.S.A., to the Stratford District.

Winchester.—Beresford N. Earle, M.A., B.M., as Analyst for the City.

EFFECTS OF THE CONTAGIOUS DISEASES ACTS.—We have been asked to publish the following letter:—"2, South-terrace, Cork, November 14, 1878.—Dear Sir,—I have been Acting Chaplain in the Lock Hospital in Cork since it was opened under the Contagious Diseases Act. I have also been Chaplain of the Cork Workhouse for nearly twenty years. I have over 3000 Church Protestants in my parish, of which I have been rector for nearly twenty-one years. You may judge that my experience as a parish clergyman must be considerable. I look upon the Contagious Diseases Act as one of the greatest blessings, socially and morally, and (so far, at all events, as poor little children are concerned) physically, that has ever been conferred upon this country. You may make any use you please of this letter.—I am, etc., GEORGE WEBSTER, D.D.—F. W. Lowndes, Esq."

AT a meeting of the Senate of the University of London, on Wednesday, November 25, Dr. W. S. Greenfield was appointed to the post of Professor-Superintendent of the Brown Institution, *vice* Dr. Burdon Sanderson, resigned.

ECONOMICAL COFFINS.—An egg merchant of Limbourg, who sends a great number of eggs to London, had often grieved at the little profit derived from the wooden cases in which they are sent. After long meditation he hit upon a means of rendering the means of transmission more lucrative. He ordered a dozen or two of coffins, knowing that this last clothing of humanity are relatively dear articles in London, and believing a considerable demand for them in a cheaper form would exist at the hospitals. It appears that his calculations here turned out correct; and this is why eggs packed in coffins now arrive in London.—*Rév. Méd.*, Nov. 25.

SKIN DISEASES.—The following classification and nomenclature of skin diseases is that adopted by the American Dermatological Association:—Class I. *Disorders of Glands:*—1. *Of sweat glands.*—Hyperidrosis. Miliaria crystallina. Anidrosis. Bromidrosis. Chromidrosis. 2. *Of sebaceous glands.*—Seborrhœa: *a.* oleosa; *b.* sicca. Comedo. Cyst: *a.* Comedo; *b.* Wen. Molluscum sebaceum. Diminished secretion. Class II. *Inflammations:*—Exanthemata. Erythema simplex. Erythema multiforme: *a.* papulosum; *b.* bullosum; *c.* nodosum. Urticaria. Dermatitis(a): *a.* traumatica; *b.* venenata; *c.* calorica. Erysipelas. Furuncle. Anthrax. Phlegmona diffusa. Pustula maligna. Herpes: *a.* facialis; *b.* progenitalis. Herpes zoster. Psoriasis. Pityriasis rubra. Lichen: *a.* planus; *b.* ruber. Eczema: *a.* erythematosum; *b.* papulosum; *c.* vesiculosum; *d.* madidans; *e.* pustulosum; *f.* rubrum; *g.* squamosum. Prurigo. Acne. Impetigo. Impetigo contagiosa. Impetigo herpetiformis. Ecthyma. Pemphigus. Class III. *Hæmorrhages:*—Purpura: *a.* simplex; *b.* hæmorrhagica. Class IV. *Hypertrophies:*—1. *Of pigment.*—Lentigo. Chloasma: *a.* locale; *b.* universale. 2. *Of epidermal and papillary layers.*—Keratosis: *a.* pilaris; *b.* senilis. Callositas. Clavus. Cornu cutaneum. Verucca. Verruca necrogenica. Xerosis. Ichthyosis. Of nail. Hirsuties. 3. *Of connective tissue.*—Sclerodcrma. Sclerema neonatorum. Morphœa. Elephantiasis Arabum. Rosacea: *a.* erythematosa; *b.* hypertrophica. Frambœsia. Class V. *Atrophies:*—1. *Of pigment.*—Leucoderma. Albinismus. Vitiligo. Canities. 2. *Of hair.*—Alopecia. Alopecia areata. Alopecia furfuracea. Atrophia pilorum propria. 3. *Of nail.* 4. *Of cutis.*—Atrophia senilis. Atrophia maculosa et striata. Class VI. *New Growths:*—1. *Of connective tissue.*—Keloid. Cicatrix. Fibroma. Neuroma. Xanthoma. 2. *Of vessels.*—Angioma. Angioma pigmentosum et atrophicum. Angioma cavernosum. Lymphangioma. 3. *Of granulation tissue.*—Rhino-scleroma. Lupus erythematosus. Lupus vulgaris. Scrofuloderma. Syphiloderma: *a.* erythematosum; *b.* papulosum; *c.* pustulosum; *d.* tuberculosum; *e.* gummatosum. Lepra: *a.* tuberosa; *b.* maculosa; *c.* anæsthetica. Carcinoma. Sarcoma. Class VII. *Ulcers.* Class VIII. *Neuroses:*—Hyperæsthesia: *a.* Pruritus; *b.* Dermatalgia. Anæsthesia. Class IX. *Parasitic Affections:*—1. *Vegetable.*—Tinea favosa. Tinea trichophytina: *a.* circinata; *b.* tonsurans; *c.* sycosis. Tinea versicolor. 2. *Animal.*—Scabies. Pediculosis capillitii. Pediculosis corporis. Pediculosis pubis.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

A. B., Romsey.—It is very easy to over-ventilate, especially for the old and feeble. Your sitting-room is very low; but with a three-light bow window and two doors there cannot be much want of a free intake of fresh air. The temperature of the room for you ought never to be below 60° in winter—65° will not be too high. Hang up a thermometer in the room, and make it the arbiter.

C. Porter, Harpurhey, Manchester.—Write to the Secretary of the Apothecaries' Society, Blackfriars.

Benevolent.—Mr. Charles Hoare (firm of Messrs. Hoare, the bankers) has offered to forego in future the rent for the Beckenham Village Hospital which was erected adjacent to Kelsey Park by the late Mr. Peter Hoare.

(a) Indicating affections not properly included under other titles of this class.

The Certificate of a Colliery Manager Suspended.—The appalling loss of life in our colleries during tbe past few months is, we notice, producing more active and searching inspections of them by the inspectors of mines A certificated manager of the Dinas Colliery, Glamorganshire, was last week charged at Cardiff, under the 72nd Section of the Coal Mines Regulation Act, 1872, with specific offences, to the effect that he had neglected to provide sufficient ventilation, that there was an excessive accumulation of gas, and that he had not complied with the rule affecting such provision for ventilation, for which he was responsible. The Court held that the defendant had heen guilty of a very serious offence, and his certificate would be suspended for six months.

Hygiene and the Gentler Sex.—"The Ladies' Sanitary Association," established at Wolverhampton, gives a course of weekly lectures, open to the public, on the laws governing healtb. There are also classes for women and girls over fifteen years of age, for the study of hygiene-questions. Papers are given out at tbe close of each class-meeting to the students, containing a list of queries on the subject-matter that has been under discussion.

Public Mortuaries.—The advantages of mortuaries, which the poor at first scorned and rejected as an undue interference with their domestic arrangements, are, we are glad to ohserve, beginning to he understood and apprcciated by them. Dr. Whitmore, the Medical Officer of Health, at the last meeting of the Vestry of St. Marylebone reported that during the past year 167 bodies had heen taken to the mortuary house, as against fifty-eight in 1874, some of the deaths having taken place from contagious diseases. He also stated that the prejudice against this temporary receptacle for the dead, entertained by the lower classes, appears to exist no longer, and that the benefits, both on the score of bealth and domestic convenience, are so apparent as to overcome tbe morbid desire to keep the remains of their deceased relatives at home, which is dangerous to the health not only of the family, but of all in their house. He had known cases where families had taken their meals in the same room containing the dead body of a relative undergoing rapid decomposition.

Hospital for Consumption, Brompton.—The quarterly court of the governors was beld last week. Tenders were accepted for the erection of the new hospital buildings upon the site opposite to the present Hospital, amounting to a total of £60,119. The new building will provide 137 additional beds for the accommodation of in-patients, together with a new spacious out-patient department in place of that in the existing Hospital, which had become inadequate for the present requirements. Several bequests were announced, and the sum of £823 2s. 5d. had been received from the Council of the Hospital Sunday Fund. The number of patients admitted since August was 262; discharged greatly benefited, 227; died, 31; fresh out-patients, 3415.

The Improved Industrial Dwellings Company.—The mortality returns for 1877, given in the recently issued statement of this Company, show that in the huildings of the Company the death-rate was 17 per 1000 per annum, while in the metropolis it was 21·9. The infant mortality, however (the houses being let for family occupation), was higher than that of the metropolis—to be accounted for probably more from the character of the tenants than the construction of the dwellings; but excluding infants, the rates were, respectively, 10·5 and 16·7. The ratio of deaths from zymotic diseases was nearly one-third less on the estates of the Company than in the metropolis.

"*The Landlord Interest.*"—At the last meeting of the Camberwell Vestry, the Sanitary Committee reported that they had received a complaint from the occupier of a house in Peckham, that the roof of the dwelling was "almost in," adding tbat the Medical Officer recommended, after an inspection of the premises, that steps should be taken to put the place in habitable repair. By a majority of one, however, the Committee recommended tbat no proceedings should be taken, assigning as the reason that the neglect in the repairing of the house was a matter between landlord and tenant. But the Medical Officer presented a special report, in which he urged that the house was, witbin the meaning of the Sanitary Act, a nuisance and most detrimental to health. A motion, that the report of the Medical Officer be received, and that the necessary measures be adopted against the landlord of the house, was met with the ohjection "tbat the Vestry bad no right to interfere with the property of landlords." Ultimately, the proposal to take proceedings was carried, a vestryman remarking that he was glad the discussion had taken place, as "he was sorry to say that the landlord interest had predominated rather too much lately." No doubt the "landlord interest" is in too many instances an obstruction and barrier to needful sanitary improvements in dwellings. Especially is this the case with small owners.

Brighton Water-Supply.—An important addition to the scheme for supplying water to this town has just been completed. The Corporation some time ago purchased the interest in the waterworks belonging to a private company, since which, works have heen carried out far beyond what was originally contemplated or thought necessary. Additional tunnels have been driven in the chalk formation, a new engine erected, and a new well sunk, involving an expenditure of between £30,000 and £40,000. The pre nt water resources will enable the Corporation to supply the town with an almost unlimited quantity, and of the purest quality.

Dr. Williams, Manchester.—The total numher of medical students registered at the College of Surgeons as pursuing their studies in the provincial schools last year was 411 against 381 of the preceding year. Altogetber, the year 1877 showed an unprecedentedly large numher, as, with 1922 at the metropolitan schools, there was a grand total of 2333 pursuing their professional studies.

M., Windmill-street.—The remains of John Hunter now rest in Westminster Abbey, whither they were removed, at the expense of the Council of the College of Surgeons, on March 23, 1859. In this good work Mr. J. F. South took a very active part. It would be a good opportunity for the sister College in Pall-mall to remove the remains of the equally illustrous Harvey to the same place.

Home Hospitals.—An association for promoting the establishment of self-supporting hospitals has been incorporated by the Board of Trade and registered under the Act of Parliament. It is proposed to open, early next year, in the western part of central London, their first "home bospital." The scheme comprises the establishment of other similar institutions in various parts of the metropolis—namely, a hospital for infectious patients, and one or more convalescent homes. The patients will have the option of selecting any duly qualified practitioner to attend them.

The Centenary of Sir Humphry Davy.—With reference to celebrating Sir Humphry Davy's centenary on the 17th inst., the decision of the Penzance Corporation is, to organise an exhibition of scientific apparatus, and to hold a public meeting to consider the advisability of devising means to still further commemorate the event in the spring, when several English and foreign *savants* will be invited to attend.

Good Templars.—The spread of total ahstinence was shown at a public meeting of the Good Templars held in Exeter Hall lately. The chairman, in reviewing the history of the Order, said that it was now known in seventy-seven towns in England, and had 400,000 members (adults), as well as 150,000 juveniles. Few organisations could show such results in the short period of eight years. It was stated that tbe higher grades of the Order, especially juveniles, were pledged to abstain —(1) from intoxicating drinks, (2) from gambling, (3) from the use of tobacco or any other narcotic, and (4) from the use of any profane language, etc.

The London Hospital.—The Corporation of London voted last week the sum of £525 to the maintenance fund of this institution.

A Former Resident.—An opium refuge has been opened at Pekin by tbe missionaries with a certain amount of success. During the first six months of its existence it received fifty-three in-patients, and was attended by nearly 300 out-patients.

Pauper Lunatics and their Maintenance.—An official return, recently issued, shows, for all the lunatic asylums in England and Wales, the name of each pauper in respect of whom the authorities obtained any sums in reimbursement of the pauper's maintenance, and the total amount received by each union during the year 1877. The statistics of the thirty unions which constitute the metropolitan district illustrates this point of poor-law administration. According to the last report of the Local Government Board, the expenditure for lunatics in asylums was £180,717. The return in question shows that the London guardians obtained from the relatives of paupers £9256 in the year—5 per cent. on the outlay. It is noteworthy how the different unions fared in procuring repayments. The City of London Union, which had to maintain 335 paupers in asylums, was paid £140 10s. At the same time the Greenwich Union, with a total of 290, obtained reimbursements to the amount of £613 2s.

The New Asylum at Darenth.—The Metropolitan Asylums Board has accepted a tender at £60,000 for the erection of this asylum for adults.

Flogging in Irish Workhouse Schools.—At a recent meeting of the Limerick Board of Guardians, the master reported that he had been informed the assistant-schoolmaster had flogged a boy six weeks ago, who had since been afflicted with "something like epileptic fits." The boy's offence, according to the statement of the assistant-schoolmaster, was "disobedience." He was one of four boys who were punished at the same time, but received "only three or four strokes with a belt." Lord Emly (the chairman) hereupon remarked that the teacher acted contrary to the Poor-law Act in not allowing six hours to elapse before punishing the boy, and also in having punished him in the absence of the master of the workhouse. The question of corporal punishment in schools has been much publicly discussed lately, but whatever else may be said for and against it, the "belt" as an instrument for the chastisement is strongly to be deprecated.

Unwholesome Meat.—There appears to he in Yorkshire and Lancashire an extensive established trade among butchers in meat unfit for human consumption. The meat is sent to some distant market where there is a large poor population. In a case tried at Leeds lately, evidence was produced that Liverpool, Bradford, and Leeds are towns where tbis trading is carried on extensively, the meat being forwarded from localities often at a long distance. In the case in question, which led to the present exposure, the magistrate sent the delinquent butcher to prison for six weeks. He seemed greatly astonisbed, and apparently expected the option of a fine. We hope in all similar cases brought under magisterial investigation, condign punishment will be awarded.

COMMUNICATIONS have been received from—
Mr. W. Spencer Watson, London; Dr. R. Douglas Powell, London; Mr. John Chatto, London; Mr. J. Astley Bloxam, London; Dr. J. Milner Fothergill, London; Mr. T. Mark Hovell, London; Mr. B. R. Wheatley, London; Mr. D. Colquhoun, London; Mr. T. M. Stone, London; Mr. F. W. Lowndes, Liverpool; The Honorary Secretary of the Liverpool Medical Institution; Mr. James T. Gilbert, London; Mr. James Cantlie, London; The Registrar of the University of London; The Secretary of the American Dermatological Association; Mr. Wm. Alexander, Liverpool; The Registrar of the Apothecaries' Hall, London; Mr. Clement Lucas, London; Mr. J. T. W. Bacot, Seaton; Dr. Edward Sparks, Mentone; Dr. McIntosh, Murthly; Mr. R. W. Parker, London; Dr. Leared, London; Dr. Carter, Liverpool; The Secretary of the Hospital Saturday Fund, London; The Secretary of the University of Edinburgh; The Secretary of the "Sun" Lighting and Heating Company; The Secretary of the Royal Institution; The Medical Staff of St. Thomas's Hospital; Dr. W. S. Greenfield, London; Dr. G. V. Poore, London; The Registrar-General, Edinburgh; Mr. William Lewis, Cardiff; Dr. J. W. Moore, Dublin; Dr. Hughlings-Jackson, London; Dr. C. M. Tidy, London; Dr. Bristowe, London; Mr. Telford, Leeds.

BOOKS AND PAMPHLETS RECEIVED—
Eustace Smith, M.D. Lond., On the Wasting Diseases of Infants and Children, third edition—Dr. B. Lœwenberg, Les Tumeurs Adénoïdes du Pharynx Nasal—D. Hayes Agnew, M.D., LL.D., The Principles and Practice of Surgery, being a Treatise on Surgical Diseases and Injuries—Transactions of the Pathological Society of Philadelphia, vol. vii.—J. M. da Costa, M.D., Harvey and his Discovery—David Ferrier, M.D., F.R.S., The Localisation of Cerebral Diseases—Fessenden N. Otis, M.D., Stricture of the Male Urethra, its Radical Cure—Carl Gegenbauer, Elements of Comparative Anatomy, translated by J. Jeffrey Bell, B.A.—Transactions of the Medical Society of the State of Pennsylvania, vol. xii., part 1—R. W. Taylor, M.D., On the Treatment of the various forms of Acne and of Rosacea.

PERIODICALS AND NEWSPAPERS RECEIVED—
Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Gazette Hebdomadaire—Pictorial World—Sunday at Home—Leisure Hour—National Anti-Compulsory Vaccination Reporter—Transactions of the Odontological Society—Glasgow Medical Journal—Gazeta Medica da Bahia—Veterinarian—Saint Lous Medical Record—Archives Générales de Médecine—Monthly Homœopathic Review—Obstetrical Journal—Boston Medical and Surgical Journal—Analyst.

APPOINTMENTS FOR THE WEEK.

December 7. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

9. Monday.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Microscopical Evening. Dr. Tilbury Fox will give illustrations of—1. The Histology of Psoriasis; 2. The Histology of Dysidrosis; 3. The Histology of Molluscum Contagiosum; 4. The Histology of Disseminated Follicular Lupus—a New Clinical Condition.

10. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Royal Medical and Chirurgical Society (Ballot, 8 p.m.), 8½ p.m. Mr. Barwell, "Three Cases of Distal Deligation of the Carotid and Subclavian Arteries for Innominate Aneurism." Mr. Dalby, "On Disease of the Mastoid Bone."

11. Wednesday.

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 1½ p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

Hunterian Society (London Institution), (Council Meeting, 7½ p.m.), 8 p.m. Dr. Sutton will bring forward a "Case of Hæmatinuria"; and "Cases illustrative of Disease resulting from an Overworked Brain." Mr. Rivington will show a "Case of Excision of the Wrist."

12. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

13. Friday.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operatious), 2 p.m.

Clinical Society, 8½ p.m. Mr. Hutchinson, "Two Cases of Popliteal Aneurism treated by Esmarch's Bandage." Dr. Whipham, "Case of Perforation of the Appendix Cæci." Dr. Cayley and Mr. Lawson, "Intestinal Obstruction—Gastro-Enterotomy—Recovery." Dr. Crocker, "A Case of Scleroderma" (living specimen).

Quekett Microscopical Club, 8 p.m. Meeting.

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 30, 1878.

BIRTHS.

Births of Boys, 1235; Girls, 1192; Total, 2427.
Average of 10 corresponding years 1868-77, 2272·7.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	813	811	1624
Average of the ten years 1868-77	808·1	827·8	1635·9
Average corrected to increased population ...	...	...	1750
Deaths of people aged 80 and upwards ...	...	...	72

Note.—The births and deaths registered last week may be compared with the average numbers in the corresponding weeks of the ten years 1868-77 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	1	9	2	12	2	1	...	3
North ...	751729	1	6	22	2	6	...	7	...	5
Central ...	334369	...	1	3	1	1	...	8	...	1
East	639111	...	9	16	...	8	1	9	1	2
South	967692	7	11	20	2	12	5	13	5	3
Total	3254260	8	28	70	7	39	8	38	6	14

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·439 in.
Mean temperature	39·0°
Highest point of thermometer	53·2°
Lowest point of thermometer	27·7°
Mean dew-point temperature	36·9°
General direction of wind	Variable.
Whole amount of rain in the week	1·48 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, November 30, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1878.*	Persons to an Acre. (1878.)	Births Registered during the week ending Nov. 30.	Deaths Registered during the week ending Nov. 30.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3577304	47·5	2427	1624	53·2	27·7	39·0	3·89	1·48	3·76
Brighton	103923	44·1	30	50	52·7	31·0	40·1	4·50	0·89	2·26
Portsmouth ...	129461	28·9	69	37	...	...	...	...	...	...
Norwich	84620	11·3	55	37	53·0	31·8	41·0	5·00	0·81	2·06
Plymouth	73599	52·8	41	35	53·5	31·0	41·6	5·34	0·70	1·78
Bristol	206419	46·4	136	107	49·6	30·0	37·4	3·00	0·62	1·57
Wolverhampton ...	74240	21·9	62	40	41·2	26·4	34·3	1·28	0·57	1·45
Birmingham ...	383117	45·6	298	189	...	...	...	...	...	...
Leicester	121473	38·0	87	42	42·5	31·0	36·4	2·44	0·78	1·98
Nottingham ...	165267	16·6	112	80	42·4	25·2	35·2	1·78	0·71	1·80
Liverpool	532681	102·2	359	362	43·5	29·8	36·7	2·61	0·26	0·66
Manchester ...	360514	84·0	239	233	...	...	...	...	...	...
Salford	170251	32·9	136	110	...	...	...	...	...	...
Oldham	107366	23·0	89	61	...	...	...	...	...	...
Bradford	185088	25·6	102	90	41·8	29·6	35·6	2·01	0·49	1·24
Leeds	304948	14·1	223	169	44·0	30·0	37·0	2·78	0·41	1·04
Sheffield	289537	14·7	177	200	43·0	28·0	35·7	2·06	0·54	1·37
Hull	143139	39·4	108	75	44·0	24·0	35·4	1·89	0·56	1·42
Sunderland ...	112459	40·6	107	58	48·0	32·0	39·0	3·89	1·48	3·76
Newcastle-on-Tyne	144570	26·9	78	56	...	...	...	...	...	...
Edinburgh	222371	53·1	127	84	40·3	26·5	35·1	1·73	1·47	3·73
Glasgow	566940	94·0	374	269	42·0	...	...	...	0·59	1·50
Dublin	314666	31·3	132	189	45·2	25·7	35·3	1·84	0·58	1·47
Total of 23 Towns in United Kingdom	8373953	38·0	5568	4197	53·5	24·0	37·2	2·89	0·76	1·93

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·44 in. The lowest reading was 29·13 in. on Wednesday evening, and the highest 29·84 in. on Saturday morning.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1878 by the addition of seven years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. Nottingham, Salford, and Oldham, however, form exceptions to this rule, as the estimates for these three towns have been revised with the aid of local information as to the rate of increase of inhabited houses. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

v.

CLINICAL LECTURE ON IRRITABLE BLADDER.

BEING THE FIFTH OF A COURSE OF LECTURES DELIVERED AT ST. BARTHOLOMEW'S HOSPITAL

By J. MATTHEWS DUNCAN, M.D., LL.D.,
Physician-Accoucheur and Lecturer on Midwifery to the Hospital.

THE subject of my lecture to day is Irritable Bladder. Upon this subject, in a former lecture—that upon Aching Kidney—I made some remarks which I shall not repeat to-day. They related to an important part of the matter, and referred chiefly to the importance, in the diagnosis of cases of merely irritable bladder, of taking notice of the order in time of the phenomena of the disease and of the severity of the different symptoms.

"Irritable bladder" is rather an ill-chosen name, because every bladder is irritable; every bladder has a peculiar faculty of sympathising with diseases in neighbouring organs, and indeed in some remote organs; the influence of sympathy is observed even in the case of emotions. But every bladder is not in the state of disease called irritable bladder—a condition in which the bladder is not only irritable but irritated, and that generally not by disease referable to itself. An irritated bladder may be so merely by sympathy, or reflex influence; and I shall give you cases where there is no other possible explanation of the irritation of the bladder than that founded on sympathy or reflex influence. But some irritable bladders exhibit a certain amount of catarrh, that is, of superficial inflammation; and this catarrh may be truly called a secondary disease, not a disease of the bladder primarily—a disease, therefore, to be studied in connexion with the cases of merely irritable bladder to which I am chiefly directing your attention. You know well that inflammation may be excited by sympathy. That is well illustrated in cases of inflammation of the eyes, disease in one eye inducing disease in the other; and that kind of induced disease has very much the same history, very much the same characters altogether, as the characters of the simply irritated bladder that I am going to describe to-day.

Some cases of irritable bladder are no doubt explained by the irritation being conveyed, not through contiguity, not through any nervous connexion, but through the passage of morbid products from one organ to another. For instance, there is no doubt that in children irritability of the bladder is frequently a sign of gravel. That is a very well-known cause of violent pain in children, accompanied by intense irritation of the bladder, and it is frequently explained by the passage of the cayenne-pepper-like grains of uric acid through the bladder and the urethra. In adults the same irritating character is justly ascribed to other kinds of gravelly urine or phosphatic urine. But I am inclined to think that urine not decomposing, yet containing ordinary morbid elements in solution, will not irritate the bladder. It is, in general, only when you have the urine decomposed or carrying with it solid matters that you have a bladder thus irritated.

The importance of this subject has been fully recognised. No diseases are more urgent than diseases of the bladder, on account of the great suffering and inconvenience which they cause. If you do not diagnose properly a disease of the bladder; if you mistake a merely irritated bladder for a more real disease of the bladder, your whole treatment will be misdirected, and you will be, so far as your ignorance is blameable, a bad adviser to your patient. It is with a view of instructing you upon this subject that I give this lecture to day, several examples of irritable bladder having occurred recently in Martha.

A bladder may be sympathetically irritated by diseases of the kidneys, of the ureters, of the urethra, of the external organs of generation, of the pelvic organs; and it is impossible to exclude some conditions of the bladder itself as a source of mere irritation.

Now, what are the indications of mere irritability of the bladder? To the patient the great indication is the frequency of urination. This is often accompanied by pain in urination, or strangury. But frequency of urination is not of itself a proof that a woman has irritable bladder. For example, an hysterical woman, when she is under the influence of that condition, urinates frequently because her bladder is frequently and rapidly filled. And it is not an uncommon thing for diabetes to be mistaken, for a time at least, for irritable bladder. I have seen this repeatedly happen in consequence of insufficient attention to the circumstance that frequent urination is not of itself a sign that a woman has an irritable bladder. You must take into account the quantity of urine; and in the case of hysterical and diabetic women, if the quantity were taken into account, the error would quickly disappear, the explanation of the supposed irritability being at once given. On the other hand—and this is a still more important remark—the passage, frequently, of a small quantity of urine is not of itself a proof that a woman has an irritable bladder; especially it is not a proof that she has a bladder which resents moderate repletion. When a woman passes a small quantity of water frequently, regularly, you may be pretty sure either that her bladder is small and contracted, or that she has an irritable bladder—that is, one which resents too soon an ordinary amount of repletion. But you have no proof, in the fact that a woman frequently passes a small quantity of urine, that her bladder is not enormously capacious. Some of the commonest errors in obstetrics arise from neglecting this. For instance, a woman with retroversion of the gravid uterus not rarely complains of irritable bladder, that is, of frequency of urination and painful urination, and yet her bladder may all the time contain a very large quantity of water, only a part of which does she pass. The same thing is true in minor degrees of other conditions of the bladder apart entirely from pregnancy—conditions of irritated bladder from permanent over-distension or too great size.

In a case of simply irritated bladder, of the kind easiest understood, you have healthy urine. But studying a case of irritable bladder, you are frequently called upon to pay attention to the condition of the urine, to its contents, such as mucus. Urine containing a large quantity of mucus is, at least at first sight, supposed to be urine from a bladder which is not only irritated, but in a state of catarrh; and this suspicion is increased by the circumstance, if it is present, of the mucus being mixed with pus. Still further is the fear increased if the urine contains blood; and still further if the urine is alkaline. Now, all these circumstances—a large amount of mucus, some pus, some blood, and an alkaline condition of the urine—lead you to suspect or believe that the bladder is not merely irritated, but also diseased, and that not secondarily merely. You have to consider whether the bladder may not be sympathetically inflamed in a slight degree; and, secondly, whether these products discovered in the urine may not be derived from other sources than the bladder. Mucus is seldom derived in large quantities from the ureters and pelves of the kidneys, so that a large quantity is more nearly distinctive; but it is impossible to say where the limit lies between the amount of mucus that may be secreted from the pelves and ureters of the kidneys, and that which is distinctive of vesical catarrh. Lastly, in order to complete a diagnosis of a case of irritable bladder, you examine the bladder itself. I think this is the most important part of the means to be employed, and I shall make special reference to it at the close of the lecture.

I propose now to give you some examples of this disease, most of which have occurred in Martha ward during the last few weeks. I begin with a case which is extremely clear. A young woman, a long time under treatment elsewhere for menstrual disorder, consulted me, and the only thing I could find wrong about her was an aching left kidney. She had no doubt had menstrual disorder, but I could find by physical examination nothing to account for it. When I saw her first, her urine was quite healthy. Some months afterwards she returned to me, and then her complaint was of irritable bladder, and she gave the best description of her symptoms by saying that she had to get up several times during the night in order to make water. The examination of her bladder revealed a perfectly healthy condition. The urine was limpid, without deposit, of a natural specific gravity, and healthy in every respect. But on more careful examination it was found that her aching left kidney was worse than it had ever been, and that her urine contained albumen in considerable quantity. Here, then, you have a case about which there could be no hesitation. There was nothing in it to account for the most prominent symptom,

the chief complaint of the patient, but the condition of the kidney. In my lecture on Aching Kidney I gave you another example of the same kind.

I now come to a case of greater difficulty. E. M., aged thirty-two, not married, was admitted into Martha ward on account of supposed disease of the bladder. Urine acid, 1012, containing a small quantity of mucus and still less of pus. Complains of having to pass water every half-hour, and the process is accompanied by pain which she feels greatly in the private parts; she also complains of pain in the loins, and down the inside of the thighs. She was ordered a saline laxative, to keep her bed, and to have three times daily an ounce of decoction of Pareira, half a drachm of tincture of hyoscyamus, and twenty minims of sweet spirits of nitre. Under this treatment her symptoms were in a few days greatly diminished without any improvement of the urine—indeed, close observation discovered it frequently tinged with blood, and always containing albumen, pus, and mucus. The bladder was now examined physically, and no disease whatever was detected in it. The patient's chief or only sufferings latterly were from pain in the region of the kidneys. A consultation with Dr. Gee resulted in the opinion that the disease was not in the bladder, but in the kidneys or their pelves. Of the truth of this result I can have no doubt. You see that the treatment removed the woman's bladder symptoms, but left her renal symptoms. The quantity of mucus and pus was small—not what you would expect in a case of disease of the bladder; and the end of the case, after treatment of the vesical symptoms, being only to leave the renal symptoms, we had no doubt that we had an example of a bladder irritated by sympathy with disease of both kidneys or their pelves.

I now come to examples traceable to the external organs, and I recall to your minds the case of stricture at the external orifice of the urethra, where the complaint was frequency of urination, where there was no disease in the bladder discoverable on physical examination, and where, on removal of the stricture of the orifice of the urethra, a cure was instantaneously effected. I will give you another example where the disease arose from caruncle of the urethra—caruncle of an irritable kind.

S. S., aged fifty, has been married thirty years. Catamenia ceased a year ago after previous regularity. Complains of forcing pain in private parts, and of frequent micturition when she is not in bed. Urine acid, specific gravity 1020, no albumen, some phosphates. Attached to the posterior lip of the urethral orifice by a large pedicle is a small red caruncle of the size of half of a small split-pea. It is extremely tender. It was removed, under chloroform, by scissors. Next day hæmorrhage to the extent of some ounces was checked by ligature of a small vessel in the wound. She remained in Martha twelve days after the operation, and had no complaint whatever after the caruncle was removed.

This, again, is an example as clear as possible of irritable bladder cured by the removal of its cause, the cause not residing in the bladder, but in the external parts. In a former lecture I recorded a case where we had slight difficulty in diagnosing a case of irritable bladder while the woman had pyonephrosis, which of itself was enough to account for it; but she also had disease at the orifice of the urethra. Now, in that case you will remember we made out that it was the disease at the orifice of the urethra that was the cause of the woman's great and chief sufferings—namely, from irritability of bladder. When the disease of the urethra was removed, she had no irritability of bladder, although the pyonephrosis existed. When the disease of the urethra returned, she was unaware of its return, but her irritability of bladder returned, and that was her great complaint.

I might give you more examples of disease of the external genital organs causing irritable bladder; but I go on to say a few words as to the most difficult part of the subject. I refer to cases where the cause of the irritability of the bladder is in the pelvic cavity or in the bladder itself. It is well known that the bladder sympathises with all sorts of diseases in the pelvis, and its sympathy is evidenced by irritability. In the case of inflammatory diseases, and in the case of some non-inflammatory diseases, we refer the irritability to congestion of the bladder, or inflammation in a slight degree communicated to it from neighbouring inflammations. It is a very frequent thing to find irritability of the bladder in these circumstances accounted for by pressure or by distortion—that is, change of shape and position. In regard to this, which is a very important matter in connexion with the study of flexions or other minor displacements of the uterus, my mind is not quite made up, but I am strongly of opinion that no change of position, no distortion, no pressure of an ordinary kind, causes irritability of the bladder. You will find the bladder without a trace of irritability, yet having every possible shape and every kind of displacement; and I see no sufficient reason for referring (as is often done) irritability of the bladder to its change of shape, or pressure upon it, or displacement of it.

Cases where the bladder sympathises with disease in its neighbourhood are well known to all; but there is a class of cases where the irritation seems to be in the organ itself. These cases are characterised by the too great size of the organ. This can sometimes be traced to a distinct cause. Sometimes it is not to be accounted for. In cases of this kind the patient occasionally has, in addition to irritability of the bladder, incontinence of urine—that is to say, the incontinence comes on at times, and irritability at other times. When these cases are watched it is frequently observed that the woman can retain her water for a very long time, and sometimes it is found that there is air in the bladder. This air gets admission sometimes through the catheter, but I have seen it in such cases present where this explanation was not tenable, the air having got in through the urethra directly. When air gets into the bladder you can easily understand that you are very liable to have the urine decomposing, especially as it may be long retained; and this aggravates the case very much. The simplest case of this kind that I remember to mention is one of a young woman who was brought to me several years ago, in whom the obstacle to marriage was that she was in the habit of wetting her bed at night, and that during the day she had frequently to make water. The disease was distinctly traceable to the bad habit of punishing the girl when she was a child for wetting her bed, and to over-distension of the bladder beginning then. The bladder was enormous. A vesical sound could be passed into it—I forget the number of inches,—but it could be felt at the umbilicus. There was no other disease present. The urine was healthy, and the case was cured by keeping the bladder empty. In order to keep it empty the bladder required more than to be evacuated by passing a catheter. A bladder may remain nearly full while the urine has free exit through a catheter. In such a case, in order to insure that the evacuation is complete, you have to squeeze it out through the catheter; as the huntsman does with rabbits he has shot.

That is the simplest case, and I have seen more than one of that kind, such as one that came under our notice in Martha not many days ago. She was an out-patient, so that I cannot tell what effect upon her the treatment by regularly emptying the bladder has had. Her case was evidently one of this kind. I will read part of it as given in the letter which was sent along with her:—"Many years ago she was a patient of Dr. T., when she had uterine displacement with bladder symptoms. Five years ago she had an accident, and since that time the bladder symptoms have been worse. She complains of pain in the region of the bladder. At one time she cannot hold the urine, at another she cannot pass it, and at another she has to pass it very frequently. There is nothing abnormal in the urine, but occasionally it is alkaline." This woman was found to have a bladder of greatly exaggerated capacity, but otherwise healthy.

In these cases the bladder is sometimes not only large in capacity, but hypertrophied. Many are of extreme difficulty, and I pass on to another important point.

Irritation sometimes does not occur when you would most expect it, when even the bladder itself is diseased. Of this I shall give you several examples. You remember a case of pyonephrosis to which I have already referred. That pyonephrosis did not bring on irritability in the woman's bladder. In a case lately in Martha, a urethral cyst did not bring on irritable bladder, but the treatment for the urethral cyst brought it on severely for a time.

Mrs. A. D., aged thirty-one, two years married, no children, came into the hospital complaining of dysmenorrhœa, which has been gradually getting worse since marriage. She has a retroverted, bulky uterus, and a tender, inflamed left ovary. A tumour of the size of a boy's marble lies in the vagina, connected with the middle of the urethra by a

large pedicle. It is cystic. There is no complaint of irritable bladder, nor is there frequent micturition. The cyst was opened by bistoury and evacuated of its viscid, glairy contents. Next day she complained of difficulty of micturition. Four days afterwards the cyst was reclosed. It was re-opened freely and cauterised with nitrate of silver. This increased greatly the irritability of the bladder for a time, but it soon disappeared; and when she was discharged she had no complaint of her bladder.

I may mention a still more extraordinary case illustrating the absence of irritability. A woman died, under my care—perimetric abscess and tubercular peritonitis. The perimetric abscess was a consequence of parturition, and it burst into the ileum. Simultaneously with the diminution of the abscess the urine became bloody, and carried with it a large amount of pus. I never doubted that the abscess had burst through the bladder. Pus was never observed in the stools. A post-mortem examination was made, and there was found no communication between the bladder and the abscess. The bladder was only slightly contracted, and the whole of its mucous membrane was dark red, in a state of the highest degree of catarrhal inflammation, secreting pus and also exuding blood. The woman had no irritability of bladder: she never complained of that organ.

Another case is that of a patient under my care, in hospital, with great hæmaturia. The case was diagnosed as being not one of disease of the bladder on account of the physical examination revealing a healthy condition, so far as it could be made out. This woman died suddenly, and her bladder was found to be everywhere dark red; and on its internal surface there were several nodules of soft cancer.

These cases show you the extreme difficulty of this subject, but they are so rare that they do not greatly diminish the confidence that you can place in the means of diagnosis that I have been describing. Before I pass on I shall tell you another curious condition in which a bladder ceases to be irritable. You know that, in cases of ulceration of the bladder, suffering is sometimes so intense that life is scarcely worth maintaining. I do not know any more dreadful picture of incessant agony than that of a woman suffering from chronic ulceration of the bladder of the kind that I am referring to. I remember well a case of this kind, in which the woman herself prevented me from opening her bladder to see if making a vesico-vaginal fistula would relieve her dreadful sufferings. I was not sure that it would have relieved her, but I hoped that it might. Years afterwards the woman got married. After her marriage a great ulcer broke out in her leg, and she went to the surgical part of the hospital and had her leg cut off. When she left the hospital she came to me to tell me that she had no trouble with her bladder now. Nothing could have astonished me more than this announcement. She told me also of her marriage. I asked her how she made water. She said she never made water. She had no vesico-vaginal fistula; her bladder was a mere dilatation of the urinary passage, through which the urine flowed without being arrested in it. She never made water; she had stillicidium urinæ from the urethra; her bladder was a non-existent organ for her—it was extremely small. In that case the examination of the bladder was necessary in order to diagnose it.

I come now, lastly, to describe what I consider by far the most important point in the diagnosis of merely irritable bladder—viz., the physical examination of the bladder, to ascertain its healthy condition or the reverse. This is done by the use of a sound. I here show you a common vesical sound which I use for the purpose. By this instrument you ascertain the size of the bladder, its hardness and its tenderness. I shall take the last condition first. In a healthy bladder there is no tenderness. You examine carefully, without rudeness, a healthy bladder; the woman is not aware of your doing so. Between this and the intensest agony you have all variations of painfulness. I know nothing more severe than the pain of examination of the bladder when it is even slightly inflamed. As a first result of your examination, you ascertain the degree of tenderness, or its entire absence, by the sound.

The next thing you do is to ascertain its softness or hardness. A healthy bladder has a considerable elasticity, so that when you touch the fundus you can push the instrument one inch, at least, farther into the bladder, and it is pushed out again by the elasticity of the organ. When a bladder is irritated it may retain this condition—it generally retains it when it is merely irritated; but when it is inflamed in the slightest degree it soon becomes hard, and it resists the push of the sound. In some rare nervous women examination leads to complete contraction of the bladder, so as to be completely closed, resisting in this way the introduction of the instrument. This is found as a permanent condition in cases of the greatest inflammation, as in the acute stage of gonorrhœal cystitis.

Lastly, you ascertain the size of the bladder. In order to do this you need not attach any importance to whether the patient has made water recently or not. The bladder does not contract to empty itself. The main use of the contractions of the bladder is to announce that it is time to empty it, to call the woman to the bedside. If then you pass a sound into a healthy bladder to measure it, you must measure from the external orifice of the urethra, because you do not know exactly where the internal one is; and in a healthy woman the sound is easily passed from five to six inches. In a case of chronic cystitis a very common measurement is four inches. In a case of acute gonorrhœal cystitis, with strangury, you very likely cannot get the instrument into the bladder at all, or, if you do, you will only have a measurement of two or two and a half inches.

To conclude, you can easily see that if a case comes before you as cystitis, and you find that the bladder is healthy, that it is large enough—not too large,—that it is not tender, and that it is elastic, you have in these circumstances almost certain evidence that the woman's bladder is healthy, and that her great symptom, which may naturally give the nosological name to the disease, irritable bladder, is a mere symptom, and not the essence of the disease.

THE CAUSES AND COURSE OF DISEASES OF THE HEART,(a)

WITH SPECIAL REFERENCE TO PREVENTION AND TREATMENT.

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Lecture IV.

THE NEUROSAL AND REFLEX AFFECTIONS OF THE HEART.

(*Concluded from page* 649.)

In considering the neurosal affections of the heart we must face the broad question, "Are the nervous disorders of the heart on the increase at the present time?" And there is no doubt an affirmative answer must be given to this question. The forms of palpitation described above must have existed from all time; and the bosoms of the spouses of primitive man must have vibrated from the violent action of the heart;—ages before advancing civilisation had rendered the nervous system of women eminently susceptible, and given to it a delicacy of organisation which has long been the characteristic of refined women. It may be questioned how far there is any increase in the neurosal affections to which women are liable beyond what is fairly attributable to the extending habit of tea-drinking to excess. But as to the increasing liability of men to have nervous disorders of the heart there can be no doubt; this is due chiefly to the exciting circumstances under which many men now live—circumstances which increase the taxation of the nervous system. We know that diseases of the nervous system, including insanity, are at the present time greatly on the increase; and good authorities like Dr. Crichton Browne tell us prophetically that such diseases must increase in the future as the battle of life falls more on the nervous system, and less on muscles, bones, thews, and sinews. The observations of Dr. Da Costa of Philadelphia during the late American Civil War bear out what has just been said. He observed a form of heart disturbance then seen by him, which has not been described by any previous writer. This form of neurosal affection of the heart he denominates "Irritable Heart." He found it usually among men who had been engaged in active service, and who got either an attack of ague or of diarrhœa, something indeed which pulled them down. After a short stay in hospital the patient would rejoin his command, but soon found that he was not equal to his

(a) A course of Clinical Lectures delivered at the West London Hospital.

work as before. He would be attacked by dizziness and palpitation when on the march, so that he had to be invalided. The heart's action would be excited and irregular, resembling that condition previously spoken of which I said might be called "a badly behaved heart." No doubt the condition was set up by the excitement of that remarkable war acting upon a people whose nervous system is highly strung - that is, speaking of them as a nation. Indeed, the whole circumstances are merely a foreshadowing of the general condition of life and nervous system which we seem steadily approaching. In this condition there is a mobile pulse readily affected by posture, varying from twenty to forty more per minute when the recumbent posture is abandoned and the patient stands up; the respiration not being correspondingly affected. Then exertion is badly borne by them. There are also concomitant nervous affections, with a tendency to free perspiration especially of the hands. It did not seem associated with excess in tobacco, or sexual excess, but rather with excitement and fatigue. It is a very intractable condition, and Da Costa says the treatment is never a short one. As to the line of treatment to be adopted, he states that when there was concomitant hypertrophy, then aconite was most useful, as lowering the excited action. But when there was debility of the circulation, then digitalis, belladonna, veratrum viride, or strychnia, were most serviceable. In fact, Dr. Da Costa found out thoroughly what has just been said about the neurosal affections of the heart, that the general conditions accompanying the cardiac disturbance must be our guide to the treatment of each individual case. This "irritable heart" is comparatively rare with men, but several distinct cases have enabled me to verify Dr. Da Costa's observations and description.

The next matter to engage our attention is that disturbance of the heart's action known as irregularity. Here there may be no palpitation, or only on exertion, but in the midst of rhythmical contractions the heart makes a pause, a brief halt, which does not extend to a true intermittence of a beat. Dr. B. W. Richardson describes it thus:—"It is like a smith who, striking on a forge a number of strokes in rhythmical succession until tired, changes the action for a moment to give a more deliberate and determinate blow, and then rings on again in regular time." To me it has resembled the change of a horse's feet when cantering, when commencing, for a change to lead with the other foot first. It is commonly found along with dilatation, and gives one very distinctly the impression of the heart rolling over and then going on again in rhythmic measure. Sometimes this halting beat is of unwonted force, as if the longer it had been kept back the more powerful it grew. George Balfour in reference to this phenomenon quotes the lines of Ballatyne—

> "My vera heart goes loup, loup,
> Fifty times a day."

And this describes very accurately the condition of the cardiac action in an anxious mother with a feeble heart. Such irregular action is a true nervous phenomenon, but, nevertheless, one rarely found without some impairment of the muscular walls of the heart. It is therefore of worse prognostic import than simple palpitation. Whenever it is found, and along with it there is palpitation on slight effort, it is pretty certain that there is some dilatation about the cardiac cavities, usually with thinning of the walls. Sometimes it is found every fourth or fifth beat, and in other cases at every fifteenth or twentieth. Broadly it may be said, the more frequent it is, and the more readily it is increased on slight exertion, the more significant it is. The longer the rhythmic intervals, the less serious its indications, so that it may be little more than a nervous phenomenon allied to intermittency.

Intermittency is a phenomenon of great importance practically, and a thorough and complete understanding of it is very desirable. To B. W. Richardson are we indebted for the full exposition of its being in many cases a purely nervous phenomenon. He would hold that it is exclusively a nervous phenomenon, and that it has no relation whatever to any organic change in the heart. In this I cannot quite agree with him. The intermittent stroke must of course be due to some modification of the rhythmic discharges of the cardiac ganglia; if the motor explosion was discharged muscular contraction would follow. Consequently we are compelled to admit that it is a nervous phenomenon; but while doing so I think its diagnostic and prognostic value depends upon its concomitants. Thus in persons comparatively young and otherwise perfectly healthy, the intermission of a beat in their pulse, even at rhythmic intervals, is a matter of little moment. It is a mere nervous disturbance, and has no practical value. The halt does not produce any alteration in the blood-pressure in the arteries, and therefore has no evil effect upon the economy. It may be dismissed as in itself being of no moment. Dr. Richardson has given a series of cases where this intermittency has been produced emotionally. Thus, in one case it was induced by terror during shipwreck, and occurred four or five times per minute; at first the patient was painfully conscious of it, but in time it fell to two in the minute, and he ceased to be conscious of it. In another case it was induced by grief, and when the case was first seen the intermissions were no fewer than twenty-three in the minute. Under treatment she recovered perfectly for all practical purposes, the halt only occurring in one out of 160 beats. In another case it was induced by passion. In a fourth it was induced by fatigue, mental and bodily. Here it returned whenever the patient was overworked or emotionally excited. In one case it was congenital, and was found in an infant on the day of his birth, and continued until it was five years old, when it gradually disappeared. From two cases referred to by him it would appear that cardiac intermittency may, to a certain extent, be hereditary, or a mere family peculiarity. But even Dr. Richardson says—"In old age intermittent action of the heart is exceedingly common." It is indeed associated with senile changes; and though I know a number of medical men of advanced life, who have had an intermittent pulse for years, and who still are hale; nevertheless, in many other cases I have found it associated with organic changes which in no long time ended in death. Dr. Richardson says—"The intermittency of the arterial pulse occurs from an independent failure of action of the left ventricle of the heart. The ventricle continues in diastole for two or more strokes of its systole." This is probably the explanation of the phenomenon; and from some observations made on rats at the time I was the Senior Resident Medical Officer of the Leeds Dispensary, I can say that when the chest was opened and the animal was dying, there was distinct intermission of the ventricular beat; at first the ventricular contraction was set up by the second auricular contraction, no ventricular systole following one auricular contraction; but as the animals died, a third and even a fourth auricular contraction occurred before the movement in the auricle was continued into the ventricle. Probably the same thing occurs in man, not only in the intermittent pulse of the moribund condition, but in that which is found as a permanent condition, especially in the aged. While maintaining that it is a nervous phenomenon, Dr. Richardson writes—"The man or woman with a hesitating heart is thereby unfitted for sudden tasks, demands, resolves, which, when the heart is firm, are considered as of comparatively little moment; for when the heart hesitates, the brain, which reposes for its power on the blood the heart supplies to it, falters with the heart, just as the gas flickers when the steady pressure is taken off the main." In long protracted halts, lasting over four ordinary beats of the heart, of which I have seen two cases, the sensations of the patients were terrible, as their features testified as well as their tongues. When the halt is so long that the brain is insufficiently supplied with blood, the intermittency is a malady; when an occasional intermittence occurs, but does not affect the blood-pressure in the arteries, then it is of no gravity. In one case of distinct intermittent pulse in a gentleman under my care, it was diagnosed as depending on an insufficiency of sleep; and proper hours of sleep soon put an end to the phenomenon.

Dr. George Balfour says of simple intermittence—"It is sometimes only an early indication of failure of cardiac power dependent upon anæmia, overwork, or worry, or upon valvular disease or gout, but it is often a purely nervous phenomenon." He also notices the thump or "loup" which follows the intermission; it is a powerful contraction of the ventricle after its momentary halt. In some cases of sudden death due to emotion, he believes the cause of death is a permanent halt of the ventricle. He goes on to say—"At other times, partly from the intensity of the impression, but chiefly from debility of the nervous system, this 'loup,' thump, or intermission, of which the loup is the most striking subjective symptom, not only occurs under the instantaneous excitement of any emotion, but

repeats itself, at first at shorter, afterwards at longer intervals, until at length it dies out under the re-assertion of the normal condition of the nervous system. Now and then, however, it never dies out, but repeats itself so long as life continues." He relates a case, that of an old gouty lady, who was attacked with syncope, where he found the radial pulse only twenty to the minute. On examining the heart, he found it beating "with perfect regularity, but with unequal force, so that the apparent abnormal slowness of the pulse was simply due to the fact that only about every third beat reached the periphery." Such is certainly the fact in some cases of intermittence in old persons; there is not a complete halt of the ventricle, but a systole so incomplete and feeble that it does not reach the radial pulse.

Dr. Hayden says—"True intermissions usually occur at short but unequal intervals of time; they are most frequently met with in old persons otherwise apparently healthy, and associated with a weak cardiac impulse, and clear sharp sounds. The arteries are likewise usually tortuous, and often atheromatous; in short, the symptoms and signs of dilated heart and atheromatous degeneration of the arterial system are usually associated with this form of intermission." My experience is quite in unison with that of Dr. Hayden's, and according to it intermittency is usually found in elderly persons along with evidences of muscular failure, and commonly with indications of some fatty degeneration. Nor is there any difficulty in understanding how this should be. We saw in the last lecture how an imperfect blood-supply to the heart, from an unelastic aorta and thickened coronary vessels, leads to an imperfect nutrition of the muscular fibrillæ and to a fatty necrosis of them. So we can readily conceive the nutrition of the cardiac ganglia to be impaired at the same time, and in consequence there is a disturbance in the rhythmic discharges therefrom. Intermittency of the heart is not due to muscular failure, except in those cases where the halt in the radial pulse is caused by an imperfect ventricular contraction, which is not true intermittency—but to an arrested discharge in the cardiac nerve-centres. This may be due in some cases to some irritation of the vagus, as in Heine's case, but the common cause of intermittency is unquestionably an arrested explosion in the cardiac ganglia. This may be due to impaired nutrition, and consequently an intermittent pulse is found along with evidences of muscular impairment, in the majority of cases. So far as I am aware, no microscopic examination of the cardiac ganglia from cases of intermittent pulse along with fatty degeneration of the muscular walls has yet been instituted; but it is a subject well worth investigation. From what has been said about intermittency of the pulse it is evident that in each case the general surroundings will tell whether it is a grave symptom or not. It may be found along with the most serious condition, and yet excite but little disturbance, so that the patient is barely conscious of it. On the other hand, it may make itself felt most unpleasantly under circumstances which cause little alarm. In some cases intermittency is found along with palpitation, especially in gouty females of middle age. When an attack of palpitation with intermissions comes on in the dead of night, awaking the patient from sleep, it is very alarming. Such patients say, "I am not so afraid when the heart is beating hard, for then I know it is going; but when the stoppage comes on, and I cannot feel my heart beating at all, then I feel as if I was going to die." And no doubt when the brain falters from an insufficient supply of blood to it, the sensations are very unpleasant, and the loss of the heart's beat adds to the alarm. Intermittency so associated has occurred, in my experience, chiefly in ladies of the neurosal diathesis.

It is not always easy to appraise exactly the importance of cardiac intermittency; and its significance is derived entirely from its associations. It may be a mere phenomenon, or it may be found along with the gravest conditions. When found associated with evidence of failure of the muscular walls, it is a symptom of very serious import.

Closely allied to intermittency is the very slow heart occasionally met with. In these cases the beats may fall to twenty in the minute. Such a case in a woman was sent me some time ago by Mr. Pugin Thornton. She was a young woman, and did not suffer in any way from this slow action of the heart. Her brain was, apparently, perfectly supplied with blood. She had no fainting or vertigo. Persons with these slowly acting hearts are rejected for military service, as was the case with a young gentleman about whom I was consulted some years ago in Berlin; but the reason of the rejection I could not ascertain. He was a youth of very active habits, fond of hunting, and in every way well and strong. Here the pulse was not below forty in the minute. In all probability this gentleman would have acquitted himself as well on the march and the battle-field as he did on the mountain-side and in the boar hunt. If there are evidences of the system, and especially the brain, being impaired, and the general efficiency lowered, by a slowly acting heart, then, and only then, can it be classed as a malady; under ordinary circumstances it is merely a peculiarity. In one family known to me, a slowness of the pulse—about forty in the minute—is found in each member of it. They are active people, and are in no way affected by this leisurely action in their cardiac ganglia.

The explosive discharging of these motor centres is affected by temporary conditions of the system. An irregular action with more or less rapidity is a not uncommon occurrence where there has been overwork and worry, and still more where there is an insufficient amount of sleep. At other times there is failure from some temporary cause, as an attack of diarrhœa or a debauch. Probably in such cases there is also a want of power in the muscular fibre as well. Such cases of sudden failure in the heart are somewhat common with men who are doing mountain-climbing, and the guides of the Tyrol are familiar with the condition, where the affected person loses all nerve and self-command, and has to be got down as best he can by his guides. This occurred with an American friend of mine in Vienna, a man of iron nerves ordinarily. More than one case of cardiac failure on the Righi has come under my notice.

From what has been said it is clear that the affections of the heart are not matters to be settled by their objective phenomena, their physical signs. So far as these are concerned, conditions of the deepest gravity cannot be discriminated from states which need occasion no alarm. But so long as the diseases of the heart are looked at merely, or chiefly, from the point of view of diagnosis only, so long will errors, and serious errors, occasioning needless alarm, continue and persist. Having noted a murmur, the next thing is to appraise its significance: having discovered an intermittent halt in the cardiac contractions, it becomes necessary to find out what it means—whether it is a mere nervous phenomenon, or the accompaniment of a very grave condition. As an organ acting mechanically the heart is greatly influenced by the work it has to do; still, there is something more than mere toil to be considered. The heart is in close connexion with the nervous system and with the emotions; and grave organic change may be closely simulated by what is after all but nervous mimicry of disease. Still more perplexing is the condition, not uncommon, where organic disease is blended with some nervous disturbance; and then the diagnosis really becomes a matter of difficulty, requiring for its proper elucidation a knowledge of the causes and progress of cardiac disease, as well as skill in the use of the stethoscope. However necessary it may be, for educational purposes, to insist mainly on a right interpretation of the sounds heard, for practice much more than that is required. And this information, which comes after the recognition of the physical signs, is much more difficult of attainment, and requires careful thought; while the recognition of the physical signs needs little more than acute senses fairly trained. But this last must precede the other and more difficult matter. However, as we progress, we find the deeper problems wax more and more attractive, and the imperfect information only stimulates to further research.

Finally, all knowledge commences by vague impressions, often erroneous, and not rarely misleading and unfounded. But these imperfect impressions are the pioneers of truer knowledge; just as the view of Sir Dominic Corrigan—that the utility of digitalis in aortic stenosis lay in its slowing the ventricular contraction so that more time was allowed for the blood to pass the narrowed ostium—though now known to be erroneous, led to more careful observation, and a truer knowledge of the action of digitalis. We now know that the good effected is by setting a more powerful contraction against a narrowed orifice, so that a normal amount of blood is thrown into the aorta each minute, and so the wants of the system are met, and the stenosis compensated. So the views set forth here may need modification and correction, and yet in so doing add to the sum total of our positive

knowledge about the diseases of the heart. As the mystery surrounding them melts away, and the clouds of imperfect information are rolled forth to make way for the more perfect light of day, so we shall find that, instead of occult conditions which we can detect, but not explain, we shall be able in each case of heart disease to understand its causation, and the direction in which it is moving, and so do much both in the way of prevention and of retardation; and may often usefully aid the natural efforts at compensation by our knowledge of and acquaintance with them and how they are brought about.

ORIGINAL COMMUNICATIONS.

THE ORIGIN OF SOME MOTOR DISORDERS.

By OCTAVIUS STURGES, M.D.,
Physician to the Westminster Hospital.

(*Continued from page* 569.)

In addition to the hysteric state and the hysteric paroxysm we find, in the third place, certain incidental phenomena set down in the books as "anomalous" but which would seem to coincide like the rest with well-recognised laws of habit, association and sympathy. It is easy to see how the hysteric state when once it has found relief in spasm soon gets fatally associated in the mind with such outbreak, each surrender of the kind making the way to future yielding more open and seductive until it acquires the strength of a habit. Meanwhile a number of deteriorating effects are being produced by the patient's consciousness that strong inclination is being palmed off as sheer necessity, by her belief that she is of an exceptional temperament unlike her companions and by observation of the sort of attention of which she becomes the object. Whatever treatment her over-emotion may receive, whether pity or punishment or contempt, it is never treated as real emotion is and never so presented to the mind of its possessor. For such reasons, no doubt, which are of a psychological kind and not now in question, the settled hysterical habit is in many respects *sui generis*.

There is no need to dwell upon the fact that the hysteric fit is contagious. It has been shown that the copying of attitudes varies with the self-reliance, and that attitudes expressive of emotion, whether justified or not, attract this kind of sympathy the most. It is not wonderful, therefore, that in an affection where self-reliance is absent and a strong bias towards certain forms of spasm already exists, the further inducement which the sight of spasm is known to afford should suffice to extend it from one to another.

But amongst the particular phenomena of a motor kind which authors describe as anomalous occur involuntary movement, involuntary stillness and disturbed muscular consensus. These defects we have seen already to be in nature. We have seen, that is, that when the will is feeble or feebly exercised muscular movements tend to degrade into rhythm; that when muscular acts have been associated together for a time the particular combination becomes a necessity; that when volition is weakened by mental causes the will or command or mere presence of another becomes an additional factor either to aid or deform or suspend the work. We have not now to speculate as to the possible outcome of such material for disorder, but simply to observe what it actually is.

There is a kind of motor infirmity which has been called "rhythmic chorea," a name in some respects well chosen as indicating that modification of childish chorea which is apt to occur so soon as the muscles have settled down to their uses. It consists in the repetition at regular intervals of certain movements in a certain order. It is quite common to find this affection in little, limited, that is, to the head and face and shoulders. I had lately in hospital a girl who, after the operation of iridectomy, began to wink the eyes, shake the head and shrug the shoulder, always in that order and with constant time. These movements could be arrested for a while by an effort of the child's own but would shortly reappear. Combined movements thus localised are far from rare. When, however, as but seldom happens, a disorder of the same kind extends to the limbs, the rhythmic movements become strangely distorting. M. Charcot has reported(a) the case of an hysterical girl who alternately flexed and straightened the trunk together with the arm and leg of one side "as though performing a series of profound salutations."

Mismovements of this kind, whether simple or associated, will occur at intervals longer or shorter and, from their being excited by a recurrence of certain events, are apt to become periodic. Just as we find many hysterics especially visited by their disorder at a fixed period of the day so the particular time of these rhythmic movements will be determined by some trifling circumstance with which, after a few repetitions, it becomes inevitably associated and strict periodicity is insured. Dr. Handfield Jones quotes(b) the case of a girl in the Hospital at Milan "who every day precisely as the clock strikes one begins to shake her head from right to left, gently at first but with ever-increasing rapidity, the mouth firmly compressed and the fists clenched. From time to time she bursts into a violent fit of laughter; consciousness and voluntary motion remain unimpaired. Exactly at 3 p.m. the paroxysm terminates."

It has been already noticed that in all movements of this sort the inducement urges with every degree of force from the least to the greatest. Far short of compulsion, however, they are easier to do than to restrain, and, although the consciousness may long linger that they are not absolutely involuntary, the energy is lacking for their suppression. It is not repugnant to the pattern of nature to find rhythmic movements of the most varied kind replacing the higher uses of the muscles as the signal of weakened control. It matters not that in young girls these movements are sometimes associated with various modes of deceit designed to facilitate them,(c) as in Dr. Gairdner's highly instructive narrative of choreic movements in a girl of eighteen. In such instances the motor symptoms are still due, less to a deliberate setting out to deceive, than to a too ready yielding to that which is easiest.

No doubt many of the varied phenomena loosely held together under the name of hysteria are referable to very obscure psychological conditions. That state of over-sensitiveness which aggravates common sensation to pain, uses the special senses as sources of suffering and solicits pity by craft is not easy of analysis. I am not attempting to explain it. The present object is confined to showing that the *motor* part of the affection so named exhibits the proper action of the muscular system. And if so it is not more likely that morbid anatomy should discover in the brain or spinal cord a material defect to account for these emotion displays upon what to us is inadequate occasion than that it should discover by the same means the woman who wanted prudence or the man who had no fear.

Similar observations would apply to that "rare and wonderful" affection, catalepsy. Wonderful as it is it is still in nature. Its factors are amongst us, and whoever sets about determining its pathology without reference to its familiar examples is neglecting necessary material. It is the tendency of violent mental perturbation to deprive women of sense and motion. It is the tendency of forcibly arrested attention to fix the attitude suddenly in mid-movement. It is the tendency of extreme sensitiveness and submission to others to impart to the body while under inspection a characteristic, motionless attitude. Here again we may not take upon ourourselves to decide beforehand the amount or duration of the disorder which such tendencies involve. We must look about and see. And so looking we find, in rare instances, the cataleptic state developed into an abiding affection, the circumstances being so combined as to call forth to the utmost the natural characteristics out of which it is made. We do not find it in the resolute or the self-controlled or the unobserved. All these conditions of being stand in the way of it. But as they are removed it comes out little by little, and is to be seen in the germ, as I have endeavoured to show, long before it comes to prevail over the whole body.

And, indeed, in the several degrees of an affection like catalepsy there is a further teaching. Volition, as it appears, may be suspended wholly or by departments. When it is enfeebled but not lost its defect must be seen first in those muscles which require the largest share of it, in the lower limbs, that is to say, sooner than the upper and in the face last or not at all. As illustration of this we find paraplegia

(a) *British Medical Journal*, pages 224, 251, vol. i. 1878.

(b) "Functional Nervous Disorders," page 363.

(c) See *British Medical Journal*, "Case of Abnormal Disposition to Sleep alternated with Choreic Movements." May 4, 1878.

by far the commonest form of hysteric paralysis, while in almost all forms of such palsy the muscles of facial expression escape.(d)

Lastly, passing from the disorders of puberty to those of more advanced life we find still the motor phenomena modified in strict correspondence with the new circumstances. No longer have we the changeful aspect and unsettled posture which denote vague expectation and accumulating knowledge. The individual has now acquired a settled estimate of the good of things and with it a settled deportment of body. With less to surprise or to transport, muscular response becomes definite and uniform. But this condition is not reached without penalty. The limbs have become trained to a particular service and bound down to certain uses and modes of action. Habit has been forming, bad as well as good. Imitation has made its mark. The consensus of particular muscles has bound them together to a crippling extent and destroyed their proper freedom. It must be added that the period of life has now arrived when, with the decline of spasm and emotional restlessness, characters which tend to make all young persons similar, the tricks and motor peculiarities derived from the parent stock find the fullest expression.

Anyone who will look around him in the strects of London will find sufficient illustration of motor disorder from this source. I do not overlook the fact that the tremors and spasm and ataxy to be seen there have their origin often enough in well-recognised nerve degenerations whether primary or secondary. But besides these there are to be noticed various rhythmical movements of the head and shoulders, twitchings of the face, wriggling of the body and many other mismovements whose origin may be clearly traced. Take, for example, the periodic nod or shrug which accompanies many elderly men in their walks. What is it but a common method of muscular response fixed and intensified? As the habit of reflection grows so also in many cases does that of silence. Too often, indeed, old age brings solitude with small opportunity for speech. Yet the working of the mind missing the movement which conversation affords will still seek some motor outlet. It finds it in the very same gestures which, when in company with speech or in answer to it, are proper and convenient and which for many years have been so associated. A practice of this sort—nodding or tossing the head or shrugging the shoulder—once acquired is certain very soon to become rhythmical in sympathy with the automatic movements. From being used occasionally when something strikes the mind (in which degree it occurs to everybody) it comes to be used habitually with *any* frame of mind and is set going so soon as the individual begins to use his legs. With the strictest regularity sometimes the head or shoulder will be spasmodically moved at the conclusion of a certain number of paces, it may be many or few, it is always the same. And, moreover, as with rhythmic chorea, the nod or shrug or toss of the head easily gets associated with some further disorderly movement so that the one always calls up the other.

There are many other mismovements of mature life whose source may be similarly traced. They are only rare and remarkable when extending beyond the muscles of expression. There is the frequent movement and soon the habitual restlessness of the mouth which follows the loss of teeth and consequent searching about on the part of the lips and tongue for new corners and recesses; the frequent movement of the scalp and forehead in those who have worn wigs and many other forms of involuntary grimacing of a similar kind. Even the natural gestures may be so brought out and accentuated by the slowness and deliberation of age as to appear in the light of deformity. We all pause for a moment in replying to questions and, before actual words, perform a series of movements of other muscles besides those concerned in speech. According to the tenor of the question these movements will be gentle, or deforming or spasmodic. But the time occupied by such acts is usually so short that they seem rather simultaneous than successive. Now with some persons it is easy to notice how the several muscles concerned are stirred in turn and with invariable order. First a movement of the face as the earliest signal of intelligence, then of the body of a particular kind more or less convulsive, next a putting forward of the chin, opening of the mouth, lighting up of the face and, at last, speech. When advancing life still further lengthens out this series of movements they soon pass into deformity, deformity sometimes of a very marked kind and extending over a wide area. It is true that mismovements of this sort do not come under medical supervision owing to the time of life at which they occur. But if their origin were different and nature had so arranged that young girls or little children instead of old men became the subjects of such contortions, we should have, no doubt, as in the case of chorea, many drugs proposed for their suppression and much controversy as to their precise pathology.

I hope in a final paper to sum up in a few words the conclusions which the foregoing remarks seem to justify and to protect them, so far as I can, against some criticism which they have provoked.

(*To be continued.*)

(d) It will be objected that hysteric paralysis sometimes directly contradicts any explanation of this kind, that, for example, hemiplegia is not very uncommon in hysteria, that a single muscle is sometimes selected for hysterical palsy whose exercise needs no conscious concern of the will, while sometimes a contracted or rigid state of limb will indicate not absence but perversion, not weakness but strength of will. To this I think it is fair to reply that hysteria, as at present defined, comprehends two distinct classes of persons, those who in Sir James Paget's phrase are "neuromimetic" as well as those who exhibit defects in volition. Hemiplegia, the contraction of a limb and many other conditions which resemble disease belong to this first or neuromimetic class. It still needs explanation why paraplegia should be by far the commonest form of hysterical limb palsy while facial palsy is by far the least common. The considerations of the text seem to supply that explanation. It remains wonderful, however, that palsies which seem purely hysteric such as ptosis should occur to muscles which need no conscious exercise of will and where no effort of imitation could contrive the particular lesion.

ON A CASE OF

ANEURISM IN THE GROIN,

FOR WHICH THE EXTERNAL ILIAC ARTERY WAS TIED WITH SUCCESS.

By W. SPENCER WATSON, F.R.C.S.,
Surgeon to the Great Northern Hospital.

THE question as to the best form of ligature thread, and the best method of applying it to an artery for the cure of aneurism, still awaits a final solution. It cannot now be accepted as proved, that in order to cure an aneurism we must obliterate an artery by a ligature which cuts through the two inner coats. The fact that digital and mechanical pressure have now, in many instances, been successful, proves the possibility of curing the disease by temporarily obstructing the blood-current through the artery implicated. Hence the method by severing the inner coats can no longer be looked upon as the best. The following case is chiefly interesting in reference to this point. A carbolised catgut ligature was employed, with the intention of bringing the walls of the artery into close contact, and retaining them in position for a time, but without cutting through the two inner coats. Whether a permanent obliteration of the canal of the artery was obtained, was not considered important. It was not considered necessary that the artery should be obstructed by a permanent and adherent clot which became subsequently organised; on the contrary, it was thought sufficient for the purpose to obtain a complete obstruction for a few days only, after which, if the catgut ligature became loosened or absorbed, there would still be every prospect of the sac of the aneurism having been filled up by the deposition of adherent layers of fibrine. In any case, the use of the catgut ligature by the method proposed would not be a cause of ulceration of the walls of the artery, and the risk of secondary hæmorrhage would, *pro tanto*, be diminished. The question, however, may be asked, What grounds have you for supposing that the catgut will remain in position even long enough (say twenty, thirty, or sixty hours) to insure even the temporary obstruction at which you aim? Have we not recent evidence of the occurrence of secondary hæmorrhage after the use of carbolised catgut as a ligature to arteries in their continuity? To this I reply that in those cases the catgut ligature was used with the *intention* of cutting through the inner coats, and therefore with more force than in the case below related; in which also a treble knot was employed with a view to avoid the tendency to early unravelling or loosening which has been noticed with regard to these ligatures. Another question will inevitably arise as to the possibility of so adjusting the amount of force applied as to be sure that the inner walls are in contact, and yet the inner coats intact. This, I confess, seems a somewhat difficult point on which to speak

decisively. Desault and Dr. Jones believed that in every instance in which a ligature was applied around an artery without including the surrounding parts the internal coat was torn through by it; and this fact was verified by Mr. Hodgson and others. But it must be remembered that ligatures were applied in those days with the intention of closing up the channel permanently and at all hazards, and that the ends of the ligature thread were left hanging from the wound, so that no hope of the escape of the noose without ulceration clean through the whole thickness of the artery was entertained. With the catgut ligature the case is quite different. We cut off the ends of the thread close to the artery—we do not wish to see any more of it; often we never do,—it may remain around the artery or become absorbed; but in any case we do not wish it to cut its way through an ulcerated portion of artery. Then, again, the intention with which the artery is ligatured must go for something. The moderate amount of force applied, though perhaps difficult to indicate verbally, is, nevertheless, conceivable and capable of regulation by the tactile judgment of the individual surgeon.

That the result was successful in the following case must be taken as an argument *quantum valeat* in favour of the method advocated, and in diminution of the distrust of the catgut ligature which has been lately expressed by distinguished surgeons. That the wound did not heal by primary union, but went on to granulation and suppuration, notwithstanding the use of Lister's antiseptic dressings, requires some explanation. It must therefore be confessed that though it was thought at the time of the operation that strict antiseptic precautions were taken, it was nevertheless afterwards remembered that a certain forefinger which had not been carbolised was thrust once or twice into the wound. It must also be acknowledged that the first dressing of the wound was too long delayed considering the heat of the weather and the copiousness of the serous discharge.

Notwithstanding the failure to obtain primary union and to avoid suppuration, it is very satisfactory to be able to record the fact that there was throughout the case little or no evidence of surgical fever—a result scarcely possible in such an operation without antiseptic measures of some kind or other. Compression, either digital or mechanical, was thought to be inadmissible in this case for two reasons. 1. The patient was a very muscular man in the prime of life, and the walls of the abdomen offered very great resistance to any pressure. It was therefore very unlikely that the pain caused by prolonged pressure, even if effectually applied for a time, would have been borne by the patient. 2. There was evidently a very rapid increase in the size of the aneurism, even in the course of the twenty-four hours preceding the operation.

The following notes were furnished by Mr. J. H. Gillam, House-Surgeon to the Great Northern Hospital:—

A. C., married, aged thirty-two, a bricklayer's labourer, was admitted on July 17, his work principally consisting in carrying at a time from one hundredweight to one hundred-weight and a half of bricks up ladders.

No history of syphilis or rheumatic fever. Eight or ten years ago he drank a great quantity of spirits, but of late years has confined himself to beer, and of this generally six or eight pints a day. Says he has always enjoyed good health, and does not remember anything the matter with him till July 6, when on awaking in the morning he noticed some stiffness and pain in the left groin, and putting his hand to the part, discovered a small swelling, which has daily and rapidly increased in size. He has continued work, however, till yesterday, July 16. The pain has been very severe at times during the day; but at night, after he has rested an hour or two, it has passed away.

Present Condition.—Patient is a well-nourished and apparently healthy man. Heart normal, and no indication of disease in other organs. Urine, specific gravity 1016, acid; no albumen or sugar. In left Scarpa's triangle, extending up to Poupart's ligament, there is an aneurism, about the size of a small orange, having a heaving, distensile pulsation, which is especially noticeable on its inner aspect. No bruit; no redness of overlying skin; pressure on left external iliac artery stops the pulsation, but does not diminish the size of swelling. The pulse of tibial is more forcible on the affected side.

July 17.—Mr. Watson, with the unanimous approval of his colleagues, ligatured the external iliac artery on the left side. Strict antiseptic measures were adopted, and a stout carbolised catgut ligature was used, the wound being dressed with antiseptic gauze. All pulsation ceased in the sac on tightening ligature. 11 p.m.: Intense pain, principally referred to wound and heel of left foot, relieved by morphia. Temperature 98·4°; pulse 68.

18th.—Passed a quiet night; slept for several hours. Pulse 82; temperature 99·2°.

19th.—Going on well. Temperature 99·1°; pulse 72. Bowels opened once freely during the night. Left limb feels cold. Temperature at internal malleolus 97·2°; no pulse in tibials.

20th.—Temperature (axilla) 98°; pulse 72. No pain.

21st.—Temperature 98·2°; pulse 84.

22nd.—Very good night. Dressings removed. Wound looks healthy; some very slight inflammatory redness around its edges; slight suppuration, apparently superficial. No evidence of any deep bagging. Pulse 84; temperature, 98·8° axilla, 98·2° malleolus.

23rd.—Rather more suppuration. No pulsation of sac. Pulse 88; temperature, 98·6° axilla, 97·5° malleolus.

24th.—Very good night. Pulse 80, slightly dicrotous; temperature, axilla 99·2°, malleolus 97·8°.

25th.—General condition remains good, pulse being 86; temperature 98·6°. There is now free discharge from wound; all the stitches have given way.

26th.—Good night. Pulse 84; temperature 98·6°. Very free suppuration; the antiseptic dressings were discontinued, and carbolised oil and tow employed.

27th.—Pulse 86; temperature, axilla 98·4°, malleolus 98·8°. Wound looks better and discharge is less.

29th.—Temperature 99·2°; pulse dicrotous, 96. Discharge is less purulent, and the granulations are large and flabby, and have little tendency to bleed. Ordered tinct. ferri perchlor. ℥xv., infus. quassiæ ʒj. ter in die; and lotio zinci sulph. (gr. v. ad ʒj.) to be applied to the wound.

August 1.—Going on well. Wound is rapidly filling in. Temperature 98·4°; pulse 72, more power about it.

8th.—Feeling well. The granulations on wound are smaller and more florid. The general condition of the patient is now much improved, the pulse being no longer dicrotous, but of good volume. Pulsation felt in anterior and posterior tibial arteries.

21st.—There has been a slight sanious discharge from wound the last two or three days, which has now ceased.

September 10.—Wound almost healed in. Temperature and pulse normal. Good pulsation in both tibials: none in sac.

20th.—Got up to-day for first time.

October 7.—Is now quite well. Firm cicatrix over seat of incision; good pulse; limb warm and temperature same as on corresponding side. Discharged from hospital.

REMOVAL OF SARCOMA OF ORBIT, WITH RECOVERY OF SIGHT.

By J. R. WOLFE, M.D., F.R.C.S.E.,
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THERE are so few cases on record in which, after loss of vision by the pressure of an orbital tumour, sight has been restored by its removal, that the following case may not be without interest.

Thomas A., aged eight, the youngest of a family of fourteen, of whom two were still-born, two died at the ages of three and five weeks respectively, and the rest are in good health (the oldest being twenty-seven years of age), was recommended to me by the family medical attendant. As far as could be ascertained, there was no history of cancer connected with the family. The patient had enjoyed good health until a few months prior to the date at which I first saw him, when he began to complain of debility, with languor and impaired appetite.

About three months before I saw him, a slight elevation was noticeable about the outer angle of the lower eyelid of the left side, which from this time slowly increased in size. About two months after this he was stated to have received a slight injury to this spot by a blow, and from that date the swelling rapidly increased.

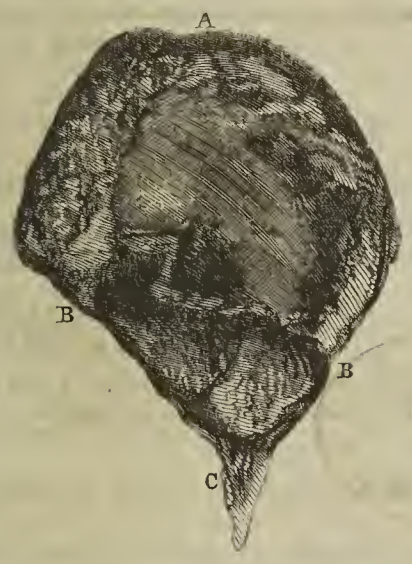
When brought to me he appeared somewhat sallow and cachectic. A tumour of considerable size was situated at

the lower and outer part of the left orbit, bulging considerably the lower eyelid, and pressing the protruding eyeball upwards and inwards, so as to hide it completely under the upper eyelid. By pulling up the upper eyelid he could count fingers and see objects towards the right side.

Ophthalmoscopic examination showed the existence of the choked disc. The optic nerve was swollen and projecting; the vessels were tortuous and much dilated. I saw him again ten days afterwards, by which time the tumour had very much increased in size, protruding itself forwards very considerably, rendering the eyelid very tense, and lapping much over the eyeball. The protrusion of the eyeball was also increased. On lifting the upper eyelid and pushing the tumour aside so as to expose the pupil, it was found that vision was completely abolished. The tumour had an elastic feel, firmer on the outer side, and softer towards the centre, and presented a sharply defined border.

Fig. 1.

Fig. 2.



The tumour was removed in the following manner:—An incision was made from the outer angle of the eye horizontally backwards to the extent of about three-quarters of an inch, dividing all the tissues down to the bone; the lower eyelid was then everted, and the incision was prolonged forwards by dividing the conjunctiva with scissors in a line parallel to and a little above the lower margin of the orbit. By reflecting the conjunctiva the whole fore part of the tumour was thus exposed. It was found to be inclosed in a thin but firm capsule, which was strongly adherent to the periosteum of the floor of the orbit, and in front it overlapped the margin of the orbit so as to encroach upon the cheek. By careful dissection its under surface was detached from the floor of the orbit, and its upper surface from the recti muscles, etc., and the whole of it was thus removed. The edges of the wound were then brought together by two sutures, and simple dressings applied. In four days the whole was healed.

On now examining the eye it was found that vision was restored. He could read No. $5\frac{1}{2}$ of Snellen's test-types. The eyeball, however, was slightly protruding, and its movements somewhat restricted, especially downwards and outwards.

Fig. 1 represents the appearance of the patient fourteen days after the operation.

Fig. 2 shows the exact size of the tumour; the triangular portion B B C being that which lay on the floor of the orbit, the point C projecting backwards, and the slightly irregular line B B being the groove corresponding to the margin of the orbit. The mass A is the part that projected in front, pushing out the lower eyelid and lapping over the eyeball.

The tumour was subjected to microscopic examination by Dr. Coats, Pathologist to the Glasgow University, whose report is as follows:—

"The main constituents of the tumour are round cells, which are intimately related to a firm reticulum, such as exists in lymphatic glands. In addition to the round cells and reticulum there is a coarse, almost fibrous, stroma which intersects the tissue and gives it an almost alveolar appearance. I regard the tumour as a sarcoma, and probably a glio-sarcoma. It might readily be taken for cancer, but I regard the existence of the fine reticulum between the cells as being absolutely conclusive against this view."

This report, along with the general appearance of the tumour, warranted us in hoping that there might be no return of it, but the result proved different.

Three months afterwards I again saw the patient. By this time the protrusion of the eyeball had increased to a considerable extent, accompanied by well-marked cerebral symptoms, showing that the tumour had recurred in the back of the orbit, and had extended to the brain. Shortly afterwards the patient died.

Remarks.—1. The restoration of sight in this case was probably due to the comparatively short time during which the pressure was kept up to an injurious extent. 2. The recurrence of the tumour is merely another illustration of the fact that the intimate structure of a tumour, as shown by the microscope, is not in all cases to be relied on as evidence either for or against the probability of its return. While it is, no doubt, true that tumours possessing a genuine cancerous structure usually return after removal, yet cases occasionally occur where they do not do so, and where removal by operation proves a permanent cure. On the other hand, while it is also true that tumours of a different structure are usually readily removable by operation without risk of recurrence, yet it sometimes happens that they do return and prove as readily fatal as if they had possessed the structure with which the character of malignancy is usually associated. In doubtful or exceptional cases it would therefore appear that the microscope is no more to be relied upon than any other means of diagnosis.

Claude Bernard's Successor at the Académie des Sciences.—The entrance of physiologists to the Académie is through the portal of the Section of Medicine and Surgery, and efforts have long since been made, and especially on the part of Claude Bernard himself, to keep this section filled only with pure physiologists, to the exclusion of practical physicians and surgeons. He used all his influence to prevent the election, first, of Prof. Sédillot, and afterwards of Prof. Vulpian, opposing Prof. Marey to the latter candidate. On the present occasion of supplying a successor to Claude Bernard himself, the Academy "would seem," Amédée Latour observes, "to have sought to pay a last homage to the memory of its late illustrious member, by placing a physiologist in the seat of a physiologist." The Section presented its list of candidates in the following order:—(1) Prof. Gubler; (2) Prof. Charcot; (3) Prof. Marey; (4) Prof. Paul Bert; (5) Prof. Germain Sée; (6) M. Moreau. The Academy, however, passed over the first two clinical candidates, and elected Prof. Marey by the voices of forty of the fifty-nine voters present, Prof. Paul Bert receiving fifteen, and four votes being given, almost derisively, to the medical candidates. Some surprise might be felt that Prof. Marey's claims were thought so superior to those of so distinguished a *savant* as Paul Bert; but it is alleged that he, having become also a distinguished political character, is less eligible than M. Marey, who devotes himself exclusively to science.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GUY'S HOSPITAL.

EXTREME TALIPES VARUS TREATED BY REMOVAL OF A WEDGE OF BONE FROM TARSUS.

(Under the care of Mr. BRYANT.)

THOMAS N., aged twelve years, was admitted on June 12 with extreme talipes equino varus of the right foot. The patient was in Guy's Hospital for this condition when eight months old, and again seven years ago, and on the last occasion was tenotomised, and for some time wore a shoe.

On admission, the head of the astragalus was found to project on the outer side of the foot; the cuboid was also prominent, and there were several swellings on the outer side due to pressure. The tendo-Achillis and anterior and posterior tibial tendons were tense, the muscles of the calf much wasted, and patient walked almost entirely on the outer side of the foot.

On June 18, Mr. Bryant performed the following operation:—An Esmarch's bandage being placed on the leg, two skin incisions were made—one on the outer side of the foot for about two inches; the other perpendicular to the first, extending from the dorsum to the side of the foot. A V-shaped piece of bone was then taken from the outer side of the tarsus, consisting of the scaphoid with the greater part of the cuboid and the articular surfaces of the os calcis, of the astragalus, and one of the three cuneiform bones. The edges of the wound were then brought together, and the foot straightened and placed on an ordinary side-splint.

29th.—Patient has complained a good deal of pain in the foot. His temperature has never been much above 100°. The wound has kept healthy.

July 4.—The side splint has been exchanged for a back one with a foot-piece.

11th.—Temperature now normal. A talipes splint is now applied, and the foot is in good position.

18th.—Patient has been out for an airing, and seems much better in general health.

27th.—Wounds healing well, discharge slight, and foot in good position.

August 20.—The splint has been taken off. There is some tenderness about the sole of the foot.

September 14.—Patient has steadily improved, and has been sent home with the foot encased in plaster.

In October patient again returned to the hospital, and had the tendo-Achillis divided. The wound had not then quite healed, and there were some prominent granulations on the outer side of the foot.

November 25.—The wounds have quite healed. Patient can put the sole of his foot fairly and evenly on the ground. The ankle-joint is somewhat mobile, and there seems to be increased mobility in the metatarsal phalangeal joints. The foot seems now little deformed, and the success of the operation has been very marked.

ANCHYLOSIS OF JOINTS AFTER RHEUMATIC FEVER.

(Under the care of Mr. BRYANT.)

Arthur W., aged eleven, admitted November 4. Three months before admission patient had an attack of acute rheumatism. A fortnight after the commencement of the fever the left hip, right wrist, and elbow became stiff and flexed, and have remained in that condition since. On admission patient seemed healthy and well nourished. The right wrist-joint was anchylosed in a slightly flexed and pronated position, the left humerus and ulna at their articulations were firmly united to each other, and the elbow was immovably fixed in a flexed position at an angle of about 100°. The left thigh was flexed, abducted, and rotated outwards so as to lie almost at right angles with the trunk, and the hip-joint was anchylosed. The left knee could not be quite extended. Patient complained of no pain, and the heart sounds were normal.

On November 19, the patient being under chloroform, Mr. Bryant broke down the fibrous adhesion in the joints, and a double long splint was applied to the legs, and both arms were put up on splints adapted to keep them in good position.

On November 23 the splints were removed and considerable movement was attained in the joints, the limbs then being in good position. This condition is not a common one after acute rheumatism; but it seems to point to the advisability of, if possible, so placing the limbs in acute rheumatism that if anchylosis should occur it may not be in an awkward position. The double splint used in this case is described in Mr. Bryant's "Practice of Surgery," and is used extensively at Guy's for fractured thigh, diseased hip, etc. The advantages claimed for it are, that it insures perfect parallelism of the limbs, makes rotation, adduction, or abduction impossible, and that extension to any amount can easily be applied. Mr. Bryant uses it for all cases of simple fracture of the thigh; and of the last thirty-one cases so treated, twenty-eight have left the hospital with limbs which for all practical purposes may be said to be without shortening.

ABDOMINAL ABSCESS, APPARENTLY COMMUNICATING WITH GALL-BLADDER—EXTRACTION OF GALL-STONE.

(Under the care of Mr. BRYANT.)

Eleanor B., aged fifty-three, single, was admitted on July 17 with an open wound just under the right hypochondrium, and another below and to the outside of it, both discharging freely. Patient stated that five years ago she first noticed a lump below the ribs, and that two years ago she went to King's College Hospital, and there had an incision made into the swelling. A year later a second abscess formed in the position of the second sinus, and both have continued open since.

July 22.—A sinus between the two wounds has been slit up, and some pus escaped along with a little blood.

August 13.—The discharge, which had kept up more or less, was very yellow, and gave the reactions for bile to-day. Patient is not uncomfortable or emaciated.

October 8.—The sinus has occasionally shown signs of closing up, but has never quite done so. The escape of bile has been intermittent, and the general health of patient has kept good. To-day, patient being under the influence of chloroform, Mr. Bryant explored the wound, and discovered the presence of some calcareous substance. By enlarging the sinus in the direction of the gall-bladder, he was able to extract a gall-stone about one inch long by half an inch broad.

11th.—Patient has kept well since the operation. A quantity of pure bile is discharged from the opening. Temperature is slightly above normal.

19th.—Almost no bile is now discharged, and the part of the wound last made has almost healed.

November 1.—The bile only passes from the opening in small quantities, but the wound is somewhat slow in healing. Patient's general health is improving.

25th.—The discharge of bile cannot be said to have entirely ceased, and the wound seems somewhat obstinate. To-day patient has been put up in Sayre's bandage to secure immobility of the parts. Her health is now good.

UNIVERSITY COLLEGE HOSPITAL.

CASE OF EPITHELIOMA OF TONGUE FOLLOWING SYPHILITIC ULCER—REMOVAL BY ÉCRASEUR.

(Under the care of Mr. MARSHALL.)

[FOR the following notes we are indebted to Mr. S. H. Burton, M.B. Lond., Surgical Registrar.]

Henry C., aged fifty-nine, a well-nourished but somewhat anæmic man, was admitted on June 26. There was then a sore occupying the anterior part of the dorsum of the tongue, extending to within a third of an inch of the tip, and lying a little to the right of the middle line. The sore was deeply fissured transversely and from behind forwards. On each side of the fissures the tissues were raised, papillated in appearance, and covered with a grey tenacious secretion. The surface was not tender. The mucous membrane of the anterior part of the tongue was white, irregularly fissured on the left side, smooth on the right. The papillæ circumvallatæ were much hypertrophied. There was no difficulty in swallowing, and no enlargement of lymphatic glands under the jaw.

History.—Patient stated that he had noticed an ulcerated condition of the dorsum of the tongue for the last four months; he had been subject to bad teeth, and had been in the habit of smoking clay pipes; forty years ago he had a chancre, followed by a severe sore throat and cutaneous eruptions, but did not recollect any ulcerated condition of the tongue, although scars were plainly visible at the sides and dorsum. Patient stated also that his uncle died of some malignant disease of the throat.

Treatment.—On June 27, Mr. Marshall removed the anterior two-thirds of the tongue by means of the écraseur, hæmorrhage being arrested by the application of the thermo-cautery. Lint soaked with perchloride of iron solution was pressed against stump, and ice was freely given in the course of the evening.

29th.—Patient has been doing well. The stump looks somewhat sloughy, and the glands under the jaw are much enlarged and very tender, more especially on the left side. "Sanitas" has been used as a wash, and Condy's fluid has been tried. The former is the pleasanter; the latter seems the more effectual.

July 2.—Tenderness of glands is much less; swelling nearly gone down.

3rd.—There has been some hæmorrhage from stump, not of a severe character, and arrested by ice. Glycerine and carbolic acid are being brushed on twice a day.

4th.—No more bleeding. The stump looks cleaner, and is being brushed with nitrate of silver solution.

6th.—Morning temperature 98·2°. The sloughs have all separated except one small piece as large as a bean. Patient has got up for the first time.

18th.—Patient left to-day with the stump in good condition, and likely to do well. He is able to talk and to swallow solid food. On microscopic examination the affected part presented the appearance of undoubted epithelioma. The collections of epithelial cells were large, the individual cells being round with large nuclei, and many of them were ridged like those of the rete of the skin. The groups were embedded in a tissue composed of round "indifferent" cells. A section of the posterior border of the piece of tongue removed close to the right side was examined, and no collections of epithelial cells could be found—only collections of "indifferent" cells besides the ordinary tongue-tissue. The inference was that all the new growth was removed.

The Muséum d'Histoire Naturelle de Paris.—The following is the programme of the courses of lectures, each to be delivered three times a week, commencing on December 4:—1. *Zoology*, Prof. Emile Blanchard.—The anatomy, physiology, metamorphosis, and classification of insecta, arachnida, and crustacea. The history of certain species that are useful, and of others which are markedly injurious to agriculture, will be dwelt upon. 2. *Annelida, Mollusca, and Zoophyta*, Prof. Edmond Perrier.—In this course the arguments will be treated of which the history of the lower animals furnishes in favour of or against transformist doctrines. 3. *Reptiles, Batrachians, and Fishes*, Prof. Léon Vaillant.—The organisation, physiology, and classification of fishes, both living and fossil, especially in reference to European fresh-water fish, and the procedures of pisciculture. —*Rév. Scientifique*, December 7.

Medical Inspection of Public Schools in Paris.—Answers favourable to the project having been returned to the circular of queries addressed to the mayors of the twenty arrondissements of Paris, the proposition is about to be brought before the Conseil-Général de la Seine for the organisation of a service of medical men as inspectors of the communal schools of Paris and the department. The number of schools is 424, divided into 1926 classes, and comprising 125,557 scholars. Paris is to be divided into eighty-five districts, each to be inspected by a medical practitioner, who will be charged with the sanitary inspection of from twenty to twenty-five classes, giving as a mean an inspector for 1477 children; so that the office, the emoluments of which will hardly exceed 800 fr. or 900 fr., will prove no sinecure. In the remainder of the department there are 258 schools, with 614 classes and 36,705 scholars; and for these it is intended to appoint twenty-nine medical inspectors, each having two or three communes, with 1265 children, to visit. —*Union Méd.*, December 3.

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Medical Times and Gazette.

SATURDAY, DECEMBER 14, 1878.

THE SALE OF FOOD AND DRUGS ACT.

In the *Analyst* for the present month, a very instructive and interesting statement is given by Mr. Adams of the results of the working of the Sale of Food and Drugs Act in Kent, showing how very successful the Act, when properly enforced, is in stamping out adulteration. In the first quarter of 1875, 109 samples were received for analysis, and of these 23·85 were found to be adulterated. In the second quarter the analyst received 558 samples, of which 9·85 per cent. were adulterated; in the third quarter, out of 507 samples received, only 4·52 per cent. were adulterated; and in the fourth quarter, out of 103 samples, the percentage of adulteration had decreased to 2·85. In the year 1876 no samples were sent for analysis except during the last quarter, and then only 8, none of which were adulterated. In 1877 again, only 2 samples, neither of which were adulterated, were received in the quarter ending March, and none in the other quarters. But in the first quarter of 1878 more activity on the part of the inspectors was shown—137 samples were received for analysis, and it was found that the percentage of adulteration had risen to 13·14; in the next quarter 60 samples were examined, of which 8·70 were adulterated; and in the quarter ending September a percentage of 13·84 of adulteration was found in the 65 samples sent to be analysed. If adulteration increases so quickly when the inspectors under the Act relax their watchfulness, it may be taken as certain that any serious legal impediment to the working of the Act would let loose adulteration in full flood; and such an impediment has unfortunately been discovered, by a perverse exercise of legal subtlety and ingenuity, in Section 6 of the Act.

When the "Sale of Food and Drugs Act Amendment Bill" was introduced into Parliament, in 1875, the first few words of Section 6 ran thus—"No person shall knowingly sell any article of food or any drug which is not of the nature,

substance, and quality of the article demanded by the purchaser"; but to this were added the words, "except as hereinafter provided." The exceptions thus provided seemed so wide that doubt was felt whether the clause would be of any value, and the words "to the prejudice of the purchaser" were therefore introduced. This clause has since been commonly known as the "prejudice to purchaser" clause, and it worked well till some keen-witted solicitors, in the year 1877, raised the objection for defendants that if an inspector purchased an article for analysis, and not for use, he was not prejudiced. For a time the objection was not sustained, but at last it was raised on appeal to the Justiciary Court of Appeal in Scotland, and there the decision was that it could be upheld. Next, this construction of the clause was adopted, or thought to have been adopted, by the Lord Chief Justice of England, who was reported to have said, in the case of Sandys *v.* Small, for selling adulterated whisky, that an officer appointed by a local authority to obtain samples could not be considered prejudiced by the purchase of adulterated articles procured under the orders of the local authority. This reading was adopted by Sir James Ingham, who dismissed a summons brought against a milkman for selling to an inspector milk alleged to be adulterated with water, on the ground that it would ill become him to express an opinion contrary to such high authorities as the Justiciary Court of Appeal in Scotland, and the Lord Chief Justice. On the application of the counsel for the prosecution, Sir James Ingham granted a case for the Court of Queen's Bench, his decision, as he has since stated through another magistrate, not being intended to form a precedent, but simply for the purpose of having the question settled. It may, however, be some months before the case is heard in the Superior Court, and meanwhile it has been publicly stated that adulteration has been vastly on the increase, and it seemed certain that this increase would continue unchecked till the judges should decide in favour of the Act, or the Act itself should be amended. But, fortunately, in the case of Sandys *v.* Markham, Mr. Justice Lush gave an opinion upholding the intention of the Act. The case was one of selling adulterated mustard. The inspector had bought a sample for analysis, and the magistrates had dismissed the information on the ground that the sale was not to the prejudice of the purchaser. That at least was stated as one of the grounds of their decision. The case was heard in the Court of Queen's Bench before Justices Mellor and Lush, and Mr. Justice Lush said, "Surely if the purchaser did not get pure mustard, as he was entitled to, prejudice must be presumed." And the police magistrates generally have not followed Sir James Ingham's example. In Lambeth, Mr. Chance overrules the objection, and says that he shall continue to do so, and to impose penalties, in all cases brought before him and proved, till he is overruled by a superior court. In Marylebone, Mr. De Rutzen continues to convict and impose penalties. At Bow-street, Mr. Vaughan has stated that, in his opinion, summonses should still be taken out, but adjourned till the point in question has been decided; while Mr. Bridge says that he will go on hearing cases, but suggests that convictions should not be enforced till the question has been determined. Mr. Bridge is also reported to have said that he believed that all the magistrates are of opinion that the selling of an article not of the substance and quality demanded is to the prejudice of the purchaser, whether an officer of the parish or any other person. Further, the Local Government Board, in replying to a request from the Chief Constable of Cumberland and Westmoreland for advice, have stated that they entertain no doubt that the view taken by Mr. Justice Lush is the correct one; and they pointed out that the authorised report of the case of "Sandy *v.* Small" does not contain the words that have been attributed to the Lord Chief Justice, and that the case "was decided upon quite a different ground." The threatened mischief may therefore be less than was apprehended; but it is greatly to be regretted that the attempt to make the Act a dead letter has received so much support; and we must hope that no avoidable delay will be allowed to interfere with the complete and speedy settlement of the question in dispute.

TYPHOID FEVER IN INDIA.

Everyone who has had much experience in the treatment of fever, even in this country, is aware that now and then there occur cases where an accurate diagnosis as between typhoid and other febrile conditions is all but impossible, and that there are many more cases where, with the diagnosis of typhoid satisfactorily established, and the previous history and surroundings of the patients carefully investigated, all attempts to discover the etiology of the disease are completely baffled. Moreover, there is not, even now, among those best able to form an opinion, anything like absolute unanimity in regard to the fundamental question whether typhoid fever may arise *de novo*, or from ordinary organic filth, or is not always the result of contagion, through some medium contaminated by the specific typhoid excreta.

There being all this doubt and difficulty in our own temperate climate, it is not to be wondered at that the difficulties of diagnosis should be greatly multiplied in such a country as India, where so many other febrile conditions, resulting from malarial or climatorial influences have to be differentiated from the specific typhoid or enteric disease. The peculiar behaviour of the latter in regard to temperature, and its undoubted tendency to relapses simulating the regularity and periodicity of the exacerbations of some forms of remittent fever, have only to be mentioned to show how difficult a problem our Indian brethren may sometimes be called upon to solve. Up to a very recent period the problem was always solved in one way by the medical officers in charge of the British troops serving in India; for before 1870 the existence of specific typhoid among these was either not recognised at all, or, if recognised, was not entered as such in the statistical returns. The apparent rarity of the true disease among other European residents in India, and, so far as is known, among the native communities, has all along been recognised. But in 1871, in an important Appendix to the Report of the Sanitary Commissioner with the Government of India for the year 1870, Surgeon-Major Bryden proclaimed for the first time the existence of true enteric fever among the European troops. He made this announcement without any hesitation, justifying his conclusion by a detailed account of cases. By a careful examination of previous returns he also endeavoured to show that the true enteric disease was not a novel occurrence, its non-appearance in former official reports being due, as he concluded, to faulty diagnosis, or to the fact that no separate heading existed for this affection in the blank forms. He found that the disease was most prevalent amongst the young and unacclimatised. In two succeeding reports in the same series of official documents Dr. Bryden reasserted his discovery, and further mentioned that cases of the disease had been detected in the Native Army and amongst prisoners. One result of these announcements has been that since 1871 typhoid fever has had assigned to it a distinct position in the nosological returns relating to the European troops; and during the years 1871-76 upwards of a thousand cases have been returned under this heading in the British Army of India.

The above-mentioned announcements have naturally given

rise to much discussion and speculation among those conversant with Indian fevers. Some have at once admitted their truth, and acknowledged that the disease was formerly ignored in India, being buried in the group, "Remittent and Continued Fevers." Others admit that there is a disease prevalent in India having the ordinarily described symptoms and lesions of typhoid, but at the same time they hold that it is not specific in its nature or origin, being really due to climatic causes. Others, again, hold that nothing has been described in reference to the alleged typhoid which differs from what was previously known to experienced medical officers as frequent occurrences in the ordinary malarial forms of fever, especially those where the type seemed a compromise between the remittent and continued forms. All shades and combinations of these various opinions have been advanced.

In a matter of this kind it would, of course, be mere trifling to attempt a settlement of the conflicting opinions by any theoretical or *à priori* reasoning. Suffice it to say that, so far as we know at present, there is nothing in the essential nature of true typhoid or enteric fever as observed in this country to render its existence incompatible with such a climate as that of India. For the rest, we must leave the matter in the able hands of those most competent to form an opinion—the medical profession in India. It is evident, however, that most weight would attach to the conclusions of those who have had experience of fever not only in India, but also in Europe. However experienced, painstaking, and talented many of the Indian medical officers may be, in a question of this nature where so much depends on the character of the symptoms and appearances as actually observed, the conclusions of those who have had experience of typhoid in England, as well as of its alleged counterparts in India, must surely have the greatest weight in the future elucidation of the subject.

There has lately appeared a "Report on Typhoid or Enteric Fever in relation to British Troops in the Madras Command," by Surgeon-General Gordon, in which the whole matter is discussed at length. Dr. Gordon evidently approaches the subject with a strong conviction that the alleged prevalence of true typhoid in India is an unwarrantable conclusion. We cannot say that his Report is to our minds a very satisfactory one, or that it seems destined to do much towards settling the question one way or the other. It is throughout too much of a bookish and mere statistical nature to have great weight against the allegations of those who speak from actual personal observation. His general conclusion after a scrutiny of the reports of 175 cases returned under the heading of typhoid fever, is that "only seven approximate to the standard of typhoid fever according to British authors; while in not one instance has the disease been traced to pythogenic causes. If not traceable," he continues, "to specific causes, then it seems to me necessarily to follow that the disease has resulted from general influences, in other words, from endemic conditions affecting masses or individuals." This last dictum of Dr. Gordon's would certainly not be agreed to by many British authorities. The reports of the cases on which he has founded his conclusions are too meagre to enable anyone to form an estimate of the accuracy of his inferences. Thus, to mention only one point, there is no systematic record of the morning and evening temperatures of the cases, and the description of the post-mortem appearances in the fatal cases is far too vague, even in reference to Peyer's glands, to be of any real use.

The truth is, as is confessed in the *Indian Medical Gazett* when speaking of Dr. Gordon's report, that the whole subject of Indian fevers "requires to be worked up both clinically and etiologically," and, we would add, in reference to pathological appearances. We further agree with our Indian contemporary in its hope that the present unsettled state of opinion may lead to closer and more discriminating observation and study of Indian fevers, and in holding that "the unsettling of present beliefs is a small inconvenience as compared with the great and substantial good that must eventually result from a more accurate induction and sound pathology."

AN IMPROVED METHOD OF STAINING MICROSCOPICAL SPECIMENS.

Dr. G. Broesicke, keeper and assistant at the Berlin Pathological Institute, recommends (*Centralblatt Med. Wiss.*, No. 46, 1878) a combination of osmic acid and oxalic acid for staining the tissues instead of osmic acid alone. Small pieces of the tissue, or prepared sections, are placed for an hour in 1 per cent. osmic acid solution, and then carefully washed to remove all superfluous acid. They are then immersed for twenty-four hours or longer in a cold saturated aqueous solution of oxalic acid (one to fiftcen), and are ready for examination in water or glycerine. The result is that while certain substances—such as mucin, cellulose, starch, bacteria, the outer coat of certain fungi, the axis-cylinder and white substance of Schwann, etc., arc scarcely at all coloured, other tissucs, such as thc vitreous humour, the substratum of the cornea, the walls of the capillaries, and various intercellular connective tissues, appear of a bright carmine, and muscular fibres, tendon, hyaline cartilage, the interfibrillary substance of decalcified bone, and most of the tissues rich in albumen, are stained a darker carmine. The grey substance of the central nervous system, most nuclei, and many cells, assume a dark Burgundy red tint. In all these cases, however, each particular tissue is stained a slightly different shade, so that it can be readily differentiated from its neighbours. None of the objects treated by this method swell up or exhibit signs of internal coagulation. The oxalic acid produces darker or lighter shades in proportion to the length of time the specimen had previously been immersed in osmic acid, and if the latter has once completely blackened the tissue the oxalic acid is powerless afterwards to redden it. Mixed solutions of osmic and oxalic acids stain proportionally to the relative strength of each. The chief drawback to this method is the small penetrating power of osmic acid, which prevents the whole thickness of a specimen from being equally stained.

THE WEEK.

TOPICS OF THE DAY.

At a meeting of the Lower Thames Valley Main Sewerage Board, held last week at Kingston, the City Solicitor in the chair, thc special Drainage Committee reported that they had taken the necessary steps for obtaining an Act of Parliament to carry out Colonel Haywood's scheme. They also recommended that Colonel Haywood, Messrs. Bailey, Denton, Son and Co., and Mr. Mansergh, should receive, in each instance, 200 guineas as authors of the three schemes for disposing of the sewage which appeared to offer the best prospects of success. Mr. O. Waterfield, in moving the adoption of the report, explained that the Board's plan was irrigation, combined with downward filtration, and hc referred to a Government report to show that they were in accordance with the wisest advice which it was in their power to procure. Not only did they intend to lay out one hundred acres for downward filtration, but the wide area of land which they proposed to take would enable them to combine with their plan any scheme for purification which might hereafter turn out to be necessary. The motion was carried.

It has been announced that it is proposed to hold the next Social Science Congress in Manchester, and the subject being brought before the Town Council last week by a letter from Mr. Chadwick, M.P., it was resolved to place the Town Hall at the service of the Committee of the Congress. A local fund of about £1000 will have to be raised.

Following the lead of the Corporation of Liverpool, who have already given notice that they intend to apply to Parliament during the ensuing session for an Act authorising the lighting of the public streets and buildings within the borough by means of the electric light, "or otherwise than by the use of gas," the Corporations of Warrington, Derby, South Shields, Leicester, Blackburn, Over Darwen, and Stratford-on-Avon, have given notice of the introduction of Bills seeking for similar powers. It will thus be seen that if any electrician can devise a genuine working process there will be no lack of customers.

The *Times'* correspondent in Cyprus states that it is the intention of Sir Garnet Wolseley to establish, as soon as possible, in certain districts of the island, dispensaries for the poor, where medical advice and assistance may be obtained free of charge, and drugs may be served out at the lowest cost. At present the medical profession is not over-represented at Cyprus; there are one or two practitioners in Nicosia, and one or two in Larnaca and Limasol—that is all, and the people in consequence endure a considerable amount of suffering from ailments which might easily be prevented. Affections of the eye are, in some parts of the island—notably, it is said, in the district of Kyremia—very common, and are attributed to the excessive glare of the sun and the prevalence of dust throughout the long summer. It will also be made part of the duty of the medical officer of each district to see to the vaccination of the inhabitants, and to keep a careful watch for any abuse of sanitary arrangements, whilst statistics will have to be collected on all subjects which may be expected to promote the general health of the island.

As a memorial to the late Mrs. Acland, of Oxford, it was resolved, some short time after her decease, to found in that city an institution for nurses with special reference to work among the sick poor, Mrs. Acland having devoted so much time and labour to this object. An appeal for subscriptions was accordingly circulated, and has been so liberally responded to, that nearly £2500 has already been received. Amongst the donors is Prince Leopold, who subscribed £50, with a promise of £10 a year for five years. About two-thirds of the sum required to carry out the idea of the institution has been collected, and further subscriptions from those who have been acquainted with Mrs. Acland, and who may wish to assist in establishing this memorial, can be paid in to the memorial account at Messrs. Parsons, Old Bank, Oxford.

Last week the committee for the periodical collections for local charities met at Birmingham for the purpose of auditing accounts. It was announced that the total collections on Hospital Sunday, October 27 last, for the benefit of the local Queen's Hospital, amounted to the sum of £6400, a result which exceeded by £600 the amount obtained upon any previous occasion since the Hospital Sunday collection was instituted.

The week before last we informed our readers that a new trial had been moved for in the case of the Society of Apothecaries *v.* Shepperley, and we then remarked that the verdict of the jury left the real question at issue just where it was before the trial. We regret to be obliged to record that this unsatisfactory state of things is destined to continue. Last week the case was brought on in the Exchequer Division of the High Court of Justice before the Lord Chief Baron and Baron Pollock, and the Court at once intimated that the rule moved for on behalf of the plaintiffs would be refused. Under the whole circumstances it was ruled that the case had been properly left to the jury, and the Court would not now interfere to review their verdict. The Lord Chief Baron further said the defendant had apparently divined the object of his would-be patient to be that of an informer, and had exhibited great reluctance before treating the case. When pressed to do so, he had only examined the throat of the informer, and prescribed a trifling remedy, suggesting that a saline mixture, which he gave him, might perhaps do the informer good, believing at the time that there was nothing the matter with him. Thus there had been no *bonâ fide* treatment or prescribing.

The Preston Rural Sanitary Authority have had under consideration a scheme for the drainage of Ribchester; and have contemplated allowing the drainage to fall into the Ribble. Colonel Cox, deputed by the Local Government Board, arrived on the spot last week to hold an inquiry, and he expressed much surprise on hearing of the proposed destination of the sewage. The Medical Officer admitted the illegality of the proposal in face of the Rivers' Pollution Act; but said that owing to the difficulties in the way of disposing of the sewage elsewhere, it had been thought that the Local Government Board might give its assent to the scheme. Colonel Cox reminded the Authority that the Local Government Board had no power to override Acts of Parliament; and the inquiry terminated abruptly.

At the meeting of the Metropolitan Board of Works, held last week, Mr. Richardson stated that since a deputation from Greenwich and Deptford waited on the Board with reference to the acquisition, under the powers of the Artisans' Dwellings Act, of a property known as Hughes' Fields, Deptford, there had been a serious outbreak of fever and small-pox in the locality; and the Greenwich Board regretted that the Metropolitan Board had not given notice to acquire such property during the next Parliamentary session. The subject was referred to the Works and General Purposes Committee. The Parliamentary Committee also submitted the Bill for the purchase of the undertakings of the Metropolitan Water Companies, recommending that the Bill be approved, with a view to its deposit on or before the 17th inst.; and that the seal of the Board be affixed to the petition for leave to introduce the same into Parliament. An amendment was moved, opposing the introduction of such a Bill, on the ground that the Board had already too much work on its hands; but after a discussion this amendment was put and lost, and it was agreed to postpone the further consideration of the matter for a week.

A visit was paid last week to Hertford by a party of gentlemen, composed of officials of various towns where the question of the disposal of sewage is still in abeyance, to witness the process in operation there. The system in force is that known as the precipitation process, which is worked by the Rivers' Purification Association, and has been successfully applied at Coventry, where the river Sherborne has been, in consequence, greatly purified. The works at Hertford are a little way from the town, in the valley of the river Lea, and adjacent to the New River. As the sewage flows into a tank, divided into compartments, it is subjected to the action of a mixture of a cheap salt of alumina and protosulphate of iron and lime. A small stream of this compound mixes with the sewage, disinfecting and deodorising the whole while precipitating the solids gradually. The water flows into several tanks, passing from tank to tank by weirs, precipitating as it proceeds, and is then discharged into a small channel which runs into the river Lea. The solids, which are without smell, are drained, and the product

is converted into cakes to be sold as a fertiliser. The water in the channel was tested, and was found to be bright and clearer than the unfiltered water taken from the river, and it was also stated that shoals of fish have been seen in this channel which have entered it from the river Lea.

The verdict of the jury in the case of a prisoner who recently died in the House of Detention at Clerkenwell, contains one expression of opinion which the authorities will do well to consider. The jury stated that, in their opinion, it was impossible for the medical officer to attend properly or effectually to his duties at the prison without being a resident. They might have gone farther, and added, that for the medical supervision of such a large number of prisoners the services of one medical man is not sufficient. In most other prisons of equal magnitude we believe that the medical officer is provided with one or more assistants. It must seem to the non-official mind impossible for one medical man to efficiently take charge of about 2000 prisoners, and attend to his own private practice at the same time. The circumstances of the case, as reported, have induced the Home Secretary to consult the President of the Royal College of Physicians upon the subject, with the result that an inquiry into the matter has been ordered, and will be carried out by the President in conjunction with another medical man, and any other persons whose assistance they may think desirable.

The prize of £100 offered by Mr. Stanford, M.P., for a prize essay on hydrophobia, is to be open for competition to foreigners as well as to Englishmen, and the Marquis of Salisbury has instructed the British Minister at Washington to bring the subject to the attention of the Department of State. The essay must be delivered to the Royal College of Physicians of London, who are to adjudicate, on or before January 1, 1880.

An examination of Surgeons in the Royal Navy who are eligible, and who may be desirous of qualifying, for the rank of Staff-Surgeon will be held at the Royal Naval Hospitals at Haslar and Plymouth on Tuesday, January 14, 1879.

PATHOLOGICAL SOCIETY OF DUBLIN.

At the meeting of this Society on Saturday, December 7, Dr. W. Moore, President, in the chair, Mr. Wheeler exhibited a large vesical calculus which he had removed from the body of a man who had been subject to a dribbling of urine for fifteen years and a half before his death. The stone had apparently been forming for about nine years. The urine contained both pus and blood. Lithotomy was inadmissible owing to the man's bad health, and he ultimately succumbed to anæmia. The bladder was sacculated, and tightly gripped in its centre a large hour-glass-shaped calculus. The stone, which was externally phosphatic, weighed three ounces and two drachms; its greater circumference was eight inches and a half, and its smaller circumference measured five inches and a half. The ureters, the infundibula and calyces of the kidneys, were all dilated; and an abscess existed in the right kidney. Professor Bennett, commenting on the case, suggested that the anterior lobe of the calculus lay in the prostatic portion of the urethra. Professor Bennett presented an interesting specimen of dislocation of the spine in a man aged forty-five years, of large build, and intemperate in his habits. While intoxicated last July he fell into an area on the back of his head and neck from a height of six feet. There was no paralysis of the upper extremities or trunk, but the lower limbs were completely powerless, and there was partial priapism, with retention of urine. No perceptible depression could be detected over the spine. It was impossible to record the temperature. Patient lay persistently on the left side. Next morning the left hand and arm were covered with a dark mottling, which extended also down the left side. The left leg was glazed and swollen, with emphysema of the areolar tissue. A patch of gangrenous vesication existed in the corresponding popliteal space. He died in a few minutes after the morning visit on this the day succeeding the receipt of the injury. Very rapid decomposition occurred. The sixth cervical vertebra was displaced. The ligamenta subflava, intervertebral, and other ligaments, were ruptured, without any fracture of the bodies or processes.

DISTRIBUTION OF THE HOSPITAL SATURDAY FUND.

The last meeting of the Board of Management of the Hospital Saturday Fund for the present year was held at the Charing-cross Hospital on Saturday week, Mr. Samuel Morley, M.P., presiding. The collection of this year was announced to have reached the sum of £6520—the largest amount yet realised in one year through the exertions of the promoters and supporters of the Fund; whilst the expenses, in the ratio of expenditure to receipts, have been smaller than in any previous year. Applications for participation were received from 112 institutions, and grants were awarded to ninety-six, the remainder being disqualified under the plan of distribution, as follows:—Hospitals, etc.: Belgrave, for Children, £25; British Lying-in, £17; Brompton, for Consumption, £227; Central London Ophthalmic, £19; Central Throat and Ear, £22; Chelsea, for Women, £18; City Orthopædic, £19; Charing-cross, £149; City of London for Diseases of the Chest, £114; City of London Lying-in, £29; Dental, £25; East London, for Children, £47; Epilepsy, Paralysis, etc., £39; Evelina, for Sick Children, £56; French, £30; General Lying-in, £23; German, £80; Great Northern, £34; Home for Sick Children, etc., £36; Diseases of the Skin, £20; Diseases of the Throat, £36; for Hip Diseases, £68; for Sick Children, £130; for Women, £49; for Women and Children, £18; Invalid Asylum, £31; King's College, £188; London Homœopathic, £57; London Temperance, £27; London, £440; Metropolitan Free, £49; Middlesex, £213; National Dental, £19; National, for Heart Disease, etc., £23; National Orthopædic, £32; New, for Women, £25; North Eastern, for Children, £48; North London, for Consumption, £47; Poplar, for Accidents, £37; Queen Charlotte's Lying-in, £34; Royal, for Diseases of the Chest, £55; Royal Free, £82; Royal Infirmary for Women and Children, £53; Royal National, for Consumption, £59; Royal Orthopædic, £49; Royal London Ophthalmic, £88; Royal Ear, £11; Royal South London Ophthalmic, £24; Royal Samaritan Free, £47; St. George's, £234; St. John's, for Diseases of the Skin, £24; St. Mary's, £159; St. Mark's, for Fistula, £30; St. Peter's, for Stone, £38; Seamen's, £163; University College, £124; Victoria, for Children, £59; Western Ophthalmic, £15; West London, £67; Wimbledon Cottage, £10. The remainder was distributed amongst twenty-nine dispensaries and three convalescent homes, etc.

THE HEALTH OF ST. GILES DISTRICT.

A consideration of the annual report on the health of the St. Giles district for the year 1877, prepared by Mr. S. R. Lovett, the medical officer to the Board, impresses one with the fact that, under the sanitary conditions of the present day, the vital statistics of all metropolitan parishes, whether rich or poor, are very similar. Thus, the death-rate for the whole district during the year is returned at 22·38 per 1000, being nearly the same as in the preceding year, and very little, if any, above the average for the whole of London. There are, of course, variations in the district itself; for, speaking of the deaths from tubercular diseases, Mr. Lovett points out, as a proof that diseases of this important order are

greatly influenced by hereditary and insanitary conditions, that the deaths caused by them during the year in the sub-district of St. George, Bloomsbury (which is surrounded by handsome squares, and situate in the wealthiest and best constructed locality in the district) were only 32, whilst the deaths from the same order of diseases in the sub-district of South St. Giles (which includes the squalid courts and alleys surrounding Great Wild-street and Drury-lane, where light, dry air, warm clothing, good food, and sobriety are conspicuous by their absence) were 91. Alluding to the Infants' Home in Great Coram-street, rendered somewhat notorious by a recent painful case at the Marlborough-street Police-court, Mr. Lovett states that 20 children died therein during the year under notice, against 13 in the preceding year, and 24 in 1875. Mr. Lovett reiterates the opinion he expressed in his last report, that all institutions for the reception and nursing of infants should be placed directly under Government supervision. In conclusion, Mr. Lovett congratulates the Board on the satisfactory state of the health of the district, and looks forward to an improved condition of things when the Great Wild-street area shall have been dealt with under the Artisans' and Labourers' Dwellings Act, the scheme having already been sanctioned by the Secretary of State.

INTERESTING STATISTICS.

From a carefully compiled report of the Registrar-General of New South Wales on Vital Statistics, just presented to Parliament, and which will be read with great interest in this country, it appears that during 1877 the population of the colony was 662,212 persons; of these the males exceeded the females by 72,434. Referring to the condition of those (9988) who entered into the married state during the year, there were 4484 bachelors, 4435 spinsters, 509 widowers, 556 widows, 1 divorced man, and 3 divorced women. Of this number 975 were obliged to make their mark to the contract, from inability to write; the females were the worst, numbering 553, against 422 males. The total number of births registered was 23,851—viz., 12,292 males, and 11,559 females, or 733 more boys than girls. There were 209 cases of twins, consisting of 222 males and 193 females. One case of quadruplicate birth occurred—viz., 2 males and 2 females. The number of deaths was 9869, as against 11,193 of the preceding year. The mean average monthly number of deaths in Sydney was 158; the greatest number was in January and December, the mean temperature for these months being 71·6° and 70·7° respectively. The two months in the year showing the least mean mortality were September and October, when the mean temperature was 58·4° and 63·5° respectively. In a table showing the deaths at all ages, from under 1 year to 100 years and upwards, which occurred in Sydney, suburbs, and the country districts during 1877, what will Mr. Thoms say when the Registrar-General states that there were 14 males from 95 to 100 years, and 2 females; and at "100 years and upwards" there were 6 males and 2 females. This twenty-second annual report is evidently compiled with great care, and reflects the greatest credit on the department of the Registrar-General.

HARVEY TERCENTENARY MEMORIAL FUND.

We are requested to state that the sub-committee have invited Messrs. C. C. Birch, A. Bruce Joy, and Hamo Thornycroft to furnish designs for the proposed statue of Harvey, to be erected at Folkestone. Each of these three artists has accepted the invitation, and the models are to be ready by March 1, 1879. The funds required for the completion of the work have been subscribed, with the exception of a sum of about £250. Further donations to this amount are still, therefore, required, and will be thankfully received by either of the honorary treasurers (Sir George Burrows, or Mr. Prescott Hewett); or either of the honorary secretaries (Mr. G. Eastes, M.B., or Mr. W. G. S. Harrison, B.A.); or they may be paid in to the account of the "Harvey Tercentenary Memorial Fund," at the Western Branch of the Bank of England, Burlington-gardens, W.

HEALTH REPORT OF ST. MARYLEBONE FOR OCTOBER LAST.

Dr. John Whitmore reports that during the five weeks ending November 2 last there were 467 births and 310 deaths registered in the parish of St. Marylebone. The mortality was equivalent to an annual death-rate of 20·24 per 1000 of the population, and was 1·24 per 1000 in excess of that of the two previous months. Two deaths were registered from diphtheria, and in each case the drainage of the houses in which they occurred was found to be defective. During the last fortnight in October there was a considerable reduction in the temperature, accompanied by increased rainfall, and consequently the mortality from bronchitis and pneumonia rapidly increased; from the former disease forty-seven deaths were registered, and from the latter eight. The mortality amongst children during the period was large, 123 having died before the age of five years, constituting about 40 per cent. of the total deaths.

A FATAL MISTAKE.

Errors in dispensing medicines are confined to no country. A sad case of the kind happened recently at Limoges. A draught containing santonin was ordered by the surgeon for the children of a member of the band of his regiment. The prescription was brought to the dispensary when the pharmacian was away, and the sergeant-assistant in making it up, instead of santonin, put sulphate of strychnia into the draught. The children each had a tablespoonful of it, and the two youngest, aged respectively four years and a half and three years, died within an hour and a half in the most fearful convulsions. The eldest, aged six years and a half, after a struggle for existence, has recovered. What has happened to the pharmacian who has allowed such a poison as strychnia to be at the mercy of an unqualified dispenser, we are not informed.

RECENT APPOINTMENTS IN ABERDEEN UNIVERSITY.

The vacancies we formerly announced as existing in the Medical Faculty of this University have just been filled up. Dr. A. D. Davidson, whose strong claims to the chair of Materia Medica we have already alluded to, has been appointed Professor of that subject. For the chair of Natural History many excellent and well-known naturalists and teachers came forward, among them Dr. W. C. McIntosh, and Professor Alleyne Nicholson of St. Andrews University. The choice of the Crown has, however, fallen upon Dr. J. Cossar Ewart of Edinburgh, and lately Curator of the Zoological and Anatomical Museum of University College, London.

MEDICAL PARLIAMENTARY AFFAIRS.

The Army Medical Service.—In the House of Commons, on Monday, December 9, Dr. Lyon Playfair gave notice of his intention to ask whether the Government proposed to discontinue open competition for Army Medical Officers, and to substitute nomination in its place. If so, whether the Government would consent to lay on the table of the House the report of the Committee appointed to examine into the grievances of Army Medical Officers, and the reply of the Board of Examiners to their inquiries, before any action is taken by Royal Warrant.

The Artisans and Labourers' Dwellings Act.—Mr. Cross, in reply to Sir U. Kay Shuttleworth, said that he had been in communication with the Local Government Board with reference to the official reports having been duly forwarded to them under the terms of the Act, and no consequent action

being taken in the matter; and he was understood to say that further inquiries would be made as to the reasons for no action being taken under the requirements of the Act. On Tuesday, December 10, leave was given to Mr. Anderson to introduce a Bill to amend the Sale of Food and Drugs Act, 1875.

FROM ABROAD.

Professor Zeissl on Epididymitis.

In a paper contributed to the *Allg. Wiener Med. Zeitung* (November 12), entitled "An Improvement in the Treatment of Epididymitis," Prof. Zeissl, of Vienna, gives an account of the results of the trials he has made of the treatment of this affection pursued by M. Horand of Lyons.

As to the statistics of the affection, he observes that of 2055 men suffering from gonorrhœa who have come under his care at the hospital during the last eight years, 696 have been attacked by epididymitis, 368 suffering from it on the right side, 302 on the left side, and 26 on both sides. The mode of treating the affection during the last ten years has been the antiphlogistic, consisting in the application of leeches and cold compresses along the course of the cord or to the perineum, and the employment of purgatives. Not only has the diet been more or less limited, but the patients have been confined to bed. The scrotum, exhibiting more or less erysipelatous redness with tumefaction, has been kept up constantly by means of a cushion, or raised upon the thighs by a cloth of a hand's breadth passed under it. It is also kept surrounded by a wet compress, over which is laid a small light bladder of ice. In many cures these means suffice in three or four weeks to relieve the tumefaction of the vas deferens of the epididymis, and the inflammatory conditions of the skin of the scrotum and the subscrotal tissue, and to allow of the restriction on diet being removed. Only in exceptional cases, and when the epididymitis has assumed the chronic form, may practitioners apply the unguentum hydrargyri cinereum in moderate quantities to the affected side of the scrotum, continuing the local employment of cold. Formerly many had great dread of the application of cold, under the idea that revulsion of the diseased process to the lungs might be induced, erroneously supposing that some fatal cases of hæmoptysis which have occurred were due to this application of cold. When the pain has been excessive, Prof. Zeissl has applied belladonna ointment (five parts of the extract of belladonna to fifty of simple ointment) spread upon linen or leather; or has had a portion, the size of a nut, rubbed into the diseased side of the scrotum, continuing the cold applications, and securing sufficient action of the bowels.

Although by following this method a very great number of cures of this affection were obtained, yet, owing to several inconveniences it gave rise to, other means of treatment were sought for. One of the earliest of these was that of Frick, which consisted in submitting the testis to a regulated compression by means of strips of sticking-plaster. This, however, could only be applied after the excessive sensitiveness of the parts had subsided. Even then it required the greatest care, and Prof. Zeissl has repeatedly known gangrene of the integument of the scrotum follow its employment. Also, in other cases in which the compression had been too hastily applied, he has known wasting of the testis to follow. Simplification of the treatment of gonorrhœal epididymitis therefore continued a desideratum; and that the more so because the painful nature of the affection kept the patient entirely away from his employment, while the nature of the affection becoming known often operated mischievously against his interests. It therefore became very desirable to find some means which might at least partly relieve the pain and enable the patient to resume his employment. This seems to be the merit of Langlebert's method as described by Horand, surgeon to the Antiquaille at Lyons, in a work bearing the title "Du Traitement de la Tumeur Blénorrhagique des Bourses par le Pansement Ouato-caoutchouté de Langlebert." In this accounts are given of 200 cases successfully treated; and the present paper furnishes the results of Professor Zeissl's trials with the apparatus in question. This consists of three parts—a layer of wadding of a sufficient degree of thickness, a square piece of caoutchouc cloth, and a suspensory. This last, triangular in shape, and slightly concave, has a hole at its upper edge through which the penis is passed. To its two upper corners are attached two long bands which serve to confine it around the abdomen; and the lower angle is also attached to two bands which surround the thighs, these last being connected with and fastened to the bandage which goes round the abdomen. The patient lying in the horizontal posture, raises the scrotum well enveloped by wadding as high as possible upon the symphysis pubis; and then the square piece of caoutchouc cloth is applied with its shining side towards the wadding, a circular hole having been made in its upper part for the passage of the penis. The suspensory is then put on, and firmly secured to the abdominal band. By this means the scrotum is kept up almost level with the upper edge of the pubes. Horand does not undo the bandage until the end of a week, and if he finds the swelling has not yet disappeared, he continues the procedure or applies a resolvent ointment or plaster.

Prof. Zeissl strongly recommends the procedure, having treated by it since October of this year fifty cases, either in private or hospital practice, and always with most excellent results. He relates a case to which he was called, in which the patient, who had passed five nights without sleep, was suffering fearful pains, every motion and the slightest contact with the testis giving him agony. The Langlebert apparatus was applied, and the patient desired to rise from his bed. This, from the intense pain he had suffered on before trying to do so, he did with great hesitation, but found that he could get up without the slightest suffering, and was able even to walk to and fro in the room. Prof. Zeissl states that he could cite several similar cases, and up to the present time he has never had, in any of the so treated cases, to prescribe anodyne ointments, or to puncture an acute hydrocele produced by the epididymitis. In most of the cases the pain ceased immediately on applying the bandage, or at the very least was so diminished as to allow the patient to pursue his employment. The practice is so simple and so cheap that it is especially suited for hospital practice, the bandage only having to be applied, and all the attendance formerly required, as the application of ice, etc., dispensed with. The suspensory used is far superior to that now commonly employed, there being none of the mischievous pressure from the elastic; while the scrotum is almost completely immobilised, and an exact application is secured by means of the wadding. A very moderate compression is exerted, and an abundant transpiration takes place at the surface of the scrotum. In all these fifty cases the patients were able to walk about the room, and most of them to follow their employments.

Professor Brown-Séquard at the Collége de France.

According to the *Progrès Médical* (December 7), the following somewhat remarkable programme is set forth by the successor of Claude Bernard in the first of the lectures which he has just commenced at the Collége de France.

"He will investigate the action of the brain on the spinal cord, discuss the question of the existence of two brains or of a single one, and pass in review all the lesions of the brain which can give rise to physiological and pathological phenomena. In his opinion, each half of the brain possesses all the functions of the encephalon, being capable of every action and able to appreciate every sensation. He hopes to demonstrate that the necessity for a *decussation* of the nervous fibres of the right side with those of the left, and the reverse, is not indispensable; and that each half of the brain can appreciate the sensitive and sensorial impressions of the two sides of the body.

"Relying on the fact that the fibres of communication between the encephalon and the cord are only few in number, the Professor declares that, in his opinion, the theory of a nervous key-board (*clavier nerveux*) is false and should be rejected. The mechanism which he hopes to obtain acceptance for implies the hypothesis of the existence of psychical powers diffused in the cerebro-spinal axis transmitting its sensations to the nervous cells. And the mode of communication between these various psychical powers and the intellectual power takes place by means of a kind of galvanic current. Very few communicating fibres are therefore sufficient for the transmission of the message to the nervous cells ready to receive it.

"'I believe,' M. Brown-Séquard observed, 'in the existence of cerebral localisations; but I maintain that these localisations, in place of consisting in a limited point of the brain, exist in another manner. They consist of elements everywhere disseminated, so that each centre possesses cells of very varied functions.' As is evident, the Professor seeks for the admission of doctrines into physiology radically opposed to those

which are received at the present time, of which he makes a *tabula rasa*. He has already expounded his theories before the Société de Biologie, and since then abroad, and especially in the United States.

"We may add that, in commencing his lectures, Prof. Brown-Séquard expressed his intention not to engage in experimentation like his predecessor, Claude Bernard, but especially to rely on facts for the demonstration of his doctrines. 'Experiments in this matter,' he observed, 'are very difficult, for they are under the dependence of *irritation*, and they often fail. It is my confidence in the truth, and the number of facts which I have collected, that will sustain me in the course I have traced out for myself.'"

REVIEWS.

Della Influenza del Vaguolo sulla Pazzia. Osservazione Cliniche der Dottori Seppilli e D. Maragliano.

On the Influence of Variola on Insanity. Clinical Observations by Drs. Seppilli and Maragliano. Milan, 1878. Pp. 20.

This *brochure* mainly consists of the relation of four clinical cases illustrative of a subject which has been specially studied recently in Italy—namely, the double influence exercised by small-pox in the production and the cure of insanity. In three of the cases recorded the patients were free from any maniacal symptoms or tendency before they were attacked by small-pox, but during and after that event they became insane, and were treated as lunatics. In the fourth case the order of phenomena was reversed, for the patient was violently maniacal, and was being treated in an asylum from April 12 to June 1, 1877, at which latter date he was seized with small-pox of the confluent type. The disease went through its usual stages, but during its progress the maniacal symptoms diminished, and were succeeded by the most complete tranquillity. The eruption disappeared in due course, and after the cure of the small-pox the patient was restored to the full possession of his mental faculties, and was discharged from the asylum. Of the other three cases where insanity followed an attack of small-pox, one remained incurably insane, but the two others recovered after a course of appropriate treatment, consisting chiefly of the use of warm baths, mustard pediluvia, and the internal use of chloral and digitalis. Drs. Seppilli and Maragliano offer some remarks as to the probable explanation of this double and apparently contradictory influence of small-pox in reference to insanity, and their conclusions, as well as the cases themselves, are deserving of attention.

A Manual of Anthropometry; or, a Guide to the Physical Examination and Measurement of the Human Body. Containing a Systematic Table of Measurements, an Anthropometrical Chart or Register, and Instructions for making Measurements on a Uniform Plan. Illustrated by numerous Diagrams, Charts, and Statistical Tables. By Charles Roberts, F.R.C.S., late Assistant-Surgeon to the Victoria Hospital for Children. London, 1878. Pp. 118.

The title of this little book explains pretty well the nature of its contents, which, however, are of a fragmentary character, because, as the author states in his preface, they form only a portion of an introduction to a larger work on the physical development and proportions of the human body, which he has in preparation. Still, small as the book is, it contains a great mass of useful information, which is applicable not only to the abstract pursuits of science, but also to the practical business of life. It must be admitted, however, that *some* difficulty may be found in the adaptation of its principles to the manners and habits of civilised life; for, as the author insists on the subjects being stripped of all their clothes for the purpose of accurate investigation, it is obviously impossible to carry out all the directions given in the case of the public in general, and especially the female portion of it. With this reservation, however, we can agree with Mr. Roberts that his book and his chart will be found useful to the intelligent traveller, and to many officers of the army and navy on foreign stations, and may enable them to contribute to the progress of anthropological science, as well as supply them with a new source of study and occupation. Coming nearer home, too, the systematic table of measurements, and the anthropometrical chart or register, devised by Mr. Roberts, may be found practically useful in the selection of subjects for the public service, either civil or military, in the selection of lives for assurance, and in the investigation of disease; and, in reference to the very elaborate nature of the scheme proposed, we may observe that it is, of course, capable of modification to suit the requirements of special cases.

The materials employed in the composition of the tables have been derived from a number of sources, the author having been engaged for several years in collecting statistics of measurements of various parts of the body of both sexes, and at all ages, for the purpose of investigating the physical development and proportions of the human body. That he has had recourse to all the available literature of the subject is sufficiently obvious from a glance at his list of works of reference, which occupies no less than fourteen pages.

From the very nature of the book, illustrated as it is with numerous statistical tables, it is impossible to give any abstract of the conclusions arrived at by the author; nor can we do more than allude to the anthropometrical chart which forms the frontispiece, and which, beginning with an outline of the human figure, maps out the various regions of the body into minute subdivisions, the size and proportions of each of which are to become the subjects of investigation and comparison, and to be recorded in connexion with general height, weight, strength, and other particulars, for which special columns are devised.

From a philosophical point of view, Mr. Roberts' researches, and the conclusions to which they lead, are valuable; and the larger work which he has in preparation will, no doubt, still further enhance his scientific reputation.

Ricerche sulla Innervazione dei Vasi Sanguigni. Di Luigi Severini, Professore di Fisiologia nella Università di Perugia.

Researches on the Innervation of the Bloodvessels. By Luigi Severini, Professor of Physiology in the University of Perugia. Perugia, 1878. Pp. 191.

In this learned and elaborate monograph, Professor Severini records the results of some researches undertaken by him during the last three years on some obscure questions regarding the physiology of the vaso-motor nerves, together with the conclusions he has deduced from them. The work is divided into five parts, namely:—1. On the historical development of the doctrine relating to the nerves which dilate the vessels. 2. On the results which point to an action of the dilating nerves on the capillary vessels. 3. Researches on the contractility of the capillaries which lead to the belief in a trophic dilatation of those vessels. 4. The connexion of the trophic dilatation of the capillaries with physiological facts already known. 5. The connexion of the trophic dilatation of the capillaries with facts already known as existing in the domain of pathology.

Professor Severini accounts for the dilatation of the capillaries by the action of the carbonic acid evolved in the fluids of the body during the irritation of the secretory or musculo-motor trophic nerves. His experiments, conducted in order to prove this proposition, were made on the capillaries of the frog, and also on those of mammalia—in the former the membrana nictitans, and in the latter the mesentery, being selected for experiment. The microscopical appearances are recorded with great minuteness, and a plate containing twenty-eight figures illustrates the observations made in the body of the work.

Relief of Pain from the Application of Sulphate of Copper.—Dr. Pick, of Vienna, observes that it was by mere accident that he discovered the means of relieving the intense and enduring pain caused by the application of sulphate of copper in diseases of the conjunctiva. As in purulent ophthalmia these applications have sometimes to be made daily for months, the relief of such suffering is of great importance. The plan consists in sprinkling calomel over the parts to which the sulphate has been applied four or five minutes after they have been touched. The pain immediately diminishes; and after from three to six days of this procedure the calomel may be applied immediately after the touching with the caustic, and then the pain instantly disappears.—*Centralblatt*, November 9.

FOREIGN AND COLONIAL CORRESPONDENCE.

AMERICA.

PHILADELPHIA, November.

EMPLOYMENT OF MASSAGE IN UTERINE THERAPEUTICS—INTRAVENOUS INJECTION OF MILK—THE YELLOW FEVER QUESTION—A FINE QUARREL—PRELIMINARY EDUCATION OF MEDICAL STUDENTS—AMERICAN MEDICAL COLLEGES.

IN my previous letter I neglected to lay sufficient stress upon the results achieved in uterine therapeutics by the employment of *massage* combined with constitutional treatment. There is of course nothing novel in this series of external applications, except in its extension into the field of gynæcological practice, and so much good is likely to follow its employment in this direction, that I think it deserves something more than a passing notice. Professor Goodell cited some remarkable cases in his able address before the American Gynæcological Society, in which, in his own experience as a practitioner, life had been made enjoyable, where it had been previously most miserable and almost unendurable, simply by the combined application of massage, tonics, diet, rest, and electricity. The cases are those of functional trouble of the reproductive apparatus which depend on mal-nutrition with exhaustion of nerve-tissue, and are revealed in various neuroses, spinal irritation, and local and reflex manifestations, which mimic grave structural lesions of the uterus, some of the cases "so clad with the livery of hysteria as to perplex alike the psychologist and the gynæcologist." From the hyperæmia and dysmenorrhœa developed by the neurosis arise secondary structural lesions, such as areolar hyperplasia, endometritis, and displacements, which may need a special treatment besides the general one. No good comes from local treatment except in those cases which clearly start from antecedent mischief to the reproductive apparatus. The treatment advised consists of massage systematically executed, rest, electricity, seclusion so that the patient's whims may not be pampered into an unhealthy importance and her slightest caprices anticipated; large doses of iron, extract of malt, fixed rations of food such as milk, and generous diet at fixed hours. The objects thus secured are proper nutrition, sleep, rest of body and of mind, and freedom from pain. In most of the cases thus treated the increase of weight has been something remarkable, in one case cited amounting to forty pounds in a few weeks. The symptoms in almost all the cases were such as ninety-nine out of every hundred physicians would ascribe to uterine disease, and to uterine disease alone; and yet they got well with but little or no local treatment. The explanation is, that the essence of the disease lies not in the sexual organs, but in the nerve-centres; the manifestations being exhaustion, wakefulness, great nervousness, and constant backache and ovaralgia. The treatment also answers admirably for the spurious womb-ails and nerve-perturbations of the climacteric, controlling the heats and chills, and emotional explosions of the change of life; and it is applicable also in that large group of uterine disorders which come from sexual excess. The advantages derived from the friction and kneading of *massage*, and which are some of the most important features in the treatment, seem to be that the action stimulates the vaso-motor nerves and the terminal filaments of cutaneous nerves, and exercises the muscles without volition, and therefore without any expenditure of nerve-force. Electricity does the same thing. Percussion or tapping—another step in the practice of massage—temporarily stuns the nerves; and these surprises effect molecular changes, by which relaxed fibre and tissues of loose consistency are strengthened. Massage and electricity both raise the body-temperature, stimulate the nervous system, promote the secretions and increase the peristaltic action of the bowels, and increase surface-circulation in the large vascular district of the skin, and by irritation of the vaso-motor nerves produce reflex alteration in the circulation of deeper parts. The new and sharp impressions of electricity break up, as Anstie has shown, the mental attitude of morbid concentration on the hysterical or the pseudo-neuralgic pains. I have dwelt at some length on this treatment on account of its great importance, and because in the hands of the writer of the address it had been so signally successful. It seems to be founded on rational principles of therapeutics, and to be particularly applicable to a class of cases that have been an opprobrium to the profession.

Much interest has lately been taken in the intravenous injection of milk as a substitute for transfusion of blood. About a dozen cases have thus far been recorded—three in Montreal, five in New York, and four in Philadelphia. The advantages claimed for it are that there is no risk of coagulation or of the passage of air, and that milk is closely allied to chyle, which, as Dr. T. Gaillard Thomas, of New York (who suggested this treatment), shows, is not unlike milk in composition. The chief objection to the use of milk thus far urged, is that the casein will cause obstructions in the small arteries. Cow's milk and goat's milk have each been employed, and the results have been moderately good—much better than those obtained from transfusion of blood. Out of eleven published cases, six have been followed by marked improvement; but the injection was made at a late stage in each case, or it would probably have had even better results. Dr. Thomas sums up the results of his operations as follows:—1. The injection of milk in place of blood is perfectly feasible and safe. 2. None but milk removed from a healthy cow within a few minutes of the time of injection should he used. 3. The intravenous injection of milk is infinitely easier than the transfusion of blood. 4. The injection of milk, like the transfusion of blood, is commonly followed by a chill, and a rapid and marked rise of temperature. 5. Not more than eight ounces should be injected at one operation. 6. Lacteal injections should not be limited to cases prostrated by hæmorrhage, but should be employed in disorders which greatly depreciate the blood, such as Asiatic cholera, pernicious anæmia, typhoid fever, etc., and as a substitute for diseased blood in certain affections which immediately call for the free use of the lancet, such as puerperal convulsions, etc. A clinical lecture by Dr. John N. Brinton, Lecturer on Operative Surgery in the Jefferson Medical College of this city (*New York Medical Record*, November 2, 1878), embodied these conclusions and facts already cited, and describes also the form of apparatus to be employed. It seems to be unsettled whether the good effects of this form of transfusion are due to anything more than the presence of a stimulating liquid in the blood, and its action on the walls of the heart. The pulmonary obstruction sometimes consequent upon it is thought by some to be due to the formation of casein in the arteries of the lungs; while the occasional albuminuria, following either the transfusion of blood or the intravenous injection of milk, may be produced by the simple ingestion of unusually large quantities of albumen. Doubtless, this novel form of injection will soon supersede the older operation, with its attendant risks and unavailing effects.

The Executive Committee of the American Public Health Association, recognising the fact that an urgent necessity has arisen for holding the annual meeting of that body late in the autumn, at some place in the South convenient to the locality of yellow fever, and yet sufficiently distant from it to render the visit of delegates perfectly safe, have issued a call for the assembling of the Association at Richmond, Virginia, on the 19th of this month. They believe that the events of the terrible epidemic in the Mississippi Valley have aroused the whole country to such concern in regard to the causes, the sanitary control, and the prevention of that destructive pestilence, and the means for protecting the public health generally, that these sanitary questions have assumed a national importance. The first days of the session will be devoted to the report and evidence submitted by the Yellow Fever Commission under the Surgeon-General of the United States Marine Hospital Service, as that important work has been undertaken with the advice and co-operation of members of this Association. As I have previously intimated, the chief object of the meeting will be the thorough discussion of evidence concerning the preventable causes of such an epidemic visitation. Eminent public men from the South and elsewhere will be present, and medical and sanitary authorities and citizens generally are invited to take part in it. I shall speak more precisely of their proceedings in my next letter. I may state parenthetically that the fever is now gradually dying out in the South, with the advent of frost. In New Orleans alone the cases have numbered about 13,300, the deaths 4000, which would be represented in London population by 266,000

cases and 80,000 deaths—truly a formidable and appalling estimate.

A correspondence of a very personal nature has recently taken place between two prominent medical men, arising out of reflections made by one of them on the professional qualifications of the other, so far as his claims or right to be considered a medical expert in cases of insanity are concerned. I had intended burying the whole matter in oblivion, and did not think I could well allude to it without quoting some of the personalities of their letters; but Dr. W. A. Hammond, of New York, has relieved me of any feelings of delicacy on this score by bringing an action for $50,000 damages against Dr. John P. Gray, of Utica, New York, editor of the *American Journal of Insanity*, for libel in the publication in the July number of that journal of an article by Dr. Eugène Grissom, of North Carolina, on "True and False Experts," in which, without mentioning Dr. Hammond by name, he so clearly pointed to him as one whom he eminently regarded as worthy to be placed conspicuously under the class of false experts; that Dr. Hammond immediately wrote to Dr. Grissom an "open letter" in pamphlet form for distribution. Dr. Grissom is superintendent of the North Carolina Lunatic Asylum, and also a member of the American Medical Association, in excellent standing, and a highly respected member of the profession. A reply naturally followed from him, and a second "open letter" from Dr. Hammond, still more abusive in its character; and Dr. Grissom then issued a second reply or supplement; and here the matter between them had stood until within a few days, when the attempt was made to hold the journal responsible. In one of my letters, a year or two ago, I alluded to a libel suit instituted by Dr. Hammond against the *New York Medical Record* for the alleged misapplication of the word "appropriate" in the report of a post-mortem examination of a case of hydrophobia, the doctor having been said to have "appropriated" the most interesting portion of the spinal cord for his own use. If I remember rightly, this suit was still hanging over that journal last year, but has probably been suspended still more remotely, as a few months ago the *Record* had some kind things to say editorially of the doctor's services to the army before he was dismissed from the Surgeon-Generalship. It will be remembered that I recently alluded to the movement to reinstate him, or rather to open the whole case against him, with the view of placing him in a more honourable record before the profession and the public. The charges embodied in the article in Dr. Gray's journal—and which, by the way, is only a reprint of Dr. Grissom's address as part of the proceedings of the American Association of Superintendents of Hospitals for the Insane—are thus summed up by the *Philadelphia Medical Times*:—1. That in order to clear McFarland, who shot Richardson, Dr. Hammond stated on the witness-stand "that the insane are very persistent in their revenge, and that he had known insane men occupied with the idea of killing their keeper for years, and finally do it"; while to convict Montgomery he stated that "deliberation takes away the idea of an insane act." 2. That to insure the execution of Reynolds, Dr. Hammond declared under oath "that epileptic mania is of remarkably short duration—there is not a case on record where it has lasted fifteen minutes"; whilst in order to convict Montgomery he said, "when an epileptic has suffered from an attack, the mental disturbance continued, frequently, several days." 3. In the Johnston will case he gave testimony which was scientifically false, although necessary for the breaking of the will, and it was proved that he was to receive $500 for his testimony, and a contingent of $2500 if he succeeded in breaking the will. 4. That in the Montgomery case he one day gave one opinion, and the following day an opposite one. Having been seen in the meanwhile by the interested counsel, Dr. Hammond takes exception to that part of the address which states that "he gave the evidence on which Reynolds was executed, although the poor wretch had an epileptic paroxysm on the day of the homicide. Too late was the world horrified at the direct critical evidence of brain degeneration in this case. Yet the supposed expert handed the helpless accused over to the hangman at the demand of the populace thirsting for blood." After referring to Dr. Hammond's testimony as an expert in various other cases—without mentioning his name, however—and denouncing false experts as persons "who impose upon the courts and the public mind their presumption for learning," the writer pronounced such expert "a moral monster whose baleful eyes glare with delusive light, whose bowels are but bags of gold, to feed which, spider-like, he casts his loathsome arms about helpless prey." These last general denunciations Dr. Hammond also considers as reflecting upon himself. The matter becomes somewhat more serious as a reflection upon Dr. Hammond's professional honour, when it is added that a resolution condemning Dr. Grissom's paper was voted down by a very decided majority in the body in which it was presented; that Dr. Grissom is a member of the Judicial Council of the American Medical Association, in addition to his reputation as the author of several valuable contributions to the literature of mental observation. It does not seem at all probable or just that Dr. Gray, as editor of the *Journal of Insanity*, should be made to suffer for following the uniform custom of publishing official proceedings of learned societies. The Association itself should be alone held responsible for such publication. Dr. Hammond calls Dr. Grissom a "cacophonous, hypocritical, ranting, howling bigot," and says of him that "a distempered and snarling cur has nobler mental and moral qualities than you; the vibrio that wriggles in decomposing filth is higher in the scale of existence; the foul bird that defæcates in his own nest is less odious; the wretch who, actuated by perverted instinct, revels in nastiness and abominations is not so execrable; the monster who insults the mother who bore him is more entitled to human sympathy." This hardly seems to be a line of argument to be adopted in defence of one's personal honour.

As a strong effort is now being made to insure a proper preliminary education of those who contemplate entering the medical profession, in spite of the indifference of many of the schools and of many in the profession itself, it may be well to indicate briefly some of the conclusions at which gentlemen have arrived who have recently made a special study of the subject. Dr. Frank H. Hamilton, in his presidential address before the American Academy of Medicine, a few weeks ago, referred to the fact that a thorough preliminary education, generally equal or superior to the acquirements demanded for the degree of A.B. in the colleges of arts and sciences in this country, is the absolute condition for matriculation as a student of medicine in Germany, Austria, Russia, Sweden, Norway, Denmark, France, Holland, Belgium, Italy, Portugal, Chili, Venezuela, and Spain. In all the countries named, also, the curriculum of study is carefully graded, the advance from one grade to another being only after a thorough examination; and the shortest time of pupilage is four years, nine months of each year being given to college and hospital instruction. In some of the States named, the term of study is extended to seven years. All of the professors, it is believed, are salaried, and in no manner dependent upon the students for their pay. The final examinations for licences to practise are made by independent boards. Great Britain, with its colonial dependencies Canada and Australia, has been satisfied with a lower scale of preliminary requirements; the courses of study in the colleges and hospitals are shorter, and not so systematically graded; fewer examinations for promotion are required; and the professors depend upon the students for their compensation. Government determined the number and location of the colleges, but provided no salary for the teachers. In the United States things have gone on in the bad old-fashioned way, although the agitation of needed reform must eventually lead to some good result. With four or five exceptions, licensing boards in this country, including the medical colleges, demand no certificate of preliminary education; nor do they demand any preliminary examination. The courses of instruction are not graded, and there are no examinations in course for promotion. The term of study required never exceeds three years; the actual time of attendance on college instruction required never exceeds ten months for the whole period of three years, and generally not more than eight months. The examinations for licence and for the degree of M.D. are made by the professors themselves, or by the professors aided by a board appointed by themselves, and who seldom or never take any active part in the examinations. The professors receive no salaries, but are dependent wholly upon the size of their classes for their remuneration. In the four or five exceptional cases referred to, there has been within a few years an attempt made to improve the plan of instruction, by demanding in some cases

certain preliminary qualifications, by grading the studies, and in one case by rendering the professors wholly independent of the pupils by fixed salaries from permanent or transient endowments; but in none of these cases have the reforms been such, either in character or degree, as to bring the standard of education to a point anywhere near that of foreign schools.

Dr. Hamilton thinks the fundamental defect of the English and American systems, and the direct and inevitable source of all the other defects, is the dependence of the professors for their pay on the fees of the medical students. This system has worked worse in the United States since they became independent of Great Britain. While they were colonies, so early as 1765, the medical department of the University of Pennsylvania was organised at Philadelphia without endowment; but at first no student was admitted to matriculation without a thorough preliminary education. Only one other medical college was established in this country until after the Declaration of Independence; and from that time all the medical colleges, except the University of Pennsylvania, omitted to recognise the importance of preliminaty education. In 1811 that school took the retrograde step by formally abolishing that condition also, being forced to do so by the overwhelming pressure of successful rivalry of colleges which did not demand such a preliminary test. Probably as a result of independence newly ingrafted in their nature, the individual States, when they became independent, claimed the right each to do its own teaching; and so this new industry of manufacturing doctors sprang up, and soon attained vast proportions, until in 1876 we find seventy-eight medical colleges of all the isms, empowered to grant licences to practise medicine and surgery. In addition to their graduates, many a pharmacist and dentist, unlicensed as a medical practitioner, steps boldly into the path of the latter, encroaching on his rights and his emoluments. The remedy is not so easy. It does not lie in the General Government; its policy is opposed to centralisation, and no attempt has ever been made, nor is it likely ever to be made, to regulate medical education in this country in that way. The States claim the control of education as among their many reserved rights; but they exercise it in very different ways. Some recognise the right of all those who choose to practise medicine, and to collect their fees as for any other labour or service; other States limit the right to practise to certain conditions, more or less severe. As a rule, State legislators, although seldom having sufficient knowledge of, or interest in, the subject to establish and maintain a proper system of medical education, usually have done pretty much what the profession and colleges have asked from them. Sometimes they have appropriated money to medical colleges, but in one instance the State claimed the right, in return for such appropriation, and endowment of lands, etc., to establish professorships in all the various forms of medical dogmas; and the example of this school—the University of Michigan—would make all other medical schools hesitate to incur the same fate or unhappy experience as a result of putting themselves under the power of the State. The union of Medicine and State is to be as much dreaded in this country as that of Church and State. Very little is to be expected, therefore, from State endowments or State legislation. The apology for the condition of medical education in this country lies in the fact that the present system is hereditary, having been imposed upon us while we were still in a colonial state; that the nature of our political institutions is such that the imperfect system we have inherited has proved to be more especially unsuited to our wants than it is to the wants of Great Britain; that the States have almost uniformly neglected to endow medical colleges or to establish a proper standard for medical education; and that the result is, and must continue to be, that the management of medical education is left entirely to the people, or rather the profession, just as law and divinity are. Consequently, almost all the colleges are private enterprises, planned, organised, equipped, and carried on by ambitious and aspiring medical men; and there is not perhaps one, however it may have originated, which could have been sustained without their special efforts, money, and personal sacrifice. They have done this as a private venture, in a field left unoccupied by the State and General Government, establishing hospitals and dispensaries and schools of instruction at a great outlay of labour and means, which in any other calling would have commanded a large pecuniary return. Dr. Hamilton insists that in the forward movement attempted by Harvard University and the University of Pennsylvania, or any other school, these institutions have not ventured a step beyond what was deemed safe in a pecuniary point of view, nor will they do so. Harvard, connected with the oldest university in the United States, and situated in the midst of the most wealthy and most highly educated people of our country, has, after much hesitation, and in the face of considerable opposition from its own faculty, adopted some of the needed reforms. But Harvard has always had from 30 to 35 per cent. of Bachelors of Arts among its matriculates, and the faculty therefore incurred very little risk of diminishing the number of their pupils by demanding either the degree of Bachelor of Arts or a not very exacting preliminary examination, conducted wholly by themselves. The University of Pennsylvania, while making reforms in the grading of its courses, has omitted entirely that most important step in reform—preliminary qualifications. Until the endowment of all the professorships is secured, the risk of diminished classes is the one great obstacle that stands in the way of this needed reform. It is believed that a sound public sentiment may be fostered, to influence medical colleges and medical men, and to create a sound sentiment among the young men who are contemplating the study and practice of medicine. In common with the medical journals and medical associations, which urge kindred views, the American Academy of Medicine, which has been recently founded, and which demands that every one of its members shall have already taken collegiate degrees, hopes in time to add the persuasive power of its influence on behalf of this great desideratum—the thorough preliminary training, by education and mental discipline, of those who intend to enter the medical profession. In spite of our imperfect system, a large number have thoroughly mastered the science, and enter upon the practice of medicine with as much theoretical and practical knowledge of their profession as is demanded in the best schools of Europe; but the standard for the masses is too low, and multitudes are admitted to practice without proper qualifications.

THE ROYAL ACADEMY.—Professor John Marshall, F.R.S., who commenced his annual course of lectures on anatomy at Burlington House on the 27th ult., will bring them to a close on Monday evening next.

LUNATICS IN VICTORIA.—According to the report of Mr. Payley, Inspector of Lunatic Asylums, for 1877, there are five asylums in the colony, which on December 31 contained 2747 inmates—1588 males, and 1159 females. The population of the colony is 860,804, thus furnishing 1 lunatic in 313. Taking the ten years, 1868-77, the ratio of recoveries on admissions was 47·4—viz., 43·1 among males, and 54·1 among females; and the death-rates on average number resident were 7·3—viz., 9·0 among males, and 4·9 among females. These results are favourable as compared with English statistics. As compared with Indian asylums, the most remarkable contrasts are the larger ratio of lunatics to population in Victoria, the much larger proportion of females in the asylum population (41·6 against 25·4), the lower lunacy-rate as compared with Indian asylums (where, however, men recover in larger proportion than women), and the much lower death-rate than in India, where insanity is a more fatal disease among women than men. Most of the admissions during the year took place between the ages of thirty and forty, most men, however, having been admitted between forty and fifty. Most recoveries and deaths also took place between forty and fifty. Among persons who had not completed one year's residence, there occurred 202 out of 258 recoveries, and 85 out of 197 deaths. Of the 197 deaths, 104 were due to diseases of the nervous system, 57 to diseases of the chest (27 from phthisis), and 16 to diseases of the abdomen. Only 6 deaths are attributed to general debility and old age; and there was but 1 suicide. Intemperance constitutes the principal of the assigned causes. To sunstroke 18 cases are attributed, and 12 to puerperal affections. Only 6 are noted as hereditary. The cost of maintenance was 14s. 2¾d. a week each. Physical restraint is sparingly resorted to; and it is evident that the humane principles of the day are fully realised in the management of these asylums.—*India Med. Gaz.*, October 1.

GENERAL CORRESPONDENCE.

THE BRITISH MEDICAL BENEVOLENT FUND.

LETTER FROM Dr. BROADBENT.

[To the Editor of the Medical Times and Gazette.]

SIR,—I ask permission to offer in your columns the sincere thanks of the Committee of the British Medical Benevolent Fund to Sir William Gull for a donation of £50, and to T. M. Bass, Esq., M.P., for a donation of £100, sent through Sir William.

These donations are as timely as they are liberal. At the last meeting the Committee voted in grants the last guinea of our balance, several applications for assistance having to be postponed.

This Fund has forty annuitants, mostly of £20, but four at £26 (10s. a week), supported from the interest of investments. and there are almost as many candidates waiting for vacancies. It is, however, in the donation department that the pressure of the "hard times" is felt. The Committee meets once a month to relieve pressing necessities by grants ranging from £5 to £20—these necessities, sad to say, sometimes amounting to absolute want; and in a large proportion of the cases the relief has to be administered in weekly payments, a task the unending labour of which is undertaken by Dr. J. C. Jonson, chairman of the Committee. In this work the Fund stands alone, and one of its advantages is that not unfrequently it prevents ruin as well as relieves distress.

I almost fear to appeal to the profession for renewed assistance. Our appeals invariably come to the knowledge of the needy, and bring us new applications for relief, but they do not appear to reach in the same proportion the hearts of those who have it in their power to give. We have, however, a subscription-list of nearly £1000 a year, which has steadily increased, and, with donations, has enabled the Committee to make grants to the amount of £1200 during the current year, and £1600 in 1877. I venture, therefore, to make known our condition, in the hope that it may bring aid to the work we have in hand.

Perhaps I may be allowed to relate a case which came before me only this afternoon, that of a widow who was left entirely unprovided for many years ago, with several young children. Some of these she has brought up; some have died—and no wonder! Of the survivors one boy earns 15s. a week as a painter, another 5s. a week, the mother doing needlework. For some weeks the painter has had no work, and the winter ulsters on which the widow had been employed were all made, so that the 5s. of the youngest boy was all they had to depend upon, until Saturday last, when, on the recommendation of Mr. Webber, a small sum was given in advance of the monthly meeting. Meat had been for some time an unattainable luxury, except that now and then 3d. had been expended on bones, which, with bread and vegetables, made soup for two or three days; "And then —I daresay you will laugh—" said the poor lady, "I get a penny for the bones at the rag-shop." To-day she had walked from Islington to the London Hospital on some errand, from the London Hospital to St. John's-wood for flannel which Mr. Webber had promised her, from St. John's-wood here for a few articles of clothing, and to ask if she might count on some further small advance before Christmas for the children's dinner on that day, and she would finally walk from here to Islington.

There is not a month in which cases like this do not come before the Committee, and unfortunately they are by no means all from the lower ranks of the profession.

I am, &c., W. H. BROADBENT, M.D., Treasurer.

34, Seymour-street, Portman-square, W.

THE UNIVERSITY OF TOULOUSE.—As it is understood that the Government is disposed to create new universities wherever the municipal authorities are willing to incur the necessary pecuniary sacrifices, those of Toulouse have resolved to do this in support of the transformation of the Ecole de Médecine into a Faculté. As Toulouse already possesses the other Faculties and a flourishing Ecole Vétérinaire, it has now been constituted into a University.—*Union Méd.*, December 7.

REPORTS OF SOCIETIES.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.

WEDNESDAY, NOVEMBER 20.

S. J. A. SALTER, F.R.S., President, in the Chair.

AT the ordinary meeting of this Society, the following gentlemen were proposed as Fellows:—Mr. Alexander Stewart, Mr. Thomas Howkins, Mr. George William Smith, Dr. Robert Hazleton, and Mr. E. A. Morgan.

CLOSURE OF THE JAWS.

Mr. FRANCIS MASON exhibited a boy, aged eight years, who is now under his observation at St. Thomas's Hospital, with closure of the jaws. The patient had scarlet fever about one year ago, which was followed by cancrum oris on the right side. There were now firm adhesions between the right cheek and the upper and lower jaws, so that the boy could only separate the margins of the incisor teeth to the extent of about a line. In feeding, he pushed all through this narrow interval, and completed mastication with the tongue. Mr. Mason thought that the best course to pursue was to remove a piece of the lower jaw according to the method proposed by Esmarch; but he brought the case under the notice of the Association, as he was anxious to elicit the opinions of the Fellows. He would like to ask (*a*) what was considered the best apparatus for preventing the contraction of the cicatrix, supposing that to be removed with or without a portion of each jaw? and (*b*) what was the best method of keeping the ends of the divided bone apart, in case Esmarch's or Rizzoli's operation were adopted?

A discussion ensued, in which the President, Mr. W. A. N. Cattlin, Mr. Coleman, Mr. Owen, Mr. Davy, Mr. Napier, and Mr. Cartwright took part.

Mr. MASON briefly replied.

DISEASE OF THE MALAR, SUPERIOR, AND INFERIOR MAXILLARY BONES.

Mr. RICHARD DAVY then read a paper on three cases of the above disease, in which he remarked that these cases illustrate (1) the results after removal of the superior maxilla and malar bones (right) for fungating cancer; (2) the results after removal of the left malar bone for myeloid sarcoma; (3) the removal of the left condyle of the inferior maxilla for confirmed trismus. The two first (males) died after operation; the last (a female) is now convalescent in the wards of Westminster Hospital. *Case* 1, aged fifty-one, was admitted October 29, 1873. The patient had complained prior to admission of an obstruction in his right nostril, and a growth was removed a month previously by a surgeon of Newcastle, when smart hæmorrhage supervened. He complained on admission of great difficulty in breathing and swallowing, and his right cheek was puffy and swollen by a glazy red mass of induration; and on looking into his mouth, a mass of soft tissue, covered with mucous membrane, was to be seen and felt on the floor of the superior maxilla and palate bones. There was no breach of surface, but much dyspnœa and dysphagia. Finding the tumour steadily increased and that the soft palate had ulcerated and formed an obstruction over the pharynx, on November 25, the patient being placed under chloroform, and a tube inserted into his left nostril, the skin was divided through the middle of the upper lip into the right nostril, then upwards towards the nasal process of the superior maxilla. The soft palate was cut through, and the incisor tooth being extracted, a small saw was introduced, and the palatine and superior maxillary floor of the nose bisected. The nasal process of the upper jaw, with its malar attachment, was next nipped by forceps and the parts wrenched out. The external angular process of the frontal bone was then divided, and the whole malar bone was extracted by twisting it off from the zygoma. The patient made good progress, and left the hospital on December 18, 1873. On February 4, 1874, he was re-admitted with hopeless recurrence of the disease, and he died on May 12, twenty-four weeks after the operation. *Case* 2: The patient, aged fifty, with a tumour of the left malar bone, was admitted into the Westminster Hospital on June 11, 1878. A firm, hard, smooth swelling, about the size of a large chesnut, occupied the left malar region, and both eyelids were œdematous. The tumour was prominent along the outer part of the

orbital floor, but caused no pain over the eye or around it. On July 2, the tumour having increased, he was placed under ether, when a straight incision was made just above and parallel to the left zygomatic arch, the zygoma was then divided about its middle, as well as the orbital process of the malar bone. The growth was then pulled away with the lion forceps. Several small pieces of bone and growth were subsequently removed. A sponge was inserted in the cavity to stop the hæmorrhage, which had been pretty free, and the edges of the wound were brought together with one wire suture. On the 5th a hypodermic injection of morphia (one-third grain) was ordered, and the face was covered with carbolised lint. Temperature 101·2°. The wound gradually healed up, and on August 1 he went home (being able to take open-air exercise) at his own request. He was re-admitted on September 16, having had a sharp attack of erysipelas on the 1st inst., but he gradually sank, and died exhausted on October 1, thirteen weeks after the operation. *Case* 3 was that of a female aged fifty, now convalescent in the wards of the hospital. She was admitted on October 23, 1878, with unilateral (left) trismus traumaticus. In June, 1873, she had her first lower molar tooth extracted; and in the following August, being exposed to the weather, an abscess formed, which burst into the mouth. The discharge gradually ceased, but she noticed a partial inability to open the mouth. On admission, she could only admit a pin between the teeth, the left temporo-maxillary articulation being partially fixed, the right less so. There was no facial deformity or buccal scar, and she feeds most inconveniently, bolting her food. There was no history of primary syphilis. She was emaciating daily. On October 29 the patient was placed under chloroform, and a forcible attempt made to open her jaw, without success. On November 5 the left condyle was excised by a cut at right angles to the axis of the neck of the inferior maxilla, the bone nipped across, and removed with the lion forceps. The hæmorrhage was slight, and three fingers could be inserted into the mouth, and she could protrude her tongue. A small sponge plug was placed in the wound to prevent bleeding, which was removed on November 6. On the 20th the wound had healed, and the patient could open her mouth half an inch by measurement, and had that day eaten a quarter of a pound of mutton, after having compulsorily abstained from meat for eighteen months. Her speech is also now distinct, and she is daily gaining flesh. Mr. Davy, in conclusion, inquired how far were operative measures in such cases justifiable, and thanked the Fellows for their attention, and trusted the Association might long flourish for the public weal and the advancement of science.

Mr. Owen, Mr. H. Cartwright, Mr. Napier, and Mr. Coleman took part in the discussion which ensued.

Mr. Davy, in reply, stated that he had selected excision of the condyle as an easy operation, and one unable to result in bony anchylosis by reason of the natural interposition of the intra-articular fibro-cartilage, and also that in both post-mortems secondary visceral deposits were universally present.

THE CLINICAL SOCIETY OF LONDON.

Friday, November 22.

Dr. Greenhow, Treasurer, in the Chair.

(*Concluded from page* 667.)

Bronchiectasis and Lung Excavation—Attempt to Drain the Cavity by Tapping.

Dr. Theodore Williams communicated a case of bronchiectasis and lung-excavation in which an attempt was made to drain the cavity by tapping. The patient, a man aged twenty-nine, had chronic pneumonia of both lungs, resulting in perfect resolution in one, and in induration and dilatation of the bronchi in the other. He subsequently had hæmoptysis to the amount of three pints, and lost two stone in weight. When admitted into the Brompton Hospital, in May, 1877, the symptoms were convulsive cough with fetid expectoration containing large quantities of lung-tissue, and so offensive in character as to cause frequent vomiting. There was also considerable pyrexia. The physical signs denoted consolidation of the base of the left lung with commencing excavation. During his stay in the hospital the area over which cavernous sounds were audible increased considerably. Various kinds of treatment were tried to relieve the cough, and to facilitate and disinfect the expectoration, but all with only temporary benefit; and as the patient appeared to be poisoned more and more by the retained expectoration, and exhausted by the cough, on October 16, 1877, a medium-sized aspirator needle was passed between the eighth and ninth ribs, in the area of the cavernous sounds, and appeared to reach the cavity, but on exhaustion only a few drops of blood followed the operation and the puncture was consequently closed with lint. The patient afterwards suffered pain in the infra-mammary region, but as his symptoms continued to increase, a fortnight later a second attempt was made to reach the cavern; this time the intercostal space below the scene of the first operation being selected, and a trocar and large drainage-tube being introduced. On reaching the pleura a pint of brownish fetid fluid escaped, which proved under the microscope to consist of broken-down pus cells. Symptoms of collapse followed the evacuation of the fluid, and the patient was with difficulty rallied with stimulants. The abscess was washed out with disinfectants, but no improvement took place, and the patient gradually sank three days after the operation. On post-mortem examination it was found that the lung contained a labyrinthine cavity formed by the breaking down of the walls of several dilated bronchi, one of which had been penetrated by the first operation. Overlying the cavity was a limited empyema, which the second operation had evacuated. The right lung was affected by recent pneumonia, the result of infection through inhaled secretion from the left, this being the immediate cause of death. Dr. Williams remarked that it was often difficult to determine by auscultation the exact size and form of a cavity, and especially so when, as in the present instance, it communicated with several dilated bronchi, as reverberation of sound in these winding and irregular passages increased the area of cavernous sound, and gave the impression of a larger extent of cavity than really existed. Another curious feature was the presence of vocal fremitus, in spite of the presence of a large quantity of fluid; but this might be attributed to the very tense condition of the pleura from the amount of effusion poured out into a limited space. The failure of the first operation was due, not to any error in aim, for the dilated bronchus was penetrated, but to the tenacious nature of the expectoration preventing its passage through the aspirator; and the second operation, with the trocar and canula, while it tapped the empyema, did not consequently reach the accumulated secretion in the bronchiectasis.

Dr. Symes Thompson approved of this treatment. He had had two cases recently, where, the opening into the bronchus having closed, the external wound was then healed. In opening the pleura it was very important not to allow any accumulation to remain, and to insert the drainage-tube in the very lowest part.

Mr. Bryant did not believe in the aspirator for the treatment of such cases; the proper method was to make a free opening and wash out the cavity, which was to be treated like an ordinary abscess. Aspiration was only admissible for purposes of diagnosis.

Dr. Green drew attention to the fact that here there was a pulmonic cavity, while Mr. Bryant was alluding to cases of localised empyema.

Dr. Douglas Powell thought this distinction of great moment, and that a free opening was hardly applicable to a lung-cavity surrounded and traversed by large vessels; for such a case he should prefer a trocar. He thought that the wound of the lung by the needle had done harm in Dr. Williams's case. A point of importance was that, in this case, as he believed was frequently noticed, cavernous breathing was heard over an empyema, and even vocal fremitus was felt over it. He considered that in such a case, when there was much pus expectorated, an empyema was probably present.

Dr. Cayley mentioned that in Berlin twelve or more such cases had been related, where lung-cavities had been tapped, with no encouraging results. Where the cavity was basal it might be treated like an abscess, but in apical tubercular cavities such a course was of doubtful good.

Mr. Berkeley Hill had opened a large cavity in the seventh right interspace, in a patient at University College Hospital. At least ten ounces of fluid escaped, followed by such free hæmorrhage as to require plugging; there was much temporary benefit. After death, the result of a mediastinal carcinoma, other cavities were found, while that one which he had opened had contracted to a sinus.

Mr. Maunder said he had ventured, on more than one

occasion, in connexion with the subject of empyema, to suggest that the purulent collections should be treated on general principles like abscess elsewhere. A free incision should be made, in order to favour a ready flow in accordance with gravitation, and in order that the abscess-walls may quickly coalesce and heal by granulation. In cases similar to the one under consideration, abscess in the base of the lung, surgeons would willingly come to the aid of the physician, provided it could be shown that the abscess-wall and the chest-wall were united by adhesions, as probably would be the case in most instances.

Dr. Williams, in replying, said that they could neither be confident of the size of the cavity nor of the amount of adhesion in his case. There was good vocal fremitus, although the quantity of fluid was large; the contrary was generally laid down in books. In empyema a free opening was most desirable. The tapping of a cavity was justifiable when it was situated at the base of the lung and it was difficult for the expectoration to be removed by the bronchi. Usually in such cases the pleura was adherent.

NEW INVENTIONS AND IMPROVEMENTS.

JOHNSTON'S FLUID BEEF.

Since the introduction of extract of meat as a stimulant and article of diet in this country, many and various preparations have been submitted to us, often possessing distinctive qualities all more or less useful. It would be idle to enumerate them, but we may at once say that this is the most satisfactory product which we have yet seen. It consists of two portions, a fluid and a solid, the former variously described as an "essence" and an "extract." Suffice it to say that it consists of substances found in meat, and which are soluble in water. The other consists of dried meat reduced to powder, and suspended in the former. Our personal experience of its practical use is as yet limited; but, speaking from its chemical composition, its flavour, and the satisfaction it gives to the stomach, we should predict for it (provided it can be sold at a reasonable rate) a success such as no other preparation has yet obtained.

The following arrangements for the lectures at the Royal Institution of Great Britain before Easter have been announced:—Christmas Lectures: Professor Dewar, M.A., F.R.S., six lectures, "On a Soap Bubble"; on December 28 (Saturday), 31, 1878; January 2, 4, 7, 9, 1879. Professor Edward A. Schäfer, F.R.S., Fullerian Professor of Physiology, R.I., twelve lectures "On Animal Development"; on Tuesdays, January 14 to April 1. J. H. Gordon, Esq., four lectures "On Electric Induction"; on Thursdays, January 16 to February 6. Professor Tyndall, D.C.L., F.R.S., etc., eight lectures "On Sound: including its Recent Applications and Methods of Reproduction"; on Thursdays, February 13 to April 3. Professor H. G. Seeley, F.L.S., F.G.S., three lectures "On Reptilian Life"; on Saturdays, January 18, 25, February 1. Reginald W. Macan, Esq. (Ch. Ch. Oxford), four lectures "On Lessing"; on Saturdays, February 8 to March 1. Walter H. Pollock, Esq., M.A., two lectures "On Colbert and Richelieu"; on Saturdays, March 8, 15. F. Seymour Haden, Esq., three lectures "On Etching"; on Saturdays, March 22 to April 5. Professor Dewar will give a course of lectures after Easter. The probable arrangements for the Friday evening meetings before Easter, 1879, are as follows:—January 17, Professor Tyndall, LL.D., F.R.S., M.R.I., "On the Electric Light"; 24th, Professor W. E. Ayrton, "On the Mirror of Japan and its Magic Quality"; 31st, H. Heathcote Statham, Esq., "On the Logic of Architectural Design." February 7, Rev. H. R. Haweis, M.A., "On Bells"; 14th, Professor G. Johnstone Stoney, F.R.S., "The Story of the November Meteors"; 21st, Professor Roscoe, F.R.S., "On a New Chemical Industry"; 28th, Sir William Thomson, LL.D., F.R.S., "On the Sorting Demon of Maxwell." March 7, Professor Huxley, LL.D., F.R.S.; 14th, E. B. Tylor, Esq., F.R.S., "The History of Games"; 21st, Professor Abel, C.B., F.R.S., "Recent Contributions to the History of Detonating Agents"; 28th, Sir Henry C. Rawlinson, K.C.B., D.C.L., F.R.S., "On the Geography of the Oxus, and the Changes of its Course at different Periods of History." April 4, Warren de la Rue, Esq., D.C.L., F.R.S., M.R.I.

OBITUARY.

ROBERT WILLIAM TIBBITS, M.B., M.R.C.S., etc.

By the untimely death of Mr. R. W. Tibbits, at the early age of thirty-six, Bristol has lost a most useful citizen, and the Bristol Infirmary a highly accomplished surgeon. His loss will be regretted by a large circle of professional men, friends, and pupils, who had learned to esteem and respect him for his sterling qualities as a man, and his zeal and ability as a surgeon and teacher.

Very early in his professional career Mr. Tibbits was called upon to discharge onerous and responsible duties. In the year of his graduation he was selected to stamp out an alarming outbreak of cholera in a village a few miles from Bristol. The thorough and efficient manner in which he carried out this important work is sufficiently attested by the fact that, though several hundreds were down with the disease, not one single instance of the malady getting abroad and causing infection outside the village was discovered. Soon after this he was appointed on the *Lancet* Commission for the Sanitary Inspection of Workhouses. In this capacity, his fearless and unsparing exposure of abuses in the workhouses of his own district, though the cause of much personal disfavour, must have been no mean contribution towards the subsequent improvement by Government of the condition of those asylums. Thereafter, and over a considerable period, Mr. Tibbits, through leaders and letters in the local press, took a most active and intelligent part in the improvement of the sanitation of Clifton and Bristol.

In matters more closely connected with his special walk in life, Mr. Tibbits' work was equally vigorous and sincere. As Lecturer, first on Anatomy and afterwards on Surgery, at the Medical School he laboured with devotion and success. As Surgeon at the Infirmary he had the well-merited reputation of possessing the rarely united qualities of brilliancy and dash with safety and caution as an operator. Always abreast of the literature of his profession, he was among the first to introduce and the most ready to adopt any real improvement in modern surgery. With so much of the material that goes to the making of a good surgeon, it is not surprising that Mr. Tibbits had already earned a reputation which extended far beyond his immediate surroundings.

The interests of the Bristol Medical School were specially dear to Mr. Tibbits, and most earnestly did he work for their furtherance. Towards the procuring of funds from the laity, for the erection of new premises for the school, he laboured with a hearty goodwill and earnestness which commanded the admiration of all concerned. The movement, thus set on foot, reached more widely, however, for it was the germ of the now important and thriving University College of Bristol.

To the above may be added the following extract from the proceedings of the Bristol Medico-Chirurgical Society:—At the monthly meeting of that body, held November 27, Dr. F. Brittan said he had been requested to propose a resolution which he felt assured would meet with the deepest sympathy and approval of every member of the Society. "We have many of us," Dr. Brittan remarked, "taken part to-day in consigning the remains of one of our most diligent and most respected members—Mr. R. W. Tibbits—to his premature and untimely grave. I have known him for now nearly twenty years: first as a pupil, remarkable for earnest devotion to the studies of his profession; later on—at the early age of twenty-six—I welcomed him to the Infirmary as my colleague, and soon became convinced that he possessed all the qualities necessary for the making of a great surgeon. Taking advantage of every opportunity, as his enduring love for his profession led him to do, and having now all that was wanted—experience and practice—he soon began to show his peculiar excellencies in the wards and operating-theatre. Active and strong, with indomitable energy, bold and unhesitating, he had the courage which is engendered only by self-reliance based on experience; but he was cautious and considerate to a remarkable degree—in fact, I have often been struck by the extensive and varied appliances at hand when he was performing any grave operation, with which he was prepared to meet any possible accident or contingency. Nor did he rely on his own experience, for he

was an extensive reader of the literature of the profession generally. The prominent points in his character to which I have alluded as so valuable to him as a surgeon, were displayed, as might be expected, in his ordinary life. He was a man of strong opinions, not held without due consideration, but enunciated and maintained with vigour and determination as disinterested as outspoken. Nor should we be surprised to find, as many of us know was the case, that underlying all there was an infinite kindness and tenderness and an ever ready sympathy with suffering and distress. He was not a man who wore his heart on his sleeve; and so it might be said of him that he had more acquaintances than friends; for where he loved, he loved entirely and well. In his death (at the age of thirty-six) his patients have lost one who never failed to inspire confidence in their hours of anxiety, our Society a diligent and earnest working member, and our profession one of its most useful and brilliant members. The resolution I have to propose is as follows:—'That the members of this Society desire to record their very high appreciation of the services of the late Mr. R. W. Tibbits as an original member of the Society and member of the Committee, and to express their deep regret at his untimely death.'" The resolution was seconded by Mr. F. P. Sansdown and adopted unanimously.

PROFESSOR LEBERT.

THIS eminent man, who died rather suddenly at Bex, in Switzerland, in the middle of August last, deserves, even at this late hour, a few words of notice in our columns. He was born in 1813 at Breslau. His medical studies were carried on first at Berlin, then at Zürich under Schönlein, and he graduated in 1831. He made many botanical excursions into Switzerland while at Zürich, and his love for that country became so great, that after studying a year or two in Paris under Dupuytren and Louis, he settled down to practice at Bex. Finding, however, that he was cut off too much from the scientific world, he resolved to spend several winters in Paris, remaining the rest of each year at Bex. In Paris he studied comparative anatomy vigorously, and from 1846-53 he spent all his time in that city, and got into excellent practice. In 1853 he was elected Professor of Medicine at Zürich, and he remained there until called to Breslau in 1859. In 1874 he retired from his professorship at Breslau, and practised for a year or two at Vevey on the lake of Geneva. During the last two winters he has practised at Nice.

Hermann Lebert was a man of immense energy and activity, and in 1869 the number of his scientific contributions reached 101. The number of the *Berliner Klinische Wochenschrift* which announced his death contained part of a paper from his pen, and he contributed an essay "On the Relation of Pregnancy to Phthisis" to the Medical Society of Nice last winter. His greatest works were an "Atlas of Pathological Anatomy" published in French by Baillière in 1854-62, a "Handbuch der Praktischen Medicin," a "General Pathology and Therapeutics," the section on Diseases of the Bloodvessels and Lymphatics in "Virchow's System of Medicine," etc. His smaller works on pathological anatomy deal with the question of the inoculation of tubercle, the varieties of cancer, and other similar subjects. Lebert's mind was many-sided, and he endeavoured to apply accurate scientific knowledge to the treatment of disease and the requirements of clinical medicine.

DUBLIN HOSPITAL SUNDAY FUND.—At the beginning of this week the amount received as the result of the collection on Sunday, November 10, was £3845. It is estimated that a sum of £400 has yet to come in, besides some special donations.

A NEW REMEDY FOR DYSENTERY.—According to the *India Med. Gaz.* (October 1), a new and very efficacious remedy for dysentery has been found, which, if somewhat inferior to ipecacuanha, possesses the advantage over it of being free from nauseating effect. It is the root of a plant called Rungun in Bengalee, and found to belong to the genus *Ixora* of the natural order Cinchonaceæ. The species that have been tried are the *I. Bandhuca* and *I. Coccinea* (Roxb.). The plant is a very common one, and is most efficacious when employed in its fresh state. An extended trial of its efficacy has been directed by the Surgeon-General.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—The following are lists of candidates who have passed the recent examinations:—

M.D. EXAMINATION.

Ashby, Henry (Gold Medal), Guy's Hospital; Hellier, John Benjamin, Leeds, and University College; Horrocks, Peter, Guy's Hospital; Morley, Thomas Simmons, Guy's Hospital; Pope, Harry Campbell, B.S., Liverpool, and University College; Symonds, Charters James, B.S., Guy's Hospital.

LOGIC AND PSYCHOLOGY ONLY.

Boddy, Hugh Walter, Manchester Royal School of Medicine; Gristock William, University College; Hobson, Lewis John, B.S., University College; Jones, Arthur Henry, Guy's Hospital; Paget, William Smith, Liverpool, and University College; Raine, George Rolph, Guy's Hospital; Stevenson, Leader Henry, Guy's Hospital; Tirard, Nestor Isidor Charles, King's College.

SECOND M.B. EXAMINATION FOR HONOURS.

MEDICINE.

First Class.—Nicholson, John Francis (Scholarship and Gold Medal), St. Thomas's Hospital; Carrington, Robert Edmund, (Gold Medal), Guy's Hospital; Henderson, George Courtenay (obtained the number of marks qualifying for a Gold Medal), University College; Wiglesworth, Joseph, Liverpool Royal Infirmary; Uhthoff, John Caldwell, Guy's Hospital.

Second Class.—Davy, Henry, Guy's Hospital; Gadsby, John Topham, University College; Hadden, Walter Baugh, Liverpool School of Medicine and St. Thomas's Hospital; Joule, John Samuel, University College and St. Bartholomew's Hospital; and Miller, Richard Shalders, University College—*equal.*

Third Class.—Wilkinson, Arthur Thomas, B.A., B.Sc., Owens College, and Wilcocks, Frederick, King's College—*equal;* Prowse, Arthur Bancks, St. Mary's Hospital.

OBSTETRIC MEDICINE.

First Class.—Henderson, G. Courtenay, (Scholarship and Gold Medal), University College; Sheldon, Thomas Steele (Gold Medal), Guy's Hospital; Wiglesworth, Joseph, Liverpool Royal Infimary; Hadden, Walter Baugh, Liverpool School of Medicine, and St. Thomas's Hospital, and Willcocks, Frederick, King's College—*equal;* Uhthoff, John Caldwell, Guy's Hospital.

Second Class.—Davy, Henry, Guy's Hospital, and Whitney, Neville Scott, University College—*equal;* Miller, Richard Shalders, University College; Carrington, Robert Edmund, Guy's Hospital; Prowse, Arthur Bancks, St. Mary's Hospital, and Wilkinson, Arthur Thomas, Owens College—*equal;* Gadsby, John Topham, University College; Lubbock, Montagu, Guy's Hospital; Nicholson, John Francis, St. Thomas's Hospital.

FORENSIC MEDICINE.

First Class.—Uhthoff, John Caldwell (Scholarship and Gold Medal), Guy's Hospital; Henderson, G. Courtenay (Gold Medal: obtained the number of marks qualifying for the Scholarship), University College; Carrington, Robert Edmund (obtained the number of marks qualifying for a Gold Medal), Guy's Hospital; Willcocks, Frederick, King's College; Joule, John Samuel, University College, and St. Bartholomew's Hospital; Nicholson, John Francis, St. Thomas's Hospital.

Second Class.—Davy, Henry, Guy's Hospital; Prowse, Arthur Bancks, St. Mary's Hospital; Hadden, Walter Baugh, Liverpool School of Medicine and St. Thomas's Hospital; Benham, Frederick Lucas, University College; Wiglesworth, Joseph, Liverpool Royal Infirmary.

Third Class.—Sheldon, Thomas Steele, Guy's Hospital; Paddison, Edmund Howard, Guy's Hospital.

B.S. EXAMINATION.

First Division.—Blake, William Henry, University College; Miller, Richard Shalders, University College.

Second Division.—Benham, Frederick Lucas, University College; Gadsby, John Topham, University College; Silcock, Arthur Quarry, University College; Smith, Kenneth Rawlings, University College.

B.S. EXAMINATION FOR HONOURS.

Second Class.—Benham, Frederick Lucas, University College, and Gadsby, John Topham, University College—*equal;* Blake, William Henry, University College, and Miller, Richard Shalders, University College—*equal.*

THE ROYAL COLLEGE OF SURGEONS.—The following Members of the College, having undergone the necessary examinations for the Fellowship at the half-yearly meetings of the Court terminating on Saturday, the 23rd ult., were reported to have acquitted themselves to the satisfaction of the Court of Examiners, and at a meeting of the Council on the 12th inst. were admitted Fellows of the College, viz.:—

Atkinson, Richard, B.A. Cantab., Carlisle, of the London Hospital, diploma of Membership dated April 19, 1876.

Brown, John, M.A. and M.D. Aberd., Leven-terrace, Edinburgh (not a Member).

Cumming, Hugh Gordon, L.R.C.P. Edin., Exeter, of St. Bartholomew's Hospital, January 28, 1875.

Eve, Frederick Samuel, L.R.C.P. Lond., Stanford-le-Hope, Essex, of St. Bartholomew's Hospital, August 3. 1876.

Makins, George Henry, L.S.A., Walton-on-Thames, of St. Thomas's Hospital, July 22, 1875.

Moullin, Charles William Mansell, M.A. and M.B. Oxon., Porchester-terrace, of St. Bartholomew's Hospital, August 2, 1876.

Potter, Henry Percy, L.S.A., Hove Villas, Brighton, of St. Thomas's Hospital, April 20, 1875.

Pye, Walter, Sackville-street, of St. Bartholomew's and St. Mary's Hospitals. July 31, 1876.

Treves, Frederick, L.S.A., Wirksworth, Derby, of the London Hospital, April 21, 1875.

Seven candidates, having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for twelve months.

APOTHECARIES' HALL, LONDON.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, December 5 :—

Ogle, Charles James, 53, Hunter-street, W.C.
Saunders, William, Sampford Peverell, Devon.

The following gentleman also on the same day passed his Primary Professional Examination :—

Knaggs, Henry Valentine, University College.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to all new Appointments that take place.

BENNETT, STORER, L.R.C.P. Lond., M.R.C.S. Eng., L.D.S. Eng.—Dental Surgeon to the St. Marylebone General Dispensary, Welbeck-street, Cavendish-square.

NAVAL, MILITARY, &c., APPOINTMENTS.

ADMIRALTY.—Staff-Surgeon Astley Cooper has been promoted to the rank of Fleet-Surgeon in her Majesty's Fleet, with seniority of November 22, 1878. Fleet-Surgeons Richard Lovell Bluett Head and William Robert Bennett, M.D., have been placed on the Retired List of their rank from the 30th ult.

BIRTHS.

BROWN.—On December 5, at Colchester, the wife of G. Brown, M.D., of a daughter.

DRING.—On December 1, at Boughton, Faversham, the wife of W. Ernest Dring, M.D., L.R.C.P., etc., of a daughter.

ELLIOT.—On December 2, at Clifton, the wife of A. F. Elliot, M.D., Surgeon-Major A.M.D., of a daughter.

FENNINGS.—On December 4, at 81, Clarendon-road, the wife of Allen Fennings, L.R.C.P. Edin., etc., of a son.

MARRIAGES.

DAVISON—TAYLOR.—On November 28, at Leeds, James Edgar Davison, M.D., of Carlton House, Sheffield, to Sarah Lucy, third daughter of the late Samuel Taylor, of 12, Hyde-terrace, Leeds.

GREENWOOD—BLACKMAN.—On December 10, at South Hampstead, Thomas Porter Greenwood, M.R.C.S., L.R.C.P., of Easton, Northamptonshire, to Jessie, fourth daughter of George Blackman, of 34, King Henry's-road, N.W.

LEAPINGWELL—HAWKS.—On November 6, at Bangalore, A.H. Leapingwell, L.R.C.P. Edin., Surgeon 13th Regt. M.N.I., to Susan Isabella, eldest daughter of Colonel T. Spence Hawks, 36th Regt. M.N.I.

WEBB—MOIR.—On December 10, at St. George's, Hanover-square, John Craske Webb, M.D., of Lower Belgrave-street, Eaton-square, to Sarah Ann Moir, of Leamington-road-villas, Westbourne-park, second daughter of the late George Gordon Moir, Esq., of Chepstow Villas, Bayswater.

DEATHS.

BIRCH, KATE, third daughter of George Birch, M.R.C.S., etc., at Downs-road, Lower Clapton, on December 4, aged 4.

JONES, RICHARD NELSON, youngest son of Evan Jones, M.R.C.S. Eng., at Tymawr, Aberdare, on December 4, aged 18 months.

LITTLETON, THOMAS, M.B. Lond., F.R.C.S., at 1, Lansdowne-place, Plymouth, on December 2, aged 54.

MUSHET, JOHN GEORGE, M.R.C.S.E., L.S.A., at Haverstock-hill, on November 28.

SANKEY, MARGARET, wife of William Sankey, M.D., at The Elms, Sutton Valence, Kent, on December 5.

WAYLEN, WILLIAM, F.R.C.S, J.P., late of Colchester, at Mount Hall, Great Horkesley, on December 6, aged 78.

WEST, JOHN HENRY, M.D., L.R.C.S. Edin., Surgeon-Major A.M.D., late 11th Regt., at 7, Lower Pembroke-street, Dublin, on November 30.

VACANCIES.

CARLISLE DISPENSARY.—Junior House-Surgeon. Applications, with copies of testimonials, stating age and qualifications, to Mr. J. H. W. Davidson, Hon. Sec., 8, Devonshire-street, Carlisle.

CHORLTON-ON-MEDLOCK DISPENSARY, MANCHESTER.—Honorary Surgeon. Applications to the Secretary at the institution.

EVELINA HOSPITAL FOR SICK CHILDREN, SOUTHWARK-BRIDGE-ROAD, S.E.—Registrar and Chloroformist. Applications, with testimonials, to the Secretary, on or before December 27.

GREAT NORTHERN HOSPITAL, CALEDONIAN-ROAD, N.—Ophthalmic Surgeon. Candidates must be Fellows of the Royal College of Surgeons of England. Applications, with copies of testimonials, to the Secretary, on or before January 6, 1879.

INFIRMARY FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST, 26, MARGARET-STREET, CAVENDISH-SQUARE, W.—Visiting Physician. Candidates must be Members of the Royal College of Physicians of London. Testimonials to the Secretary.

METROPOLITAN ASYLUM DISTRICT.—Assistant Medical Officer for the Asylum for Imbeciles at Caterham, Surrey. Candidates must be duly registered and qualified to practise both medicine and surgery in England. Forms of application may be obtained at the offices of the Managers, 37, Norfolk-street, Strand, W.C., where applications, with copies of recent testimonials, must be lodged by 4 p.m., December 19.

YORK DISPENSARY.—Resident Medical Officer. Candidates must be duly qualified and unmarried. Letters and testimonials to S. W. North, Esq., 84, Micklegate, York, on or before December 14.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population in computed according to the census of 1871.

RESIGNATION.

Basingstoke Union.—The Fourth District is vacant; area 14,029; population 3598; salary £97 per annum.

APPOINTMENTS.

Hayfield Union.—Wm. Chatterton, M.D., M.Ch. Univ. Dub., to the Hayfield District and the Workhouse.

Liverpool Parish.—J. Hamilton, M.D., M.Ch. Queen's Univ. Ire., and R. A. Brannigan, M.D., M.Ch. Queen's Univ. Ire., as Assistants Medical at the Workhouse.

CREMATION.—The Sanitary Council of Munich has, according to the *Cologne Gazette*, recommended the use of cremation—(1) after battles, (2) during certain epidemics, (3) where the transport of bodies is difficult, and (4) where the soil is unsuited for inhumation.

WARTS TREATED BY CHROMIC ACID.—Three or four applications suffice to cause the disappearance of warts, however hard and thick, and of whatever size. The application causes neither pain, suppuration, nor cicatrices, the only inconvenience being that the warts become of a blackish-brown colour.—*Rév. Méd.*, December 2.

RUSSIAN GARGLE IN ANGINA FAUCIUM.—Carbolic acid, tannin, of each 15 parts, alcohol 60, and distilled water 120 parts. A teaspoonful in half a glass of water once a day. This gargle is greatly employed in Russia and in the Russian colony at Nice. It is of great service in commencing angina, and in all chronic irritations of the throat.—*Rév. Méd.*, December 2, and *Nice Méd.*

THE NEW ECOLE PRATIQUE DE MÉDECINE AT PARIS.—On December 4, M. Bardoux, Minister of Public Instruction, in the presence of a large concourse of professors and students, laid the first stone of the new Ecole. Prof. Vulpian, the Dean of the Faculty, in his address thanked the Minister for his active co-operation, whereby a project so often deferred will now be speedily realised. He was also received with enthusiasm by the students. "Long indeed is it since a Minister of Public Instruction has met with such a reception from *la jeunesse de notre école.*" The domain of the Ecole is quadrupled in extent. There will be six amphitheatres, eight lecture-rooms, fourteen great laboratories, and twenty private laboratories. The galleries for the museum are to be tripled in size, and the library is to be four times its present size. The number of dissecting tables is to be increased from 80 to 180. The city of Paris and the National Budget provide the funds jointly.—*Gaz. Hebd.*, December 6.

IMPURE CHLOROFORM.—M. Perrin mentioned at the last meeting of the Académie de Médecine that he has found chloroform of late years a much less reliable and more dangerous agent—probably since the increase of the tax on alcohol. He finds now that instead of five or six minutes' inhalation sufficing, twenty, thirty, or even more, are frequently required; and on several occasions he has been obliged to renounce its employment after having tried that of various pharmacies. Formerly, disturbance of the stomach by the chloroform was quite exceptional, but vomiting and faintness are now the general rule. He has also this year met with two alarming cases of apparent death. Testing these specimens of chloroform with sulphuric acid, he has found the fine mahogany-red colour produced characteristic of impurity. When this chloroform has been submitted to Prof. Regnauld's process of rectification, none of the accidents complicating the induction of anæsthesia ensued. Prof. M. Sée observed that he had met in his hospital with none of these peculiarities, and he believed that the chloroform supplied to the hospitals continued as pure as ever it was; and Prof. Richet believed that M. Perrin must have been unlucky, for neither in his hospital nor private practice had he met with these differences. M. Guyon had of late met with these accidents, but they occurred in women, who, as well as children, according to his experience, are much more liable to vomit from anæsthesia than are men. M. Perrin replied that he had never observed this peculiarity in women and children. He had very frequently employed chloroform for twenty years past, but he had met with nothing of the sort now complained of until within the last five years.—*Gaz. des Hop.*, December 5.

A CENTENARIAN.—In his return of births and deaths for the week ending Saturday, November 23, the Registrar-General for Ireland notes the deaths of three females in Dublin, who were stated to have been aged 91, 94, and 103 respectively. The woman returned as 103 years old died in the North Dublin Union Workhouse, into which she had been admitted from Finglas, Co. Dublin. Her name was Bridget Colfer. To the entry of her name in the record of deaths in the workhouse, Dr. Humphry Minchin appended the following note:—"In these days when so much doubt is being thrown on the reports of cases of centenarianism, the establishment of an authentic case is not without interest. According to a record in her father's handwriting, preserved in her family, Bridget Colfer was born on August 9, 1775. I submit a photographic portrait that was taken on July 8 of the present year, a few days after her admission into the house.—H. Minchin, November 27, 1878." The portrait was that of a hale, well-looking old lady, presenting much the appearance of a well-preserved lady of threescore or threescore and ten years. The deceased died of asthma.

NERVE-STRETCHING IN ANÆSTHETIC LEPROSY.—Surgeon Laurie, M.D., Resident Surgeon of the Medical College Hospital of Calcutta, states that owing to the difficulty in following up cases in dispensary practice, he has not been able to report upon one completed case of local anæsthesia treated by nerve-stretching. One such case has, however, now occurred to him, and the result is satisfactory. A European female consulted him on March 22, having suffered for four months from pain and tingling in the hand and forearm, gradual loss of sensation in the ulnar area of the hand, and a peculiar weakness and stiffness in the fingers. The ulnar nerve was much thickened; the ulnar area of the hand was of a dull red, with complete anæsthesia all over this discoloured patch; and the hand had a wasted appearance, due to atrophy of the muscles supplied by the ulnar. The nerve was stretched the same day under chloroform, and in a few days considerable improvement took place. When the patient was seen six months afterwards, no trace of disease existed in any part of the hand, forearm, or arm, the woman having been quite well from the time the wound had healed. —*India Med. Gaz.*, October 1.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

F.R.C.S., Cambridge.—Yes, Professor Humphry will deliver the Hunterian Oration at the College of Surgeons in February next.

Lodging-houses, Belper.—In making a house-to-house inspection of the lodging-houses in this town, the inspector of nuisances to the Local Board found a house occupied by thirty-six persons, fourteen of whom were allotted to the kitchen, which barely gave them floor room.

M., St. George's Hospital.—Mr. Cæsar Hawkins resigned his seat as a member of the Court of Examiners of the College of Surgeons on December 10, 1866.

The Boarding-out System, Scotland.—The following interesting details are given in a statement published by a member of Mr. Francis Peek's Committee, who has been paying visits of inspection amongst the boarded-out children in Scotland. He states—"In recently visiting many of the children under this system from the parishes of the cities of Glasgow and Edinburgh, it was interesting to an English observer to see how thoroughly it deserves all the praise given. In one cottage after another were found boys and girls, of various ages from the little infants in arms to those of twelve or thirteen years, bright, happy, healthy, with nothing either in face or clothing to mark them from their playfellows. All the children in each district were thus unexpectedly visited at the same time, consequently there was no selecting of pet cases. From the cities of Glasgow and Edinburgh alone some hundreds of children are at the present time scattered in parishes and villages, enjoying the benefits thus afforded." He adds—"Doubtless much of the success is due to the wise and judicious carrying out of the system by such boards of managers, and their officials, as are happily to be found in these cities, where they not only prove themselves in truth guardians of the children, but foster-parents and schoolmasters united with guardians, in a true spirit of humanity; and orphan and deserted children are being cared for in Scotland as thoroughly and well as the best philanthropist can desire, and as cheaply as any economist can reasonably expect. And what hinders England from carrying out the same system as successfully? Happily the number of unions is steadily increasing, which are proving that it is not only possible, but wise to follow in the steps of Scotland in this care of the children."

Longevity.—Mrs. Webb, of Ledbury, widow of the late Mr. Thomas Webb, banker, of Herefordshire, celebrated her hundredth birthday on the 25th ult. She is the only surviving sister of the late Sir Joseph Thackwell, a Waterloo officer. It is stated that records in Berrow Church, near Ledbury, contain proofs of Mrs. Webb's age.

Public Water Supply: Novel Claims.—Two unusual claims were made in cases lately brought before the local magistrate, by the Sheffield Water Company, which are worthy of notice. In one case the claim was the right to refuse water for domestic purposes to the owner of a property on the ground that the previous tenant, who had filed his petition, had not paid his water-rate. In the other case, by claiming to be privileged creditors, on a bankrupt estate, they refused the dividend, and cut off the supply from the succeeding occupier. In both cases the magistrate decided against the Company, and fined them heavily.

Plumstead Common.—The Metropolitan Board of Works have paid £10,500 to Queen's College, Oxford, and acquired formal possession of this common as a metropolitan open space. A keeper has been appointed, and the necessary improvements are being carried out.

Drunken Cabmen.—It is satisfactory to notice that Mr. de Rutzen is disposed to take a somewhat more severe view than some of his brethren on the Metropolitan Bench of the danger and of the not unfrequently serious accidents in the streets caused by drunken cabmen. At Marlborough-street Police-court, a few days since, three cabmen were brought before him charged with being drunk while having care of their cabs. Two of them, who had been fined previously for a similar offence, were ordered to pay 40s. each; and the third, who had not been fined before, was sentenced to pay 20s.—Mr. de Rutzen expressing his opinion that "There is no class of people who are more leniently dealt with than cabmen—much too leniently, he thought—for no one is more capable of doing mischief and damage than a drunken cabman."

Scott's Sewage System.—The annual report of the Scott's Sewage Company, just issued, states that the works at Burnley are now in successful operation. The Corporation of Burnley expressed unqualified approbation of the mode in which the operations had been conducted. They might be viewed as model works. The success at Burnley had created much interest throughout all Lancashire. The process was pre-eminently suitable for the treatment of the London sewage, as it was far the cheapest and most complete which could be adopted by a large city.

London Suburban Drainage.—During a discussion by the Metropolitan Board of Works in reference to a recommendation of the Works Committee for improving the drainage of Kilburn, a member remarked that "when the Board was formed they took over sewers in all parts of the metropolis, and these sewers were made of smaller diameter than those which had been subsequently constructed. Large numbers of houses had been built in the suburbs of late years, and, unfortunately, in many cases the basements were below the level of those inadequate sewers." The inhabitants of the Kilburn district having suffered severely from flooding and consequent illness, the improvement of the drainage became a pressing necessity.

Miss Florence Nightingale.—In gratitude and acknowledgment for his kindness, Miss F. Nightingale has sent a gold watch to Captain Scott, of the *Erl King*, for rescuing four nurses belonging to her training institution in London, who were wrecked whilst returning home from the Montreal General Hospital in Canada.

The London Labourers' Dwellings Society.—The new buildings, known as the "Murray Buildings," in Burnett-street, Vauxhall, erected by this Society, were formally opened on Saturday last. They are of an extensive character, comprising fifty-two separate dwellings of from two to four rooms each, and have the advantage over other model lodging-houses, that each sitting-room fronts the street, thus obviating the objectionable dulness inseparable from living in a back room. Each tenement is complete in itself, and has its own separate sanitary conveniences and front door. The rents range from 4s. to 8s. per week. Nearly all the dwelling have been already let.

The Metropolitan Building Act: Mortar.—The District Surveyor of Hammersmith summoned a builder a few days since, at the Hammersmith Police-court, to enforce compliance with the provisions of the Building Act in reference to the mortar being used in the erection of houses in Bassien-park-road. The evidence was to the effect that the defendant in building the houses in question had failed to comply with Section 12, and with Rule 2 of the first Schedule of the Act, which required that brickwork be solidly put together with mortar or cement. Instead of using mortar compounded of lime and sand, a very inferior substitute had been used, composed mainly of vegetable soil slightly charred during the process of burning bricks upon the ground. Good sand, with which the neighbourhood abounds, had been dug out and sent away, instead of being used in the buildings. The magistrate said it was clear that the mortar used by the defendant was bad and inferior, and did not consist of lime and sand only mixed with water. He therefore ordered the demolition of the portions complained of, allowing the district surveyor his costs. Cases brought under judicial inquiry, similar to the present, have been rather numerous lately. The extent to which bad and inferior materials are used in the construction of new buildings manifestly demands an active and diligent discharge of the duties of our district surveyors.

Treatment of Lunatics.—As a model asylum, that of Clermont, Oise, managed by MM. Labille Brothers, was much commended at the recent Congress of Alienist Physicians in France. The patients are employed at agricultural labour, and are boarded out on large farms. The asylum is under State control, being used, in fact, for the reception of all pauper lunatics in the Oise, but there are detached pavilions surrounded with private gardens for the accommodation of patients who can afford to pay from £100 to £240 a year. There are also workshops where some of the lunatics are employed at manual crafts. The lunatics are allowed to enjoy two-thirds of their earnings, a small percentage being given them to buy little luxuries during their confinement, while the rest is remitted to them upon their discharge, or is bestowed for the support of their families.

COMMUNICATIONS have been received from—

Mr. J. Astley Bloxam, London; Mr. John Chatto, London; Mr. D. Colquhoun, London; Dr. J. Matthews Duncan, London; Dr. Octavius Sturges, London; Mr. B. R. Wheatley, London; Dr. J. Milner Fothergill, London; Dr. F. Churchill, London; Mr. T. M. Stone, London; Messrs. Barclay and Sons, London; Dr. J. M. Bruce, London; Messrs. Bewdley and Draper, Dublin; The Registrar of the Apothecaries' Hall, London; Mr. E. W. Berridge, London; Dr. P. Manson, Amoy; Mr. H. Silverlock, London; Dr. Wolfe, Glasgow; Dr. Edward Sparks, Mentone; Dr. R. H. Semple, London; Mr. S. Murphy, London; The Registrar of the University of London; The Registrar-General, Edinburgh; Mr. R. W. Parker, London; Dr. Broadbent, London; Dr. J. W. Moore, Dublin; Messrs. H. R. Williams and Co., London; Mr. J. Hamilton Craigie, London; Dr. J. Greig Smith, Bristol; Dr. Lory Marsh, London.

BOOKS AND PAMPHLETS RECEIVED—

H. Silverlock, Medical Practitioner's Visiting Lists; Visiting List and Diary; Visiting List and Day-Book—Sydney Ringer, M.D., A Handbook of Therapeutics—Dr. Gustav Behrend, Die Hautkrankheiten für Aerzte und Studirende—Walter Ball-Headley, M.A., M.D., Homœopathy, Past and Present—The late Thomas Hawkes Tanner, M.D., F.L.S., and Alfred Meadows, M.D. Lond., A Practical Treatise on the Diseases of Infancy and Childhood.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Gazette Hebdomadaire—Boston Medical and Surgical Journal—El Siglo Médico—American Practitioner—Nordiskt Medicinskt Arkiv—Edinburgh Medical Journal—La Semaine Française—Students' Journal and Hospital Gazette—Toronto Sanitary Journal—Practitioner—Philadelphia Medical Times.

APPOINTMENTS FOR THE WEEK.

December 14. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

16. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Dr. W. H. Day, "Heart Diseases in Children."

17. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Pathological Society, 8½ p.m. Dr. Hoggan—Specimens illustrating the Growth of the Fungi in Ringworm and Favus respectively. Drs. Tilbury Fox and T. C. Fox—The Histology of Rodent Cancer. Dr. P. Irvine—Specimens showing the Effects of Compression of the Main Bronchi. Dr. Coupland—1. Brain showing Effects of Extreme Congestion; 2. Chronic Pneumonia. Mr. James Adams—Tumour of the Breast. Dr. F. Taylor—Spinal Cord from a Case of Infantile Paralysis. Mr. Sydney Jones—Cured Aneurism of the Subclavian. Dr. R. Crocker—Warty Growths on Tricuspid Valve, with Mitral Stenosis. And other Specimens.

18. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 1½ p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

Association of Surgeons Practising Dental Surgery, 8½ p.m. Dr. C. Meymott Tidy, "On Anæsthetics."

19. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

20. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, December 7, 1878.

BIRTHS.

Births of Boys, 1294; Girls, 1282; Total, 2576.
Average of 10 corresponding years 1868-77, 2256·5.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	982	1034	2016
Average of the ten years 1868-77	831·2	818·1	1649·3
Average corrected to increased population ...	...	...	2154
Deaths of people aged 80 and upwards ...	...	...	67

Note.—The births and deaths registered last week may be compared with the average numbers in the corresponding weeks of the ten years 1868-77 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	1	5	9	3	8	2	6	...	2
North ...	751729	...	6	12	...	6	...	5	...	6
Central ...	334369	...	1	6	3	1	...	1	1	...
East	639111	...	10	11	1	16	...	3	3	1
South	967692	3	6	24	2	11	...	7	1	...
Total	3254260	4	28	62	9	42	2	22	5	9

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·795 in.
Mean temperature	36·3°
Highest point of thermometer	42·4°
Lowest point of thermometer	29·1°
Mean dew-point temperature	32·5°
General direction of wind	N.
Whole amount of rain in the week	0·23 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, December 7, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1878.*	Persons to an Acre. (1878.)	Births Registered during the week ending Dec. 7.	Deaths Registered during the week ending Dec. 7.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3577304	47·5	2576	2016	42·4	29·1	36·3	2·39	0·23	0·58
Brighton	103923	44·1	56	44	42·0	28·4	36·5	2·50	0·20	0·51
Portsmouth ...	129461	28·9	89	57	...	...	...	...	...	...
Norwich	84620	11·3	42	39	43·0	31·0	36·8	2·67	0·29	0·74
Plymouth	73599	52·8	38	49	45·0	30·5	37·3	2·95	0·28	0·71
Bristol	206419	46·4	141	109	45·2	28·8	36·3	2·39	0·11	0·28
Wolverhampton ...	74240	21·9	51	50	41·2	25·6	34·1	1·17	0·47	1·19
Birmingham ...	383117	45·6	301	230	...	...	...	...	...	...
Leicester	121473	38·0	91	56	41·8	28·5	36·1	2·28	0·23	0·58
Nottingham ...	165267	16·6	108	65	42·3	27·7	35·6	2·01	0·20	0·51
Liverpool	532681	102·2	400	341	43·4	31·8	37·6	3·12	0·24	0·61
Manchester ...	360514	84·0	239	208	...	...	...	...	...	...
Salford	170251	32·9	135	92	...	...	...	...	...	...
Oldham	107366	23·0	51	53	...	...	...	...	...	...
Bradford	185088	25·6	134	93	42·0	30·0	36·7	2·61	0·23	0·58
Leeds	304948	14·1	248	163	44·0	30·0	37·8	3·23	0·23	0·58
Sheffield	289537	14·7	225	185	43·0	29·7	37·6	3·12	0·19	0·48
Hull	143139	39·4	96	70	44·0	28·0	35·2	1·78	0·72	1·83
Sunderland ...	112459	40·6	100	57	44·0	31·0	37·7	3·17	0·62	1·57
Newcastle-on-Tyne	144570	26·9	106	73	...	...	...	...	...	...
Edinburgh	222371	53·1	136	95	41·3	23·7	34·3	1·28	0·33	0·84
Glasgow	566940	94·0	354	279	42·7	27·7	36·4	2·44	0·02	0·05
Dublin	314666	31·3	161	225	45·8	23·3	35·5	1·95	0·08	0·20
Total of 23 Towns in United Kingdom	8373953	38·0	5878	4649	45·8	23·3	36·3	2·39	0·27	0·69

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·80 in. The highest reading was 30·06 in. on Wednesday morning, and the lowest 29·42 in. at the end of the week.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1878 by the addition of seven years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. Nottingham, Salford, and Oldham, however, form exceptions to this rule, as the estimates for these three towns have been revised with the aid of local information as to the rate of increase of inhabited houses. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

CLINICAL LECTURE
ON A
CASE OF ANÆSTHETIC LEPROSY.
REPUTED CURE BY, BUT FAILURE OF, THE BHAU DAJI TREATMENT.

By TILBURY FOX, M.D., F.R.C.P.,
Physician to the Department for Skin Diseases, University College Hospital.

GENTLEMEN,—There are two interesting cases in the hospital at the present time, illustrative of the two kinds of Elephantiasis—viz., the E. Arabum and the E. Græcorum, to which I may profitably draw your attention. The two kinds of disease referred to have nothing in common except in the generic name, "Elephantiasis"; and it is surprising what confusion has arisen from the mere application of such a generic term—a confusion, indeed, from which we are hardly yet delivered.

The ELEPHANTIASIS ARABUM, or Elephantiasis of the Arabs, is a chronic hyperplasia of the subcutaneous connective tissue and the skin proper, attended with general enlargement and deformity of the affected part as a whole, and accompanied by thickening, induration, and pigmentation of the connective tissue, together with an excessive growth of the papillary layer in certain of its parts giving rise to a verrucose condition. The disease is sometimes accompanied by varicosity of the lymphatics, which latter are usually enlarged, and more or less obstructed; and this obstruction is thought to be the immediate cause of the disease. Other names for this *E. Arabum* are *Pachydermia, Bucnemia tropica, Elephant leg, Barbadocs leg,* and *Spargosis.*

The *Elephantiasis Græcorum,* or Elephantiasis of the Greek, or true Leprosy, consists in a profound alteration of the nutrition of the body as a whole, which evinces itself by the formation of a new growth, possessing the physical characters, roughly speaking, of granulation tissue, which developes in the skin, certain mucous surfaces, and superficial nerve-trunks, causing on the one hand (*a*) thickening and deformity by its mere deposition so characteristically seen in the face of the leper, together with (*b*) ulceration, the result of the softening up of the new product; and, on the other hand, in consequence of the implication of the nervous trunk, to (*a*) disordered sensation and particularly anæsthesia, together with (*b*) special cutaneous changes, such as bullæ, ulcers, and quasi-psoriatic-anæsthetic patches.

I propose to deal to-day with the case of Elephantiasis Græcorum or Leprosy, and reserve any comments upon the patient suffering from Elephantiasis Arabum. Now, there are, as I have indicated above, three sets of phenomena to be met with in cases of Leprosy, viz., (*a*) certain alterations of colour, comprising pigmentation or maculation; (*b*) special changes in the skin, due to two causes, the one being the deposition of leprous material in the skin, which may assume the form of distinct dullish-red tubercles or infiltrations: and the other cause being distinct deposit of the same leprous material in the nerve-trunk, inducing certain scaly anæsthetic atrophous spots, bullæ, ulcers, and the like; (*c*) anæsthesia, with thickening of the superficial nerve-trunk, the result also of the deposit of leprous matter in them. Clinically these several sets of symptoms are not found apart, but usually concur in varying groupages in different cases; still there are instances in which one kind of lesion predominates to the exclusion in great part of all others, and varieties of leprosy have been made by various authors in accordance with variations in this respect: for example, the *pigmentation* may be the only change which is well marked; in others, *anæsthesia* may be, if not the only, at least the more prominent, symptom; in others again the *deposit of leprous matter*, and in others *atrophy and deformity of the extremities*, inducing a more or less mutilated state of the patient;—hence the terms LEPRA *maculosa, anæsthetica, tuberculosa, mutilans,* etc.,—but I repeat that there is no line of demarcation between these varieties, and the various symptoms and signs above described as belonging to the complete disease are intermingled in varying proportion, so that in all marked cases it is common to have eruptive, sensory, and deposition phenomena. Modern authorities have by common consent reduced the varieties of Leprosy to two, viz., the Tubercular and the Anæsthetic, which is a very satisfactory clinical division. In the tubercular form of the disease, pigmentary discoloration and deposition of leprous matter in the skin are well marked, whilst the anæsthetic phenomena are only comparatively developed. In the anæsthetic form, however, there is usually some, but it may be very little, deposit of leprous matter in the skin, as you will observe in the patient before us, who offers an example of the anæsthetic form of leprosy. There is, however, well-marked anæsthesia in various parts of the body, and, be it observed, out of all proportion to the amount of eruption or those skin changes which are usually found in tubercular leprosy. Our patient affords striking exemplification of this fact, and he also furnishes us with an example of a condition of nerve-trunks observable in both forms of leprosy, but more decidedly in the anæsthetic than in the tubercular, viz., thickening and knottiness of the nerve-trunks. He also exhibits bullæ about the lower extremities, and many slightly scaly, circular, dull, red-edged patches of eruption, which are to be regarded as the direct consequences of the nerve lesion in him. I will now read to you the notes of the case, and comment upon them as I proceed. The patient, Thomas H, who is seventeen years of age, was born in Bombay. His father was a Kentish man, and he was married in India. The father is still living, and fifty-nine years old, having lived for thirty-six years in Bombay, and enjoyed good health up to the present time. The patient knows very little of his mother, but believes she was an English woman. She died six years ago from "corpulency." The patient has four brothers and six sisters living, and they are all healthy; six brothers and sisters died when they were young, from what cause the patient does not know, but he is certain that none of his family have ever been affected with leprosy. The father can give no clue to his son's illness. The patient's health during childhood was exceedingly good, and whilst in Bombay he went to school, but never remembers having seen anyone affected like himself except an old native woman, nor is he aware that he was ever brought in contact with lepers.

Now, leprosy has been known to be hereditary in a large percentage of cases, but there appears to be no reason to conclude that the disease was so in this boy. The appearances of the disease in his case can only be ascribed to residence in a locality where leprosy was endemic. I may observe, with regard to the influence of age, that leprosy generally begins somewhere about the same time that it appeared in this boy, viz., between seven and twelve years of age. The disease may last ten to twenty or more years, but the tubercular form runs the more rapid course.

The disease commenced in our patient about six years ago. Either his father or his brother—it is uncertain which—first noticed certain brown marks in spots or large patches which cropped up in various parts of the body, limbs, hands, feet, and face.

The patient states emphatically that there were no lumps about him when the disease came on; that he was not out of health at the time, nor prior to the outbreak; that he did not suffer at any time from fever or ague; that, in fact, the brown discolorations occurred without any subjective symptoms. He was treated by the well-known Dr. Bhau Daji with a peculiar kind of oil, which he took in five-drop doses three times a day, the body being also rubbed with the same oil several times in the twenty-four hours. This treatment was continued for two years. After he had been under treatment for several months he became very ill; his strength left him, his hands, feet, and face became swollen, and he had to be carried about; his legs broke out in sores in their lower third. But he gradually got well again, and declares that after two years from this attack—that is, two years and a half or so from the original onset of the disease—he became perfectly well, and no trace of his former malady remained behind save some disordered sensation; for on being carefully interrogated, he says, when he comes to think about the matter, he has always had a slight numbness about the styloid process of the ulnar bones and the pendant lobe of the right ear. He now came to England with his father, and went to school for eighteen months, and was subsequently a barman. He has been in London about four months, having been working up to the present time as a

carpenter and pianoforte manufacturer. He has lived well since the first attack of the disease.

Now, it will be observed that the first sign of the disease in this patient was a disorder of pigmentation affecting more or less the whole surface of the body, in patches, and this was unattended by any decided deposition of the ordinary leprous material in the skin. This general maculation is the earliest sign of tubercular leprosy, but it is not, so far as I know, the rule in the anæsthetic variety, in which, in the cases I have observed, dullish-red, circular, slightly scaly, anæsthetic patches appear, which are different from mere pigmentation. I presume the origin of the two conditions is different: the ordinary yellowish-red or dull saffron *diffused* bronzing of the skin of early tubercular leprosy is the consequence of some special alteration of the blood by the leprous poison, and is different from the *localised*, scaly, anæsthetic patches of eruption which are due to specific nerve lesion. However, to proceed, our patient *apparently* recovered under the influence of the special treatment to which he was subjected at the hands of Dr. Bhau Daji in Bombay. I say "apparently," because it is by no means certain, from the course of subsequent events, that the improvement was not due to a temporary and spontaneous amelioration, which I beg you to remember is no new fact in the history of leprosy. I learn from Mr. Kirtikar, of the India Medical Service, who recognised the patient now in the hospital, that the case excited very considerable interest in India, as it was one which Dr. Bhau Daji claimed to have completely cured, and in fact it was one of the test cases upon which he relied in proof of his assertions concerning the success of his method of curing leprosy. You will have remarked that the notes state distinctly that some little time (several months) after the man had been treated by Dr. Bhau Daji, he became suddenly much worse, and continued to be ill for a considerable time, but at length regained his health. Such facts can scarcely be regarded as proof of any *curative* effect exerted upon the disease by the Daji treatment, because in all cases in which "essential oils," such as the Cashew, Gurjun, and Chaulmoogra, have benefited—and no doubt they do so temporarily in many instances—they have done so, not by the excitation, prior to real amelioration, of any such severe condition as that which supervened in our patient's case, but by inducing a steady diminution of the various phenomena of the disease, and more especially the skin changes.

I have already observed that when the patient did seemingly get rid of the disease at the end of two years from its first appearance, some anæsthetic symptoms remained, clearly proving that no real cure or complete removal of the malady occurred. All that can be said is, that the cutaneous manifestations appeared to vanish, and the disease assumed a quiescent condition. Now, this is exactly what the treatment by essential oils seems to bring about in some cases, though not in all; but then something more than this happened in our case, and that I will now proceed to analyse. I think it has been clearly shown by clinical inquiry, especially of late, that Leprosy, particularly in the anæsthetic form, cannot be said to uniformly run a steady and fixed course. It may begin and increase gradually, or its onset may be more acute, and pyrexia may usher in a quasi-erythematous or scaly rash, associated with more or less anæsthesia, and followed by slight desquamation and staining, and rarely other cutaneous manifestations, such as patches of dullish-red erythema or bullæ. Such a state, termed *acute leprosis*, may pass away more or less completely, and no further diseased action occur for several months or even years. Further fresh accessions of the disease may be heralded by acute leprosis, occasionally during the continuance of the disease; but I have remarked that, particularly in the tubercular variety, an apparent spontaneous cure, or, to be more correct, a vast amelioration as regards the skin changes, may result by a process of acute softening and absorption or disappearance of the deposited material therein; and this is attended by a semi-pyæmic condition, severe prostration, and consequent debility, out of which the patient slowly recovers into a condition of approximate health for a time. I have recorded two cases of the kind, and similar ones have been noticed, I believe, by Hansen, Carter, and others. Whether this change occurs as the result of the action of remedies I am unable positively to decide. In both my cases it occurred whilst the patients were taking large doses of quinine, but I have been led to regard it as spontaneous and as a somewhat unusual occurrence, which constitutes, nevertheless, a part of the normal history of the disease. In the case under notice something of the same kind seems to have taken place when the patient was under Dr. Daji, several months after the original attack of leprosis; but though the other troubles disappeared, as I have said, the patient never wholly recovered, and he remained anæsthetic in parts. The disease has remained in a quiescent state for about three years and a half, and he is now suffering from a considerable increase of it. I am anxious that you should be aware of these several unusual occurrences in the progress of leprosy.

The case is not a severe one: quite the contrary—so much so that a careless observer might readily overlook its nature, and fall into the error of supposing it to be syphilitic. It is by no means unnecessary that you be put upon your guard in this respect, and I want to utilise the case, so far as I have described it to you, as a means of impressing upon you the importance of regarding the presence, in all who have resided in or returned from tropical parts, of dullish-red or reddish-brown stains about the body, and especially the face, as in the highest degree of probability indicative of leprosy. There will in such cases be no difficulty, as a rule, in detecting anæsthesia in some part of the extremities or in the seats of eruption, even in the earliest stage of the malady, and thereby the diagnosis will be at once settled. The mistaking leprosy for syphilis is more particularly apt to occur in those instances of tubercular leprosy in which there is, together with some malaise or general ill-health, dullish-red maculation pretty generally diffused about the body, and presenting somewhat the aspect of the "coppery" staining of syphilis. It is certain that anæsthesia was well marked in the boy from the very outset of the eruptive developments in his skin, so that no mistake in diagnosis could well be made in such a case.

The patient at the present time is suffering from what may be considered a second attack of acute leprosis, or an acute recurrence of the disease. This began about two or three months ago, when his attention was drawn to a brownish discoloration about the cheeks and the region of the nose. Suspecting what these changes meant, he carefully examined his body for further mischief, and discovered a patch of eruption over the styloid process of the right radius. Since that time the discoloration has gradually developed on the right hand along the thumb, and on the face slightly in extent; patches have also appeared about the fingers of the left hand, the knees, and the feet. The patient has not suffered from any fever or aguish attacks, and declares his health is very good. He seems to limp somewhat on walking, but this is due to the presence of indolent ulcers which occupy the sites of bullæ. The only remark which I will make in reference to this recurrence of the disease, is that the attack is evidently similar to that which he had in the first instance, as regards the face and some other parts of the body, but certain of the patches about his body offer some special features for consideration. They have not behaved as mere maculations, as was the case some six years ago, but exhibit distinct structural changes in the skin texture.

The *present* condition of the patient is briefly as follows:—He is not badly grown for his age, which is seventeen, but he looks older than he is. He is not anæmic, but well nourished, and except that he is disfigured by certain brown blotches on the face, looks in fairly good health. He can do his work well, and is intelligent and educated. His skin generally is dry and harsh and rather muddy-coloured. He does not suffer from any itching, or tingling, or neuralgic pains. The bridge of his nose is somewhat sunken. The ears look slightly thickened, but there is no discoloration and no sign of deposit about them. The patient complains of slight numbness in the right lobe. The features are coarse, and the cheeks are prominent. The lips are unaffected, but there is a brown discoloration on either cheek extending across the nose and involving the tip: on close examination it is seen to be made up of two main circular well-defined patches, one on either cheek, the size of half-a-crown, with others of irregular shape covering the front and sides of the nose, and giving at first sight the appearance of a typical and well-marked case of Lupus erythematodes. There is some slight thickening of the patches: they are dull reddish-brown, here and there slightly scaly, and they are devoid of sensation. There are other smaller

patches elsewhere about the face and at the frænum of the nose at the upper lip; on the right hand is a brownish-edged patch of eruption with a clearer centre without thickening but with partial loss of sensation, which commences over the radius, runs over the back of the thumb to the end of the first phalanx, and over the index-finger and across the back of the hand to the base of the little finger (which is anæsthetic), and reaches the terminal phalanx of the third finger. It has also spread round slightly to the front of wrist in front. Its edge is somewhat distinct, dull red, and slightly scaly; the central portions of the patch are delicately reticulated, paler in colour and look, and polished —semi-atrophied and semi-animated, in fact.

As regards the left hand, there is a similar condition of things, but it is rather less extensive. The eruption exists over the metacarpus and phalanges on the ulnar side of the little finger, and also over the knuckle of the third finger and the first phalanx of the thumb. Both the hands look a little distorted; some of the joints are thickened, and the little fingers present a peculiar crooked shape; but the patient says there is nothing amiss with them. The nails have not been cut since he has been in the hospital, and, although not brittle, they are split up, clubbed, or stunted; they are thin and curled up peculiarly at the edges. The fingers are all slightly numbed.

As regards the legs, over each knee-cap there is a well-marked brown patch of eruption, with a distinct slightly scaly edging, covering in extent the area of the patella. This is more extensive over the right knee. The skin is dry, hard, slightly cracked, and devoid of sensation, and the centre of the patches looks polished and thickened somewhat. The patches at first sight remind one of a fading Psoriasis circinata. There are patches on the front of the ankles, on either side, of like character, and over the front of each leg.

As regards the feet, on the inner half of the arch of the sole on each foot is a patch with characters like those of the eruption on the hand, and the skin on it is slightly scaly and dry and wrinkled and thickened. The toes are all more or less numbed, and there are slight patches of eruption upon them; upon the ball of the left great toe beneath, at the time of taking these notes, there is a distinct bulla seated in a thickened cushion of skin; and on the right foot are three more bullæ, fading away into slight ulcerations. One on the big toe beneath, one on the base of the little toe towards its outside, and one about the heel. The boy says he had these bullæ on and off for two months. The bullæ give rise to superficial ulcers which heal up after a time. He has had no bullæ on any other part of the body. There is a slight discoloration and deposit in the palate and the tonsil. The median, ulnar, and radial nerves are greatly enlarged and knotty.

This sketch of the present condition of the patient is sufficiently complete for all diagnostic and therapeutic purposes. Except in regard to the eruptive manifestations, the symptoms are the same in kind as existed in the former attack of leprosis, viz., of eruption, nerve lesion, and anæsthesia. Now, as regards the skin changes, there is no diffused coppery discoloration or pigmentation of the body, but, instead of this, the peculiar more or less circular anæsthetic patches or blotches, with dry, slightly scaly, withered, dirty white or faintly red centres, and their more conspicuous reddish-yellow, well-defined, semi-psoriatic-looking edges, and the presence of bullæ in the feet—the whole indicative of distinct and more advanced nerve lesion. The deposit in the skin is only slight—it is found about the nose and ears; and in this respect and the decided degree of development of the anæsthesia the case chiefly differs from the tubercular form of the disease. The well-marked anæsthesia of various parts and the knotty state of superficial nerve-trunks fully complete the picture of anæsthetic leprosy. I do not know really for what other disease it could well be mistaken, and so I say no more on this point, but pass to speak of the treatment, just observing in passing that the progress of the case will—as it always is, in fact, in this, compared with the tubercular form of the malady—be slow. Perchance the disease may be averted yet, and never disable the lad.

Treatment.—A great deal, you know, has been said of late about "specifics" for leprosy; but careful investigation of reported cases has shown very conclusively that at present no cure for leprosy is known. The disease, however, may be greatly ameliorated, especially as regards the skin conditions, by the use, mainly externally, of certain oils, such as the Cashew, the Gurjun, and Chaulmoogra; but after a while the disease returns. In dealing with lepers, the first thing to be done is to remove them out of the reach of all unhealthy conditions. They should, if in them, be taken from the localities where leprosy is endemic, or which are naturally unsalubrious, and sent to a temperate and bracing climate. They should be placed under favourable hygienic conditions —be provided with a liberal supply of fresh food, animal and vegetable; be properly clad, housed, and tended; take due exercise; be particular in the frequent use of the bath; and find some suitable avocation, in which the mind is healthily employed. The patient has had every advantage in these respects. The general health, too, of the leper must be improved by appropriate tonics, and these may be combined with remedies calculated to promote the absorption of the leprous deposit in the tissues. This absorption may be favoured by both internal and external remedies. As regards internal medicines, I have much faith myself in quinine pushed to extreme doses. In several instances I have had excellent results from the exhibition of the drug. I put our patient under the influence of quinine, but he is very susceptible to its influence, and I cannot get him to take more than six grains in the day. He is also taking full doses of the mineral acids, chlorate of potash, and bitter infusion, and with good result, for no one can have watched him for the last month without seeing that he is really getting better. The eruption is not so decided, the anæsthesia of his hand and some of the patches of eruption not so decided, and the ulcers on his feet are healing. I propose to continue this internal treatment steadily, and to submit him to the constant current applied along the extremities. But there are several local measures that are of use in leprosy. The one most in vogue just now is the Gurjun oil. It is infricted twice or so a day, and it does tend to promote the absorption of the tubercular formations, but then there is no decided deposit in our patient's case, and I have not, therefore, ordered any local remedies at present. But I think it will be advisable to try the application of Gurjun oil, as it may tend to improve the eruptive condition in the patient. I have laid stress chiefly upon the diagnostic aspect of the case, as you have very seldom an opportunity of seeing such an one, and you might be indeed much puzzled in practice hereafter were you left without all clinical acquaintance therewith. Happily, when once seen, the disease is readily recognised again, for its characters are so striking that they are not easily forgotten.

M. Granier de Cassaignac.—This celebrated fighting Bonapartist, lately member of the Chamber of Deputies, is also, according to the *Progrès Médical*, an *officier de santé*, and as such was some time ago illegally appointed medical officer to the railway of the Compagnie des Charentes. As none but a doctor of medicine can hold such an appointment he has just been deprived of it.

Victoria as a Resort for the Consumptive.—In a paper read at the Medical Society of Victoria (*Australian Medical Journal*, February), Dr. Bird reiterates the opinion which he has so often expressed of the great value of the climate of Victoria in the treatment of consumption. The majority of *early* cases either get well under favourable conditions or live for some years in comparative comfort. Dr. Bird can refer to many instances of persons following sedentary occupations in large towns in Britain—such as bank clerks, etc., who, having been obliged to throw up their employments in consequence of pulmonary disease, getting worse every winter, are now in Melbourne in the enjoyment of good health, while pursuing employments identically similar. Physicians are even justified in sending out *advanced* cases under favourable conditions, and when the patients themselves have a strong desire to go. A good deal depends then upon a patient's means and his ability to move from place to place according to the season. Such patients may then live on, and have a fair enjoyment of life which they probably would not have had elsewhere. While well aware of the special faults of the climate of Victoria, Dr. Bird is absolutely convinced that its *general average in the year* is more suitable to consumptive patients than any in the northern hemisphere.

ORIGINAL COMMUNICATIONS.

THE ORIGIN OF SOME MOTOR DISORDERS.

By OCTAVIUS STURGES, M.D.,
Physician to the Westminster Hospital.

(*Concluded from page* 679.)

In conclusion it remains only to notice the objections of some who would condemn the method of analysis which has been here pursued as being faulty both in its principle and aim. The contention of such critics I understand to be this: A scientific inquiry, say they, into the origin of motor disorders would not concern itself with analogies and comparisons which may easily mislead, it would go to the root of the matter which is not to be found in the muscles but in the motor centres. It is true, they admit, that the earliest departure from order is beyond anatomical recognition, and that the characters of the earlier changes must be inferred from those that happen later. The most extreme motor disorder, however, is also that which will presently furnish material for post-mortem examination and it is to actual search in the brains and spinal cords of such subjects, together with experiment upon the lower animals, that we must look to discover the nature and seat of that material change which, so far as pathology is concerned, is the sole object of search. The true method of procedure, therefore, would be the converse of that which has been here followed. In place of extending indefinitely the region of emotion and disputing as to the precise limits of disease, it would take as its example undoubted instances of fatal motor disorder and from the nervous changes observed in these would draw inferences which might be applied to similar disorder at an earlier stage.

I would venture but two short answers to such proposals. The one concerns the matter of fact, the other is a consideration of utility. As regards the matter of fact it is to be considered, (and the fact is significant,) that the motor disorders of which we have spoken are not producible among the lower animals by any known means, whilst among mankind they happen under such conditions that anatomical inquiry, if not wholly inapplicable, is at best difficult and hazardous. Inferences drawn from such material must be accepted with extreme caution. Our means of insight into the structural pathology of these affections will compare, in fact, as to its method and certainty, with the knowledge attainable in regard to all conditions whatever of which the essential phenomena tend to disappear in the presence of serious illness. For hysteria and catalepsy(a) no less than for animal passion or profound thought or sound sleep —there needs a certain amount of physical well-being. It is not enough to say that death dissolves all such phenomena. They cannot abide its approach. It is readily granted, nevertheless, although direct evidence is wanting, that some central change or other takes place in hysteria and catalepsy as well as in passion or in sleep. It may even be conjectured from collateral circumstances what the precise nature of this change may be. But death cannot reveal it. The sleeping or the sexually excited brain will never be open to view, nor can it retain a physical impress of its former occupation when once the life has gone out of it. If it is to be discovered at all it must be reached somehow in its working. From mere dissection, if it be true that individuals do not die hysteric or cataleptic and that neither of these conditions involves lasting disease, there can be no hope whatever.

The question thus arises whether in the failure of that appeal in which it is our habit to trust we are to refrain from further search and leave the origin of these disorders in the dark, (as those with whom morbid anatomy and pathology are convertible terms would be constrained to do); or whether finding that the dead help us so little we may not learn somewhat more by further interrogation of the living. My argument in these papers has been that motor disorders respond to such question by exhibiting, in phenomena which are only apparently anomalous, natural and universal characteristics which escape full recognition owing to a special machinery which education and custom have provided for their suppression. These characteristics, I have urged, in spite of such restraint, are continually pressing for notice now in this way and now in that according to age and sex and the particular inducement. With the guidance which each individual life affords we can detect the springs of motor disorder, explain its successive modifications, predict the time of its development and interpret the causes of its advance and decline. With such ample knowledge we are able in a measure both to provoke and allay these affections. Their treatment ceases to be empirical. It is the application to a particular instance of those great laws of human control and government and persuasion which are universal and universally recognised.

And this brings me to the question of utility. Suppose for a moment that the physical basis of the motor disorders we are discussing were fully determined and that this should be, not "an enormous downrush of molecular motion," but some very definite state, such as embolism or thrombosis or arterial repletion. From the point of view we are now considering the value of such knowledge, even assuming it to be thus precise and tangible, must be tested by our means of making use of it. In the present state of therapeutics no one will venture to say that we could make any use of it at all. There are instances enough in the ordinary experience of disease where the occurrence of embolism or thrombosis in the cerebral circulation is plainly indicated, but in none of these does that knowledge (whose value in every other respect I do not for a moment question) assist us at all in dealing with the paralysis or other symptom which has been thereby caused. On the other hand if we can succeed in establishing the relationship between motor disorders and everyday defects of movement we at once open the way to their treatment. If these affections are only declensions from the pattern of ordinary life made prominent and enduring from known causes that view of their origin suggests at once a rational method of dealing with them. A great experience may be appealed to. Whatever rouses to energy or compels attention or strengthens self-command or suppresses self-regard in the world at large may be employed for the same purpose in chorea and hysteria and catalepsy. When all motor phenomena whatever are thus regarded from a single point of view, there still remains, it is very true, the ultimate problem as to their common origin. But without awaiting its solution the practical physician has already at hand material enough for his purpose if he can follow and explain the successive steps between a complete subservience of the muscles to the guidance of an intelligent will and their various degrees of yielding to the many influences which are always at hand to restrict and deform their use.

The considerations which have been advanced seem to justify the following among other conclusions:—

1. It is only by an arbitrary distinction, which breaks down under analysis, that the motor phenomena of chorea, hysteria, catalepsy and some other motor disorders can be severed from the ordinary conduct of the muscular system and regarded in the light of disease. The elements of these affections are universal characteristics which circumstances serve either to develope or repress. All the world is choreic and hysteric and cataleptic.

2. The factors of motor disorder are to be seen in the common tendency of muscular movement to degrade into rhythm; in the unconscious conveyance of motor acts from one to another; in the several conditions of restlessness, spasm, immobility, and muscular relaxation associated with particular states of mind; in the wide variability of what we call "volition" and the circumstances in which it becomes enfeebled, perverted or extinguished.

3. The method and the progress of motor disorders are in harmony with the laws which regulate ordinary movement. In both the muscular system in its several parts responds to mental impressions in a constant order, those muscles being moved first or easiest which are appropriated to expression, those next which are concerned in the higher intellectual uses and those latest which move automatically in locomotion. This order of implication (provided, of course, that intelligent life has begun and subject to certain exceptions) surrenders the face to movement before the hands and arms, and the upper limbs before the lower.

4. The face and speech muscles as the readiest and most delicate exponents of mental impressions, exhibit within their own territory all those motor phenomena which when

(a) And I believe also for chorea so long as it retains the form in which we commonly see and study it; but opinions may differ upon this point.

further extended are deemed morbid and anomalous. The restlessness and spasm and palsy and incoördination which in ordinary emotion make the quivering lip, the drawn mouth, the stammering speech lose none of their characters when spreading beyond the region to which these terms apply, although by the mere fact of such extension they first obtain notice and are taken as symptoms of disease.

5. Motor disorder at the several periods of life is subject to modification in conformity with the characteristics of those periods. The chorea of childhood is irregular, inexpressive and incohcrent. The hysteria of youth conforms to the pattern of passionate emotion. The muscular distortions of age indicate the supremacy attained by long habit. Moreover, in the exceptional occurrence of any motor affection out of its time (as of hysteria in childhood or chorea in adult life) the disorder alters its shape accordingly. Childish hysteria is deficient in emotion movement. Adult chorea acquires the character of rhythm.

6. Although the precise condition of the nervous centres in disorders which are neither permanent nor fatal cannot be directly known, yet by the study of their phenomena during life much may be learnt of their nature and origin. It is not more true to assert that want of knowledge upon a point which, from the nature of the case, is necessarily hidden, implies ignorance of the whole character of these affections, than it would be to assert the same thing in regard to the motor phenomena of any common passion or emotion where, for the same reason, our knowledge is similarly defective.

REMARKS ON THE USE OF MARTIN'S INDIARUBBER BANDAGE.

By ROBERT WILLIAM PARKER, M.R.C.S.,
Assistant-Surgeon to the East London Hospital for Children, Shadwell, E.

The introduction of Martin's indiarubber bandage in the treatment of ulcers, œdema, and varicosities of the leg has been a source of great comfort, not to patients merely, but also to the surgeon; for many of us have frequently felt ourselves baffled by the combination of evils—poverty, occupation, and habits of life—which enter so largely into the etiology of these affections. Martin's bandages seem to defy all these difficulties, and secure a successful result, when other measures have quite failed.

The idea once introduced, other cases naturally present themselves in which these bandages seem likely to be useful. I would especially mention rickety curvature of the long bones of either extremity, in very young children. It is, I believe, now generally admitted that curvature of the bones may begin long before a child can walk, and it must therefore be attributed to other causes than the weight of the body acting on bones somewhat softer than usual. Whatever be the exact cause, these indiarubber bandages will be found a very good substitute for the old kind of bandage. If carefully applied, slightly on the stretch, over a straight well-padded splint, and persevered in, I believe that many of the deformities can be overcome and corrected. I would just caution against putting on the bandages too tightly. In one of my own cases, pressure sores were produced in less than twenty-four hours, owing to rather tight bandaging. We must remember that this bandage is constantly pulling, and that, while it is very beneficial as regards the correction of a curve in a bone, the soft parts cannot bear too much pressure, and will suffer unless due care be adopted. The bandages ought to be taken off and reapplied twice in the twenty-four hours.

In early and slight cases of genu valgum, or in genu varum, the indiarubber bandages applied over a well-padded outside or inside splint (according to the case) will be found of great service. By this means a constant and uniform traction can be kept up such as is almost impossible with the ordinary bandage, even when the patients can be kept under observation in the wards. For out-patients it is especially valuable, and I now try it in nearly all cases before undertaking operative measures.

I have also tried the bandage in strumous (pulpy) disease of the knee- and ankle-joints. It is too soon at present to say what can be finally obtained by this means, but at present I am inclined to believe the disease may be stayed in its progress. I have several cases at present under observation in which the swelling about the joint has been greatly reduced, and the impeded movement partially restored. Whether a complete cure will be effected or not, I do not pretend to say, but I venture to hope that should any more radical measures be required, there will be less of that synovial degeneration to remove—the which, if left, tends greatly to retard the final recovery.

I have under care in the hospital a boy, whose knee I excised three or four months ago. There is good union, but one or two sinuses in the line of the incision refuse to heal. The whole knee is enlarged and tender, as though swelled out with thickened and degenerated pulpy material. I cannot detect bare bone with a probe. One of the indiarubber bandages was applied, and kept on night and day as tightly as could be comfortably borne. The effect was most marked even after a week's trial, and the girth of the knee reduced by three-quarters of an inch.

I have also tried the bandages, and with considerable success, in the adaptive talipes so common after essential paralysis—together, of course, with suitable splints. The bandages will also be found useful in the stages antecedent to talipes, when the limb hangs cold and paralysed. In these cases it seems to impart warmth to the limb, and to aid the circulation. Probably this is partly effected by keeping up the action of the skin and its secreting apparatus, and thus physiologically helping on the circulation. Indeed, I am inclined to regard this as a factor in many other cases where Dr. Martin's bandage is found serviceable.

CASE OF

PUERPERAL ECLAMPSIA WITH RIGID OS: DELIVERY BY CRANIOTOMY—RECOVERY.

By WILLIAM FEARNLEY, L.R.C.S. Edin.

Mrs. L. G. S., of Lerwick, Shetland, in September, 1876, finding herself pregnant, engaged a doctor rather earlier than usual to attend to her in her forthcoming labour. At this time she believed herself to be about six months advanced. She had had a miscarriage with her last. On Saturday, September 23, she experienced a severe pain in the left side, and her husband was sent for at once. This was about 2 p.m. About 11 p.m., as I was returning from a friend's house along with a medical friend who was staying with me on a visit, I was called in, and found the patient passing quickly from one convulsive fit into another, and being watched by the assistant of the gentleman whom she had engaged for her labour. The three of us saw the case, and the husband of the lady insisted upon my undertaking the case in the absence on his holidays of the doctor engaged. She was now breathing hard and deeply comatose. From this time till 3 a.m. next morning she had four seizures, and was deeply comatose in the intervals. As the fits succeeded, each seemed more intense than the last—the face being more dusky and contorted each time. During the fits I gagged her teeth to prevent her injuring her tongue, and gave chloroform freely. At 12.30 a.m. I examined per vaginam, and found labour had well commenced, the os being about the size of a shilling, head presenting, the parts roomy and moist. During the intervals of the fits I gave chloral hydrate in thirty-grain doses, but this set up so much sickness that I desisted. The nurse was on the bed, and declared she could always see the fits approach by (1) the twitching of the facial muscles, and (2) the increased stiffness of patient's arms. So sudden were they, however, that the respiration was suspended each time before I could get chloroform applied. Seeing the fits becoming so violent, and the labour making no advance, I dilated the os with Barnes' bags to the size of a crown-piece. Beyond this I could make the os yield not one fraction. The pains were moderate in strength and came on every three minutes. The urine drawn off was scanty, dark, and smoky, and highly albuminous.

At this stage (3 a.m.) I determined on keeping the patient continually under chloroform, seeing that chloral would not remain with her, and that to allow her to come out of chloroform was quite unsafe. This treatment seemed highly promising, as the membranes were unruptured, and the pains, though not strong, were frequent and regular. For five hours under continued anæsthesia all fits were averted, but at the end of that time the most violent

seizure of all took place, although she was, to the best of my knowledge, fairly under. During all this time I could never be certain how much of the comparative quietude was due to the anæsthetic, and how much to the deep coma. When the most violent fit of all took place, whilst I thought her safe under chloroform, I was thoroughly alarmed, and determined to empty the uterus, *secundum artem*. Now (8 a.m.) the os was less than a crown-piece and quite rigid. I again applied the hydrostatic bags, but without the least appreciable effect. Turning was out of the question, so I ruptured the membranes and evacuated the contents of the cranium, and delivered by crotchet. Two hours after the uterus was quite empty another fit occurred —the last one.

The patient remained comatose for the next forty-eight hours, and slowly regained her reason. Now it was found she had complete paralysis of the right arm and leg, which continued for some days. On the Thursday (28th) severe jaundice made its appearance, for which she took carbonate of ammonia, etc. This passed off in four or five days.

The patient made a most excellent recovery. The fœtus was a six-months one or a little less. Nothing further seems left for me to remark, save a peculiar bloodshotness and pain in in the right eye, which produced some little distress for a few weeks.

I had almost forgotten to add that the patient not only was unconscious from the moment of first seizure to the fourth day of attack, but she remembered nothing of what transpired for quite an hour before the onset. She is now, I believe, in capital health, and has been ever since.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GREAT NORTHERN HOSPITAL.

CASE OF POISONING BY LIQUOR AMMONIÆ— POST-MORTEM NOTES.

Poisoning by liquid ammonia is of such rare occurrence that we are glad to place on record the following case, for the notes of which we are indebted to Mr. Gillam, the House-Surgeon of the Hospital:—

T. B., aged sixty-four, a foreman in some stables, was admitted late in the afternoon of June 25. It was alleged that he had been for several weeks very strange in his manner, and that on that day, about 1 p.m., after returning from his lunch, he had taken up a bottle in the stable, and swallowed its contents—viz., about half a pint of liquor ammoniæ,—shortly after which an emetic of mustard-and-water and some castor oil were administered, probably before the caustic nature of the poison was known. His symptoms becoming worse, he was brought to the hospital about 5.30 p.m. He was then semi-conscious; his pupils were widely dilated, and his breathing noisy and hurried; the pulse very rapid; and he was sweating profusely. He complained of great pain in the abdomen, and whilst in the surgery vomited a quantity of blood, mucus, and shreds of mucous membrane. A drachm of dilute acetic acid in water was immediately given, followed by milk and acidulated mucilage, and he was then put to bed. During the evening the acetic acid draught was given on several occasions, but there was great difficulty in deglutition. At 11 p.m. patient was very hoarse and in a heavy drowsy condition; face was dusky and skin dry; temperature 100·8°; pulse 130. He had again vomited blood and mucus.

June 26.—He has swallowed some milk during the night, but with the greatest difficulty. His lips are much swollen, the tongue very dry, and the mucous membrane of the mouth is partly eroded. The fauces are extremely congested, and almost meet in the middle line; the mucous membrane looks œdematous, softened, and inflamed. There is great pain and tenderness of the abdomen on the slightest pressure. Tympanites is marked. The bowels have been open three or four times in the night, the motions containing no blood. He has twice vomited blood since the night, and complains of burning pain in the throat and at the pit of the stomach. 11 p.m.: Patient is much worse, and is becoming comatose. There is great dyspnœa; respirations about 66 to the minute; pulse 180. There has been diarrhœa throughout the day.

27th.—Patient died at 1 a.m. It should be added that there was incessant retching during the time he was in the hospital.

Post-mortem Notes.—June 28.—The mouth much swollen, the mucous membrane being generally softened and in parts destroyed. There were patches of hæmorrhage into the submucous tissue. The stomach and intestines were distended with gas and deeply congested. The mucous membrane in the stomach was charred and destroyed, and there was great congestion as far as the lower end of the jejunum. The stomach contained about ten ounces of dark altered blood. The œsophagus on its internal aspect presented much the same characters as above described, the mucous membrane being yellowish, thickened, and partially destroyed, and at parts there seemed to be complete occlusion of the canal. There was considerable œdema of and around the epiglottis. But little abnormal was discovered in the air-passages. There was marked congestion of the larynx, but this did not extend below the vocal cords. There was no œdema of the glottis. The trachea and lungs were healthy.

LONDON HOSPITAL.

MR. HUTCHINSON'S CLINIQUE, DECEMBER 16, 1878.

Case of Double Inguinal Hernia with Hydrocele.

Patient, a very old man, was brought into the theatre for examination. He was found to have two large symmetrical swellings in the scrotum—one on each side. The points made out by examination were, that the swelling on the right side was tympanitic on percussion, that on the left side dull; that on both sides there was impulse on coughing, but that on the left side the impulse was not expansile to the bottom of the tumour; that the right testicle could easily be felt at the lower part of the scrotum, while the testicle of the left side could not be isolated. On placing the patient on a couch, the whole of the right tumour was easily returned into the abdomen, while only about half of the left tumour could be put back. Patient also stated that the left side had been tapped on two occasions. The diagnosis being made perfectly clear, the hydrocele was tapped. In commenting on the treatment for the radical cure of these cases, Mr. Hutchinson remarked that he considered the Pharmacopœial tincture of iodine, either undiluted or with its own volume of water, was the best injection. He usually injected about a drachm, and left it in the sac. This mode of treatment was perfectly successful, and seemed to have originated in India, where hydrocele was extremely common, and where some surgeons could point to as many as a thousand cases treated in this manner. The effect produced did not depend upon the obliteration of the sac, but rather upon the destruction of the secreting tendency of the cells lining it. The older practitioners were formerly in the habit of using port-wine or sulphate-of-zinc injections. One favourite plan of treatment used to be to introduce some red oxide of mercury into the sac, and in some cases the whole sac had been laid open and left to heal up from the bottom; but the iodine treatment seemed the best. There was for the first week an increased secretion; this was subsequently absorbed, and usually there was no further secretion.

Case of Sycosis of the Nails, etc.

A girl of about nine or ten years was brought in for examination, and put under the influence of ether. Mr. Hutchinson pointed out that she had disease of the eyelashes, or sycosis, that there was an eczematous eruption about the groins and on the vulvæ, but that the peculiarity of the case was the condition of the toe-nails. The nail must be looked on anatomically as a gigantic hair with one half of its follicle open. He had never seen a case similar to the one before him. Chronic inflammation of the nail was common enough, and so was onychia maligna; but that affected only one toe,—this disease affected all the toes. The nails were all inflamed and softened in their beds, and the condition was exactly analogous to the disease of the hairs known as sycosis. Eczema here stretched only as far as the base of the toes, the feet being quite free. That condition had existed since last September, but patient had had irritation about the groin for a long time previous.

Hutchinson then removed the toe-nails, this being easily effected with a pair of forceps. He then remarked upon the close connexion between eczema and sycosis. There was no reason to suppose that the presence of this peculiar condition of the nails had anything to do with the cold weather, as the disease had begun in September; the exciting cause was therefore obscure. During the last few weeks he had seen several cases of unusually severe chilblains, accompanied by vesication and inflammation, but he had never seen any cases of chilblains producing loosening of the toe-nails. While patient was under the effects of the ether Mr. Hutchinson pointed out an erythema of the chest which seemed to come on with that anæsthetic. It had been noticed in a case under operation the previous week, but it seemed only to last while the ether was being administered.

Case of Syphilitic Sarcocele.

Patient was a man apparently about thirty years of age. There was a large ovoid swelling of the left testicle, not painful, and which had been coming for some time. The epididymis could not be felt. These points distinguished it from an affection of the epididymis alone, as in gonorrhœal orchitis, where that part is affected and the rest of the testicle is pushed forward as a flattened swelling. The man had been an in-patient under Mr. Hutchinson five years ago, suffering with rupia and a phagedænic ulcer of the penis. At that time he was treated with the continuous bath for the phagedæna. In such sores Mr. Hutchinson considered that local treatment was essential, as the sore spread by its own secretions, and therefore these inflammatory products must be destroyed. There were two ways of doing this: one was by the use of caustic application, such as the strong nitric acid or the acid nitrate of mercury, freely used so as to destroy all the cells; another way was to wash away the cells as they were secreted by immersing the parts affected in warm water. The patient should, if possible, sit in the bath all day and night, or else have a short night's rest and resume the bath in the day. Thorough syringing also ought to be attended to. He had just dismissed a gentleman who had come up to him from the country with a phagedæna of the glans opening into the urethra. He had objected to the use of caustics, but had sat in a bath all day and used the syringe well for about two weeks, when he was quite cured. It often happened that when a patient had a second attack of syphilis it was apt to be phagedænic. Syphilis seemed to detect any peculiarities that might lurk in a man's constitution. The same sore might infect one person with rupia, another with psoriasis; one man with a hard chancre, another with a phagedæna. One peculiarity was that it sometimes revealed that a man had had syphilis before. In the case he had just mentioned the gentleman was consoling himself with the idea that he had had syphilis and could not have it again; and while under treatment for the phagedæna (one month old) he had loose bone in his nose from tertiary syphilis. The man under notice had also had syphilis about five years before his last attack of phagedæna and rupia. Rupia seemed to be a disease of the skin eminently associated with the phagedænic ulcer. He had now syphilitic disease of the testicle following on his previous attack. It was to be noted that when, as in the present case, the syphilitic testicle was large the original disease was most likely to have occurred some four or five years back. In nervous affections, however, the original syphilis could sometimes be traced back to a very remote period.

Case of Phagedænic Ulcer of the Hand.

Patient was a cachectic-looking woman about thirty-five years of age. There was a well-marked phagedænic ulcer over the back of the right thumb, and extending over the whole palm. The raised and undermined edges were very characteristic. The surface of the ulcer presented a somewhat warty appearance almost suggestive of epithelioma, but the serpiginous edges left little doubt but that this was a case of phagedæna in a very unusual situation. The whole hand was much swollen and deformed. In such cases syphilis should always be suspected, but patient denied having any other disease or illness. On examining the throat the uvula was found to have been lost, and nearly all the soft palate, which was in part adherent to the pharynx. The treatment here was to kill the secretions by the free use of the acid nitrate of mercury. If the condition depended on tertiary syphilis he would give iodide of potassium along with iron for the cachexia. He would also avoid sending her into an open ward, as the danger would be great to the other patients. In the London Hospital an epidemic of hospital gangrene, which spread over the whole building, was traced to the infection from one syphilitic phagedænic ulcer. A precisely similar epidemic arose from the same cause also at St. George's; therefore this patient would be isolated while under treatment.

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Commencing with the Number of January 4, 1879, the edges of this Paper will be cut.

Medical Times and Gazette.

SATURDAY, DECEMBER 21, 1878.

THE DEATH OF THE PRINCESS ALICE.

We cannot allow the present number of the *Medical Times and Gazette* to go from our hands without a brief expression of the deep concern of the Medical Profession at the great loss the Queen has sustained by the death of the Princess Alice, and of their warm sympathy in her sorrow. When the tidings first came that the Princess, after the fatigue and anxiety of nursing her husband and children, and the depressing sorrow for the loss of one of her daughters, had herself been attacked with diphtheria, men could not but remember with fear and foreboding what a sad and anxious month December had been to the Royal Family. The bulletins from Darmstadt were waited for with ever increasing anxiety and fear, as the days passed without any hopeful tidings, and especially as the fourteenth day of the month drew near; and only deep sorrow was felt when we learnt that as that day dawned, once more

> "The dark hand struck down through time,
> And cancelled nature's best."

It may without exaggeration be said that all English-speaking peoples sorrow for the loss the Queen has sustained, and that here in Great Britain the people feel the death of the Princess Alice as a personal loss. Of a singularly bright, gracious, sympathetic, and most loving

and loveable nature, and richly and rarely endowed with mental gifts, the Princess presented in rare perfectness, as daughter, sister, wife, and mother, all the qualities of heart and head of the highest, purest, and sweetest type of woman. Her life was one of loving care for, and happy devotion to, others. Whilst still a very young woman she was a brave, skilful, and untiring nurse to her father in his last illness, and then the comfort and support of her mother. Next we heard of her winning the love and admiration of the people of her adopted country by her quick, ready, and practical sympathy and help in their trials and anxieties; and something of what she was there is told in a communication published elsewhere in our columns. When the Prince of Wales was sick nigh unto death, she left her home for a time, to watch by his bedside and aid to restore him to health. And lastly, she devotedly nursed her own children and her husband through their late illness; and caught her fatal disease by an instinctive act of motherly love and devotion that has moved every heart by its pathos, and has been well described as "wonderfully piteous." The teaching of such a life is invaluable; and none know better than do medical men the vital and deep influence of such a domestic atmosphere as that the Princess spread around her, on the health of mind and body of all within its reach. Such living teachings as hers make the men and women who are the strength and the salt of a nation.

* * * * *

The lamentable death of the Princess Alice, in the prime of her womanhood and the fulness of her domestic happiness, can hardly fail to attract more attention than it has of late received to the dreadful scourge which has laid her low. Moreover, the malady has run such a remarkable course among the members of the Grand-Ducal family, that, altogether apart from the sad issues it has had in at least two instances, the outbreak would constitute a very valuable field for study. The curious thing was that it should be strictly and entirely limited to the Grand-Ducal family, and have attacked no one of the many attendants in the palace, or even those more immediately surrounding the sick folks. The epidemic began on November 6; the eldest Princess, Victoria, aged sixteen, was attacked. Five days elapsed, and, on the night of the 11-12th November, Princess Alice, aged six; on the day of the 12th, Princess Mary, aged four; and on the night of the 12-13th, Princess Irene, aged twelve, were successively attacked. On the afternoon of the 13th, the son and heir of the Grand-Duke, Ernst Ludwig, aged ten, the Hereditary Grand-Duke, was similarly seized; and on the 14th the Grand-Duke himself became in turn the subject of the disease. Thus in the eight days from November 6 to 14, the whole of the family, with the exception of the Princess Elizabeth and the Princess Alice herself, were attacked with the formidable malady; but the interval which elapsed between the first and succeeding cases is to our mind most significant, for, as it seems to us, it clearly points to the Princess Victoria being the source of the illness to the rest of the family. By some means yet unknown the disease originated in her, and then, by means evidently of the most strictly limited kind, was successively spread among the other members of the family; but not apparently to all, for the onset of the malady in the case of the Princess Alice came much later; and it is most probable that the fatigue and mental distress she had gone through during the illness of her husband and children was one of the main factors in causing in her its fatal issue. The story of the former part of the epidemic—that, namely, relating to all the members of the Grand-Ducal family, except the Princess Alice herself, has been well and clearly told by the physicians in attendance, Ergenbrodt, Oertel, and Jäger. Dr. Ergenbrodt was in especial attendance on the Court, and had accompanied the family to this country last year when they took up their temporary residence at Eastbourne. The names of Oertel and Jäger are better known to the profession in this country.

Looking at the outbreak from a purely scientific point of view, the first thing to be noted is the causation of the epidemic. These physicians affirm that it came from without; and in support of this they allege the violent characteristics of the disease from the very beginning in the Princess Victoria. But they also seem to think that the children were unusually prone to the mischief, inasmuch as all had suffered very frequently from acute and chronic affections of the parts. This will again, to the minds of most medical practitioners in this country, suggest a doubt as to the soundness of the view taken by these gentlemen as to the cause of the disease. Repeated attacks of tonsillitis are commonly considered indicative of an indifferent constitution, or of exposure to unhealthy influences. In the case of the Grand-Ducal family, we have no reason to believe that the former is the case, but it is not so clear that the latter influence has not been at work. The New Castle, which was built in 1864, is in every respect, we are assured, perfect as regards sewage and ventilation, and its position high up on a hill renders this all the more likely. Moreover, we have the authority of Mr. Spencer Wells for saying that Dr. Ergenbrodt, who makes this statement, is one in every way qualified to give such an opinion. But we believe that the Old Castle, where the family passed much of their time, was very far from being in the sanitary state a regal palace should command. Most of our readers will remember the repeated outbreaks of illness which occurred in the Prince of Wales' family and suite until the cesspools of Marlborough House were discovered and cleared out; and some may know what is now the condition of things in the War Office in Pall-mall. There is, unfortunately, reason to believe that the Old Castle or Palace of Darmstadt was, or may be is, in a somewhat similar condition. It is a received application of a well-known axiom in this country: whenever sore throats of a bad, what used to be called a putrid, kind recur again and again in a household—look to your drains. And it is quite possible that some such or similar causes may have given this tendency among the children of the Princess Alice to the sore throats referred to, and possibly to the fatal diphtheria.

But whatever may have been the cause of the Princess Victoria's illness, direct infection or gradual blood-poisoning, the history leaves little doubt that the illness of the rest of the family could be traced to her. True, the Princess, as soon as the nature of the malady had been discovered, was separated from the others, but probably the mischief had been done before the exact nature of the malady had been ascertained; and the fact that the rest of the family were attacked in such rapid succession distinctly points to a common source of infection, both as regards time and place. The intervening period of from five to eight days is exactly that known to occur where diphtheria has been clearly traced to infection. As to the mode of infection, the physicians distinctly indicate a mode of propagation so powerfully indicative of domestic affection that it adds a pang to the sad story of this fatal outbreak. That the affectionate intercourse of parents and children with each other should be converted into a minister of death is mournful beyond conception. Yet so it has been; and Lord Beaconsfield, in his speech in the House of Lords, brought this home to us with a fulness of pathos which cannot fail to deepen the regret for the lost Princess wherever and whenever her story is told. He said, "My Lords, there is something wonderfully piteous in the immediate cause of her death. The physicians who permitted her to watch over her suffering family enjoined her under no circumstances whatever to be tempted into an embrace.

Her admirable self-restraint guarded her through the crisis of this terrible complaint in safety. She remembered and observed the injunctions of her physicians. But it became her lot to break to her son, quite a youth, the death of his youngest sister, to whom he was devotedly attached. The boy was so overcome with misery that the agitated mother clasped him in her arms, and thus she received the kiss of death. My lords, I hardly know an incident more pathetic. It is one by which poets might be inspired, and in which the professors of the fine arts, from the highest to the lowest branches, whether in painting, sculpture, or gems, might find a fitting subject of commemoration." There is no more mournful tale on record. Doubtless there have been higher types of womanly devotion than that of this poor Princess; but the sudden and overpowering motherly instinct, so dear to English-speaking folks, has never had a nobler expression—the utter unforgetfulness of self which was to soothe the sick boy, perhaps also to relieve an overflowing heart, was in very deed the fatal signal for the ghastly embrace of death around the mother.

THE WAR OFFICE REPORT AND THE BOARD OF EXAMINERS.

The members of the Board of Examiners of Candidates for the Military Medical Services have addressed to the Secretary of State for War a long letter of trenchant criticisms upon the recommendation made by the War Office Committee for the partial abolition of entrance examinations, and upon the statements by which that recommendation is supported, Before speaking of the criticisms themselves, we cannot resist a remark on the difficulties that discipline and red-tape placed in the way of their being offered at all. The statement of these difficulties occupies the first two pages of the letter, and is really very amusing reading. A copy of the Report having been sent to the Secretary of the Senate of the Army Medical School, it was assumed, not unnaturally. that it was sent "to enable the Senate through the Professors" to consider such parts of it as concerned the welfare of the School and the education and admission of candidates through the London examinations. But the Director-General of the Army Medical Department did not think that the Senate could raise any discussion upon it; and suggested that the Professors should draw up a statement for the Secretary of State for War, and send it through him as President of the Senate, when he would recommend it to Colonel Stanley's most serious consideration. Shortly after, the Director-General changed his mind, and opined that as Colonel Stanley had not signified any wish to hear any expression of opinion from the Senate of the School as a body, it did not seem quite the thing for the Professors to make any in their senatorial capacity, though no doubt he would be glad to have their opinions individually. The Professors, however, did not think it expedient for them to give separate expression to their individual opinions; and finally the Secretary to the Senate (himself one of the Board of Examiners in London) sent a copy of the Report to his co-examiners, and the letter before us is the result. It is signed by Dr. Aitken, Dr. G. J. Allman, and Messrs. George Busk and George Pollock; and undoubtedly any statement from such men deserves the most careful consideration. We have said that the letter is a long one—it makes a pamphlet of twenty-one printed pages, and two appendices in smaller type occupy other ten pages; it is therefore obviously impossible to comment upon it at all fully in the space at our command. We must content ourselves with noticing the "General Summary" given of the substance of what the writers say "with reference to the recommendation of the Committee, as contained in Paragraphs 79 to 83" of the Report. These paragraphs concern "admission by half-yearly competition," and we have in former articles so fully noticed the Report that our readers will, we trust, be able to understand what follows without our re-stating the paragraphs at length.

First, as to Paragraph 79: The Examiners say (1) while fully agreeing with the Committee that the London competitive examinations answer two good ends, they differ from it in the definition of these ends; (2) they deny that the examinations do or are intended to search "into the most minute details of medicine, surgery, and physiology"; (3) they fail to find in the Report anything worth calling evidence as to the deterrent effect of the examinations to the candidature of the most eligible students; nor do they agree that competition has ceased on account of the paucity of entries, but, on the contrary, that it is as active with a small as with a larger number; and they notice that the paucity of entries has relation only to the Army Medical Department and to the Naval Service, for reasons wholly irrespective of the examination. Upon this we must observe that to some, and that not a little, extent we agree with the Examiners; but we must take exception to the word "wholly." For we think, notwithstanding the contempt with which they treat the evidence given in the Report as to the deterrent effect of the examination, that there is a widely spread opinion that it is deterrent. A great number of, even good, students are by no means in love with examinations, and are apt to think that, being registered practitioners already, they have had enough of them. And as to what is competition—the Examiners, if we understand them rightly, hold that as the candidates who pass the examination are placed in order of merit, the examination is a competitive one. But certainly the common idea of a competitive examination for appointments, of any kind, is that the candidates exceed in number the appointments to be disposed of.

Second. Paragraph 80: The Examiners say that the supposition that candidates are subjected to a searching examination into the minutiæ of every bone, muscle, ligament, and into every division of the botanical classification, "is altogether absurd." We think that the Examiners rather exaggerate the statement in the paragraph; and we are quite ready to believe that such men do endeavour, at the least, to make the examination a fair, honest test of practical and serviceable knowledge; but they allow that the candidate is given "abundant opportunity of displaying any knowledge he possesses in the higher branches of practical surgery and medicine," in which they include anatomy and physiology, so that the examination papers may contain questions that gave foundation for the observations in the obnoxious paragraph. The Examiners are severe, and with some reason, on the present Director-General, because, unlike Sir Galbraith Logan, he has never taken the trouble either to attend the examinations himself, or to depute anyone to do so for him.

Third. Paragraph 81: The Examiners point out that the mere possession of a diploma is not always a sufficient test of competence to enter a service in which the lives and limbs of soldiers and sailors are *compulsorily* placed in the so-called surgeon's hands.

Fourth. Paragraph 82: They say, "There is no reason to believe that there is the slightest foundation for the curious, if not preposterous, notion put forth in this paragraph." The notion so characterised is, that as some months often occur between the termination of a man's studies in the schools and the next period of examination, he may find a difficulty in maintaining himself during the interval, and is naturally prone to close with any advantageous offer that presents itself; and so he may be lost to the Service. The paragraph is rather interesting as a proof of the difficulty in getting candidates; but we more than suspect that it is

not wholly without foundation, and at any rate it is hardly courteous to speak of it as the Examiners do, seeing that the Committee say the objection had been stated to them, and, they think, "with great force."

Fifth. Paragraph 83: This speaks of the considerable difference there appears to be in the value of the diplomas issued by the several schools; it admits that competitive examination is beneficial, if it can be resorted to without being seriously deterrent; and then it goes on to recommend a partial departure from that system. The Examiners hold that it simply contradicts all that had been said before in the Report; and that the proposed new arrangement "is in the highest degree injudicious and impracticable." And with reference to the proposal of taking candidates upon the recommendation or selection of their teachers, they direct attention to the pregnant remarks in a speech of the late Dr. Parkes' to the General Medical Council, which speech they publish in Appendix No. 1. We think the proposed new arrangement a mistake, a half-and-half measure, and not at all likely to work well, and so far we agree with the Examiners; but in support of their objections to this paragraph and to Paragraph 81, they rely greatly on Dr. Parkes' speech. Now, it must be remembered that speech was made in March, 1864, and it must surely be admitted that there has been a vast improvement in education and in examination for diplomas since then. The Examiners indeed assert, we gather, that such astounding ignorance is sometimes displayed by qualified candidates now as then; but they seem to us by no means sufficiently to take into consideration the change that has taken place, and the tables which they themselves publish show that during the past ten years 93 per cent. of the candidates have passed their examinations.

Sixth. With respect to Paragraph 84, which recommends that one-half of the vacancies should remain open to competition, "the examination being of a more practical character than heretofore," the examiners recommend that it should be extended to all vacancies; observing, however, that the examinations cannot well be made more practical than they always have been, and still are.

Seventh. Paragraph 85 concerns especially the Netley School examination, in which the examiners hold that the competitive system should be above all things adhered to, and we are quite ready to agree with them.

Eighth. Paragraph 86: This speaks of the school examinations as being to a great extent public competitions, and says that the selections of candidates by the schools will be watched by the students, and so "the advantages of public competition will be obtained more thoroughly than now, when the examination is in reality "nothing beyond a 'pass,' as the candidates rarely equal the vacancies." The Examiners, of course, do not agree with "this strange paragraph," as they call it. They object, truly enough, that the examinations of the "schools" are private examinations, employed merely as a means of instruction, and that they never can secure the advantages of public competition. Still, they do serve to mark out the best workers among the students, and it can hardly be supposed that the selection of candidates by the schools would be made by means of these ordinary examinations only. A more forcible objection is offered when the Examiners go on to remark that these examinations "have no competitive character whatever (except in the few cases where examinations for prizes may be held), nor ever could have, as between one school and another. For who is to tell whether the best man out of three or four hundred students at a large metropolitan school is better or worse than the best man out of a class of ten or twenty at a small provincial or colonial establishment?" The thing is, they say, "glaringly impossible."

We repeat that any well-considered statement from such men as the Examiners of Candidates for the Military Medical Services ought to command grave consideration by the Secretary for War; but we cannot help thinking that they have very unwisely overstated their case, and have not always remembered to be courteous. They speak of "misrepresentation" and "gross misstatement," and now and then adopt a tone very like scolding. A really strong case is not helped, to say the least, by such a style of argument. Rather more moderation of tone and consideration for the difficulties Colonel Stanley has to meet would, we venture to suggest, have been more dignified, and more likely to secure a careful and unprejudiced consideration for their letter. The real interpretation of the Report simply is, we take it, that the Committee and the Department are at their wits' end how to make the Army Medical Service sufficiently attractive, not only to eligible candidates, but to candidates of any kind.

THE PRIMARY EXAMINATIONS OF THE COLLEGE OF SURGEONS.

After the repeated expression of opinion in our own columns and elsewhere regarding the unsatisfactory character of the Primary Examinations of the Royal College of Surgeons of England, our readers will not be surprised to learn that the teachers of anatomy and physiology in the London medical schools, with the concurrence and support of most of their *confrères* in the provincial schools of England, have at length resolved to take some action in the matter. As the result of many private conversations there was found to be so much unanimity on the subject, that, at a preliminary meeting, it was resolved to take measures to elicit the opinions of the general body of teachers of anatomy and physiology in the various English schools of medicine. With this view there was issued a circular, signed by Dr. Curnow, Professor of Anatomy in King's College, and Examiner in Anatomy at the University of London; and by Mr. R. J. Godlee, M.S., F.R.C.S., Senior Demonstrator of Anatomy in the University College School, convening a general meeting of anatomical and physiological teachers. This meeting was held in the Board-room of Charing-cross Hospital, on the evening of the 16th inst., and was in every respect one of weight and authority. During the greater part of that evening the chair was occupied by Mr. Thomas Smith, Lecturer on Anatomy at St. Bartholomew's, who was succeeded, towards the close of the meeting, by Dr. Pye-Smith, Lecturer on Physiology at Guy's, and Examiner in Physiology at the University of London. Nearly all the London schools of medicine were represented in person by their teachers of anatomy and physiology, letters being read from several gentlemen who could not themselves attend. Communications had also been sent from teachers at most of the English provincial medical schools, viz., Birmingham, Bristol, Cambridge, Leeds, Liverpool, Manchester, and Sheffield. These, with a single exception, expressed sympathy with the objects of the meeting, and pointed to desirable changes in the Primary Examinations at the College. Even the solitary opponent writer did not express approval of the existing system, but merely indicated the belief that the present was not an opportune time for such a movement.

After these various letters and communications had been read, and the gentlemen present had in turn expressed their views on the subject under discussion, there was found to be an almost complete agreement that certain changes were desirable, though opinions naturally differed somewhat as to the character and extent of the changes required. What was unanimously complained of was the uncertainty, or "fluky" nature of the College Primary Examinations, several members considering this to be quite as marked a feature of the Primary Membership as of the Primary Fellowship Examina-

tion. There was an all but unanimous wish for the appointment of separate examiners in anatomy and physiology; also for an increase in the number, and improvement in the quality, of the questions set to test the knowledge of the candidate. Very severe strictures were especially made on the physiological questions in the College examination-papers, the utter worthlessness of many of them as tests of real knowledge of the subject being insisted on by most of the physiologists present. Though this was unanimously recognised, some few at first felt there might be a danger of pitching the range of proficiency too high if pure physiologists were allowed to conduct this part of the examination; but it was pointed out that the Council of the College had only last year refused to entertain such a proposal, so that the examiners would still continue to be chosen from the Fellows, and there would be no danger, therefore, of the examinations becoming too abstruse. But everyone agreed that great improvement was urgently needed in the general character of the recent questions as efficient tests of physiological knowledge. The non-practical nature of the oral examinations in physiology and histology was also pointed out, and in regard to all the oral examinations the opinion was expressed that the practice of giving exactly the same number of minutes to each candidate in a pass examination was indefensible and unfair. Many good candidates require a short interval to recover their mental equilibrium on facing their examiners, so that it is obviously impossible for them to appear except at a disadvantage within the usual allotted time. Other candidates, again, could be dismissed in a few minutes, it being evident at once that they are exceptionally good or hopelessly bad. It was pointed out that this discriminative method of oral examination is practised by some of our best teachers and examiners in Scotland without their prolonging the period of examination, though they are thus able to devote to each candidate the time necessary for forming a just estimate of his real merits. In regard to comparative anatomy, the general feeling was decidedly in favour of retaining it among the subjects of examination for the Fellowship, but there was an unanimous wish for the definition of the area of examination under this head. This subject was also regarded as of too special a character to be satisfactorily conducted by any but special examiners.

After a full discussion of the above-mentioned points the meeting unanimously resolved to appoint a committee with instructions to draw up a memorial embodying such recommended changes in the College Primary Examinations as coincided with the majority of the opinions expressed at the meeting and in the communications that had been read. This memorial will be submitted for approval at another general meeting of the teachers of anatomy and physiology, before any presentation be made to the Council of the College.

In noticing this movement it is quite unnecessary for us to express our hearty sympathy with the desire to improve the character of the Primary Examinations of the English College of Surgeons, more especially as several of the changes proposed have been repeatedly enforced in these columns. At the same time we may point out that one important circumstance which lies at the root of the unfortunate position of physiology in the College Examinations—viz., the extraordinary position of that subject in the curricula of English medical schools—has not received the prominence it deserves. He would indeed be a bold surgeon who would deny the daily increasing importance of physiology to surgeons no less than to all other members of the profession; but it would be still more heroic to deny that the practice of beginning the study of function before the elementary facts of structure have been acquired, is a most illogical and pernicious one. To begin on the same day the study of anatomy, physiology, and ordinary chemistry is surely the *reductio ad absurdum* of our educational system. We therefore wish the teachers of anatomy and physiology all success in their present endeavours, believing that the proposed changes, as far as they go, cannot work anything but good to all concerned.

RODENT ULCER.

An instructive debate on Rodent Ulcer, or Rodent Cancer took place at the Pathological Society last Tuesday evening and very diverse views were expressed as to the pathology of this malady. Most of the authorities agreed as to the clinical features of rodent ulcer. Mr. Hutchinson, to whose labours and observations much of our present clinical knowledge on the subject is due, regards the most typical form of the disease as occurring on the upper half of the face. An ulcer, he argues, occurring above a line drawn from the lobule of one ear across the face below the nose to the other ear, would be a rodent ulcer, and not an ordinary epithelioma. In other words, such a sore would be much slower in its growth, less proliferative on its surface, and unlikely to infect the neighbouring lymphatic glands. Sir James Paget, Messrs. Hulke, Lister, and many other authorities, mention cases of rodent ulcer, typical in all its characters, as occurring on other parts of the body besides the face. Thus we are led to conclude that, although it usually commences on the face, and there runs its most typical course, yet that other parts of the body are not exempt from its invasion. It may be that, on the face, morbid tendencies to this peculiar form of disease are intensified by exposure to those irritating influences, which, by common consent, enter so largely into the etiology of its onset.

In calling to mind the history of many cases which we have been able to observe in the practice of Mr. Hutchinson and other surgeons, we are struck by the similarity of the original starting-point of the disease—a small soft wart on some part of the face or forehead, which has existed as long as the patient can remember. This may have been "picked" over and over again; indeed, it becomes almost a habit with the patient to pick off the scab as often as it naturally re-forms. In this way a process of constant irritation—Mr. Hutchinson, we believe, would call it cultivation—is kept up; next, when the middle period of life is past, this wart begins seriously to ulcerate, and now, for the first time, to receive a little attention. It is, however, by this time a cancer to all intents and purposes, and, unless vigorous measures be adopted, will sooner or later destroy the patient. It would be useless to speculate on the changes which may have taken place in the proliferative process: clinically we know that something has been going on for years which has remained a merely local and exceedingly limited process. But, without any further or increased stimulus, a new process of activity is set up, which tends to spread indefinitely, to invade any structure with which it comes in contact, and even finally to kill the patient. For an explanation we fall back on constitutional peculiarities, often without being able to appreciate or detect any such; but though age will certainly account for some modifications of constitution, it does not seem to us to account sufficiently for the great changes which must take place in the life-history of one of these early soft warts, before it assumes the characteristics and the dangerous tendencies of a well-marked rodent ulcer. We should, from analogies, rather incline to think that the bodily constitutional proclivities, like mental ones, would be the more active during early manhood, and less so when the body and the mind, as in old age, are tending to decay. Such reflections may not be without their value; but as clinical facts go far to show that this disease at one time of its history is very largely a purely local one, it behoves surgeons to utilise the opportunity and freely remove it while there is yet a fair chance of doing so with success.

The debate also confirmed an interesting fact, which was well recognised before: that a disease which one surgeon would call rodent ulcer might be regarded by another as epithelial cancer.

Coming to the pathology of the disease, opinions were found to differ very widely. Dr. Tilbury Fox showed some very beautiful sections, together with drawings of the disease, and read a short paper on the subject (on which the debate ensued). He endeavoured to demonstrate that the disease took its origin, for the most part, in the outermost layer of the hair root-sheath, the layer corresponding with the rete mucosum of the skin. Dr. Thin argued that the diseased process commenced in the sweat-glands—that it was indeed an adenoma of the sweat-glands. Mr. Howse and Mr. Golding Bird could discover nothing but collections of lymphoid cells (leucocytes) immediately below and in the rete Malpighii. Mr. Parker had not been able to detect any well-marked histological characteristics in rodent ulcers which were not present in epithelial cancers, and *vice versâ*. There is here really less divergence of opinion than seems to exist at first sight. We agree with Dr. Fox in believing that changes do take place in the hair-sheaths—it would be quite remarkable if changes did not take place there; but we are unable to agree with him that his specimens conclusively prove that the disease commenced in these sheaths, and nowhere else. Dr. Thin's observations of changes in the sweat-glands cannot reasonably be doubted; and our own observations accord with speakers who had found a very similar histological condition in rodent ulcer and in epithelial cancer. In the latter disease, authorities, we believe, are agreed that extensive proliferative changes occur in all the glandular elements of the skin; and hence we are driven to the assumption that the discrepancies in opinions expressed the other night are due to differences in the individual specimens examined, or the stage of the disease, or the point whence the sections are cut, rather than to any more radical divergence. Of course the question as to the exact seat of the very earliest disease remains unsettled, and we should think that it is likely to remain so. It does not seem probable that the disease commences always in the same situation and in the same manner, for these cases present well-marked variations within certain given limits, and it would be contrary to our ordinary ideas to look for a common origin under such circumstances.

Microscopical science has done much to advance scientific surgery; but it must work hand-in-hand with clinical observation. Most pathologists would agree, we think, that the mere microscopic examination of a tumour would at best give but a poor idea of its real nature. On the contrary, clinical observation may very safely be brought to bear on the explanation which various histological appearances are to receive after microscopic examination. In the case of rodent ulcer, some of our best authorities now agree to classify it among the cancers, and the outcome of the remarks at the Pathological Society last Tuesday seems to indicate that its histological characters do bear out and give support to this view.

THE WEEK.

TOPICS OF THE DAY.

The annual general meeting of the Hospital Sunday Fund supporters was held last week at the Mansion House, under the presidency of the Lord Mayor. Sir Sydney Waterlow, M.P., moved the formal approval of the laws constituting the management of the Fund, with the following addition—namely, that the Committee of Distribution should have power to set aside 1 per cent. of the total amount of collections for the purchase of surgical appliances. He attributed the falling off in the receipts of the present year to the great depression in trade, and to the wet weather on the day appointed for the collection, but he denied that the Fund was less popular than when it was first started; he felt, on the contrary, that the public fully appreciated the fact that in giving their money to the support of the various hospitals through the agency of the Fund, they insured that a larger portion of their contributions would reach the object than in any other form. The expenses of the Fund were only 4 per cent. of the gross receipts, therefore 96 per cent. was distributed to the hospitals. In advocating the introduction of the new rule, he explained that surgical relief was often not complete without the provision of surgical appliances, and that the present method of obtaining a gift of these was open to much objection, whereas by setting aside 1 per cent. of the proceeds such articles could be provided promptly, and without recourse to other means. The Rev. T. J. Rowsell seconded the resolution, but he remarked that he thought there was a flagging interest in the movement. After some discussion the motion was carried. Bishop Claughton then proposed that Sunday, June 15 next, be fixed for Hospital Sunday in 1879, and that, as usual, the cordial co-operation of all ministers of religion in the metropolitan area be invited; which was seconded and carried. We append a statement of the amounts received each year since the organisation of the Fund, which certainly does not testify to its increasing popularity:—1873, £27,700; 1874, £29,986; 1875, £26,396; 1876, £27,042; 1877, £26,082; and 1878, £24,904.

It is announced that a Bill has been prepared by Mr. Anderson, M.P., Mr. P. A. Taylor, M.P., and Mr. Whitwell, M.P., to amend the Sale of Food and Drugs Act of 1877, by providing that in the case of prosecutions for the sale of adulterated articles it shall be no defence to allege that the purchaser having bought only for analysis, was not prejudiced by such sale. The same Bill also proposes to allow the reduction of spirits to the extent of 25 per cent. under proof for brandy, whisky, and rum, and 30 per cent. under proof for gin.

The *New York Times* states that Dr. Raymond, of Brooklyn, Sanitary Superintendent, who attended the meeting of the American Public Health Society, recently held in Richmond, Virginia, has submitted an elaborate report to the Board of Health on the late yellow fever epidemic. He estimates that the plague attacked 125,000 persons, caused 12,000 deaths, and cost the country $200,000,000. On May 22 last, he adds, New Orleans was in its usual sanitary condition, but the fever was introduced by the steamer *Emily B. Sonder*, from Havannah, whose purser having reported himself sick merely of neuralgia, was permitted to escape quarantine. In concluding his report, Dr. Raymond directs the attention of the Board to the acknowledged filth of the Southern cities visited in this and other years by yellow fever. In almost every instance there were leaking vaults, the contents of which soaked into the soil, and found their way into the well-water used for drinking; open ditches with sluggish streams formed the only sewers, into which the surface- and slop-water drained, while decayed wooden pavements, saturated with all kinds of filth, stretched for miles through the heart of a city whose sick and dead are to be numbered by thousands. Should the present winter be a mild one, the germs of the disease will not be destroyed, but will, with the next summer, gather new force, and continue their devastations north, east, and west.

The death is reported of Dr. Birt Davies, who was Coroner for Birmingham for thirty-six years—from 1839 to 1875. Dr. Davies was remarkable for the fidelity with which he carried out the duties entrusted to him; and it is

worthy of notice that during his term of office he held every inquest in the borough, and never had occasion, from ill-health or absence, to appoint a deputy. Dr. Davies was in his eightieth year.

At Reading, last week, an application was made under the Rivers' Pollution Act of 1876, to Mr. Vernon Lushington, Q.C., County Court Judge, on behalf of the Guardians of the Hartley Wintney Union, to make an order restraining General W. E. Napier, Governor of the Military College, Sandhurst, from causing or permitting the sewage from the Military College to flow into the river Blackwater. His Honour reserved judgment on two points of law, but he remarked that he could not understand technical objections being raised by the Crown officers where the public health was concerned.

At the last week's meeting of the Metropolitan Board of Works, a letter from the Home Office was read, referring to the interview between the Home Secretary and a deputation from the Board, which took place on the 21st ult., and acquainting the Board that her Majesty's Government did not see their way to further the proposed scheme of the Board for the purchase of the existing interests of the water companies of the metropolis. At the last sitting this question was ordered to stand over for a week. On the motion of Mr. Le Breton, it was now resolved that no further steps should be taken with the contemplated Bill on the subject. Another letter was also communicated from the Home Office, thanking the Board for the particulars furnished of the official representations under the Artisans' Dwellings Act, 1875, which had not been taken up by the Board, also expressing regret that another year has elapsed without measures being taken to carry into effect the provisions of the Act in such cases, and urging upon the Board the necessity of furthering, as much as possible, the Limehouse and the other schemes already presented and passed. This letter was ordered to be referred to the Works Committee.

A special meeting of the Governors of the London Hospital was recently held for the purpose of considering certain recommendations from the House Committee, which, if approved, would seriously affect the privileges of life governors in their distribution of letters of admission to patients. At the present time each life governor is entitled to have one in-patient and four out-patients under treatment at any one time, but as all life governors do not avail themselves of this privilege, those residing in the immediate neighbourhood of the Hospital have been enabled to procure an extra number of letters from the steward of the institution. This latter privilege has been so largely used, that the Committee of the Hospital have found themselves under the necessity of imposing some restriction on the distribution of tickets. At this special meeting they accordingly submitted a recommendation in the following terms:—"That from January 1 next in-patient recommendations be discontinued, and that the by-law which states that no governor shall have more than one in-patient and four out-patients at the same time, be altered as follows, viz.:—No more than eight tickets per annum shall be supplied to each governor; they shall be for out-patients only; but in the event of the person recommended being deemed by the medical or surgical officers to require admission, owing to the severity of his or her case, such person will be at once admitted as an in-patient, provided there be room in the wards." This recommendation was moved and seconded, but after considerable discussion the further consideration of the matter was adjourned for three months.

The Guardians of the City of London Union met last week to consider the report of a Committee appointed to inquire respecting the non-admission of patients from the City to the asylums at Leavesden and Caterham. It is stated that the Committee found that preference had been given to parishes and unions other than the City—a fact which they deemed unsatisfactory and illegal, especially as the City contributed one-tenth of the total cost of the asylums. They recommended that no more patients be sent to either Leavesden or Caterham, and suggested that a committee should consider the advisability of re-classifying the inmates—those at Holloway to be removed to Bow and Homerton; the first-named place being utilised as an asylum for all the imbeciles belonging to the Union, as well as for those whose sanity is a matter of doubt. The report of the Committee was eventually adopted.

At a recent meeting of the Whitby Board of Guardians some astonishment was created by the statement that it cost the Union 18s. per head per annum for each inmate in the workhouse for alcoholic liquors, whereas the average amount for the whole of the North Riding was only 3s. 8d., and for the whole of the English Unions 8s. 7d. per head per annum. The Medical Officer to the Union, on being referred to for an explanation, said it was necessary to the existence of the inmates to issue liquor in this quantity; that he always exercised the greatest care, and never gave more stimulant than was required; and if the Guardians wanted to kill the poor people they could not devise a better plan than to cut off the supplies of stimulants. He could not give cod-liver oil and quinine instead, because the stomachs of old people would not retain them. After this explanation the subject dropped.

From the Registrar-General's report for the week ending 7th inst., it appears that 2576 births and 2016 deaths were registered in London during that period. The deaths included 389 which resulted from the sinking of the steamer *Princess Alice* on the Thames in September 3 last; the remaining 139 of the 528 deaths which were the subject of the recent inquest held by the Coroner for Kent will be registered in another week. Allowing for increase of population, the births exceeded by 162, while the deaths (exclusive of the 389 deaths from drowning above referred to) were 138 below the average numbers in the corresponding week of the last ten years. The annual death-rate from all causes, which in the two previous weeks had been equal to 22·6 and 23·7 per 1000, further rose during the week in question to 29·4; but exclusive of the 389 deaths from drowning, the rate would have been 23·7 per 1000, the same as in the preceding week.

SOME POINTS IN THE ETIOLOGY, NATURAL HISTORY, AND TREATMENT OF DIPHTHERIA.

The epidemic at St. John's-wood, the recent illness of the Ducal family of Darmstadt, and the extreme fatality of diphtheria in young children, make all contributions to our knowledge of this disease of interest at the present time. Several important monographs have lately appeared in Germany, namely, by Weigert (*Virchow's Archiv*, Bd. lxx., lxxii.), by Zahn ("On the Pathological Histology of Diphtheria," Leipsic, 1878), by E. Schweninger ("Studien über Diphtherie und Croup," Munich, 1878), and lastly by Settegast ("Report of the Bethany Hospital," Berlin, in *Langenbeck's Archiv*, xxii.). The first three writers chiefly treat of the histology, and the question of the fungoid or non-fungoid origin of the disease. Into the first we do not intend to enter here; but it is important to notice that all three are led by their researches to negative the idea that there is a necessary connexion between the presence of micrococci and other forms of coccobacteria and diphtheria. They are often present, but are, as Weigert expresses it, "an inconstant occurrence." According to Zahn, they are not an integral or constant constituent of the different varieties of

diphtheritic membranes; and Schweninger takes the same view, and gives some excellent reasons for adopting it. Thus he points out (1) that the diphtheritic micrococci are only found in the great majority of cases in the epithelial layer of the pharyngeal mucous membrane, and in many bodies are only present there; (2) that the micrococci are not met with in the deeper layers unless the bodies have been kept awhile before examination, or when there has been rapid breaking up and mortification of portions of tissue which are thrown off—such a process being, however, only a possible sequela of diphtheria, and not an essential element of it; lastly, (3) that if diphtheritic *débris* from the pharynx or trachea are inoculated into animals they never induce the whole set of correlated phenomena which are peculiar to diphtheria, especially those anatomical alterations in the pharynx and air-passages which are always and invariably met with as its primary features.

According to these authorities, therefore, the fungus theory of diphtheria is by no means proved.

The report of the Bethany Hospital, drawn up by Settegast, is of a more practical character. It embraces the period from 1873 to 1876, and deals with the large number of 568 cases of croup and diphtheria. Of these 274 were males, 294 females; 87 adults, 481 children.

Eighty-five per cent. of the adults recovered. In six adult cases tracheotomy was performed, and of these four (all males) died. Of the children 62·79 per cent. died. Among those which recovered the two sexes were nearly equally represented. Tracheotomy was performed, in round numbers, in 78 per cent. of the children's cases; and 32 per cent. of those operated on recovered.

In 106 children the operation was not performed, either because they did not require it, because they reached the hospital *in extremis*, because they were weakly infants under two years and a half, or because in spite of severe general symptoms there was no laryngeal obstruction. Of these, forty-nine, or 46·29 per cent., recovered.

As to the distribution of the cases of tracheotomy over the different months, it was found that there is a rapid rise in the number of operations from August on, the maximum being reached in October or November. The number then falls, at first suddenly, and afterwards more slowly, until the next August, with slight temporary exacerbations, especially in March and April.

As to age, the largest number of tracheotomies occurred in the *fifth* year. The mortality in the first and second years of life equals 100 per cent.; 23·65 per cent. of the children in the third year recover, and the number of recoveries increases pretty regularly until the ninth year, when it reaches 45 per cent. From this time, curiously enough, the return becomes again more unfavourable.

A very large number of the cases in children were complicated with scarlet fever and albuminuria, but only one child died of this complication. Measles occurred less frequently, but were of worse prognostic significance. The use of inhalations after tracheotomy, which has been introduced in the last two years and a half, has not in the least diminished the mortality.

The chief lesson of these statistics is that in very young children the prognosis is even now as nearly as possible hopeless; and, further, that there is probably some relation between the occurrence of croup and diphtheria and unseasonable weather.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The Council of the Royal College of Surgeons had a great deal of business before them at their ordinary meeting on Thursday, the 12th inst., and some of the matters they had to consider were of considerable importance. The following resolution was received from the Board of Examiners in Anatomy and Physiology:—"That it be recommended to the Council that a candidate, referred on the Primary or Anatomical and Physiological Examination for the diploma of Member, who shall not obtain more than half of the total minimum number of marks, be required, on admission to re-examination, to produce a certificate of the performance of dissections during six months, instead of three months, subsequently to the date of his reference." After consideration the recommendation was adopted by the Council. A report was received from the Committee on Examinations in Anatomy and Physiology; and in accordance with the recommendation of the Committee the members of the Board of Examiners were re-elected, with the exception of Mr. Savory, who did not seek re-election, and Mr. Wagstaffe, who had been compelled to resign on account of ill-health. Mr. Walter Rivington, of the London Hospital, and Mr. Morrant Baker, of St. Bartholomew's, were elected to the vacancies. Mr. Luther Holden, one of the Vice-Presidents of the College, was elected member of the Board of Examiners in Dental Surgery, in place of Mr. Savory, who did not desire re-election.

A letter was read from Sir James Paget to the President of the College, reporting, as representative of the College in the General Medical Council, on the parts of the proceedings of that Council during the sessions of 1877 and 1878 in which the College was interested.

Mr. Hancock brought forward the motion of which he had given notice, viz.—"That until the medical authorities in Scotland and Ireland respectively shall have agreed to establish Conjoint Boards in those divisions of the United Kingdom, it is not expedient for this College to take further steps towards the voluntary establishment of a Conjoint Board in England." This having been duly seconded, the following amendment was proposed, seconded, and carried:—"That the President be requested to call an extraordinary meeting of the Council for the consideration of the position of the College in relation to the institution of Conjoint Examining Boards, so soon after the next meeting of Parliament as he shall think right." Mr. Hancock then gave notice of motions respecting the existing Conjoint Scheme for England, to be considered at the next quarterly meeting of the Council; the sense of the principal motion being that it is expedient for the Council to further entertain the question of the voluntary establishment of the Scheme dated May 1, 1877, or any other Conjoint Scheme of a similar nature.

The "further report" of the President and Vice-Presidents on the Erasmus Wilson Endowment was received. Having, in obedience to the resolution of the Council of June 6, considered with Mr. Wilson in what form it might be agreeable to him, and desirable for the College, to give effect to the accepted principle that the scope of his Endowment should be enlarged, the President and Vice-Presidents now submitted a scheme, approved by Mr. Wilson, for such modifications of the Trust as seem likely, in their opinion, to "enable the endowment to produce its best and most far-reaching effect." The report will be found elsewhere in our columns, and it will be seen that the principles of the new scheme of the Trust are—that the field of application be pathology; that within this field the special aim be to encourage original research; that lectures be not an object, except as means for first promulgating from time to time results which the researches may have gained; and that payments out of the fund be assigned quite subordinately to the lectures as such, and be mainly applied to remunerate the research. The Trust would then be to promote not only the pathology of the skin and its appendages, but in general any studies that are for the advancement of pathology in any of its relations or parts; and especially to promote original researches in pathology by members or fellows of the College. The annual income of the Endowment

is at present £150 a year, and it cannot be doubted that if the scheme is continuously well carried out it will give decided encouragement to original work and research. The report was considered and adopted; and it was referred to the President and Vice-Presidents to give directions for the necessary steps to be taken to give legal effect to the recommendations contained in it.

THE PATHOLOGICAL SOCIETY.

In elsewhere noticing at length the discussion on rodent ulcer at the Pathological Society, we feel bound to ask the members whether they do not think that they are departing from the original intention and objects of the founders of the Society in encouraging the reading of elaborate papers on such a subject as this. Instead of the Pathological being a sort of relief society for the Medico-Chirurgical, and instead of its time being devoted to the exhibition of examples of morbid anatomy for the mutual instruction of the members, the meetings have too often lately been taken up with the reading of lengthy papers on subjects of disputed histology. Matters may be said to have reached a climax on Tuesday evening, when more than two-thirds of the whole time of the meeting was spent in attempting to settle the microscopical appearances of a form of ulceration which could not be clinically defined; and when the speakers seemed to be indulging in pathology much as Scotchmen are said to indulge in metaphysics—"the one not understanding the other, and the other not understanding himself"! According to the by-laws of the Pathological Society, the business of the meetings shall be the exhibition and examination of specimens, drawings, etc., with accompanying written or oral descriptions. Instead of this useful rule being followed, the specimens and drawings in these days too frequently "accompany" a lengthy dissertation on some abstruse—and perhaps really insignificant—point. The same by-laws state that in the remarks made in reference to specimens exhibited, all discussion on abstract points shall be, as far as possible, avoided. Members will do well to remember this. When the whole natural history of a disease has to be discussed, the Medico-Chirurgical, and not one of the special societies, ought to be chosen. It is lamentable to think how many valuable specimens of morbid anatomy were sent away from the Pathological Society the other evening without being looked at.

THE MEDICAL BILL.

In our Parliamentary Intelligence it will be found reported that on Monday evening Lord George Hamilton stated that the Government hoped to be able to introduce and to pass this session a measure amending the Medical Act of 1858. We would draw special attention to the significant phrase "to pass." "The constitution of the Council," continued Lord George Hamilton, "is a matter of considerable difficulty and importance, in respect to which we think further inquiry is necessary before any legislation could be attempted." We may consider it as probable, therefore, that the Government will either accept the inquiry on the constitution of the Council that has been instituted by the Council itself; or will judge by the results of an inquiry made by themselves or by Royal Commission; or refer the question to a Select Committee. We trust that the inquiry, in whatever way it may be carried out, may not be the means of postponing the necessary changes in the Medical Act, as is too often the case in such matters. So far as we can judge, the Medical Council, constituted as it is at present, has done very fairly well the work assigned to it. All that is really necessary is that the method by which the examination and test of fitness of candidates entering the medical profession should be rendered more sufficient and more uniform. Her Majesty's Government have tried to secure this end in former Bills; but they have been hindered by certain gentlemen who aim at obtaining what they call "direct representation" on the Council. The policy of these gentlemen exhibits a strange paradox. They say that they cannot obtain uniform examinations by Conjoint Boards in consequence of the want of direct representation of the profession on the Council; and when it is proposed to secure Conjoint Examinations for them by an amended Medical Act, they say they will not accept it because it does not give them direct representation.

THE BOGUS DENTAL DIPLOMAS.

We understand that some extraordinary revelations respecting certain of the American dental diplomas have come to the knowledge of the Executive Committee of the General Medical Council, now engaged in superintending the registration of dentists. In answer to letters of inquiry as to the course of study and the character of the examinations required of the candidates for dental degrees, the Dean of an institution calling itself "The American University of Philadelphia," forwarded, along with a notification regarding two of their so-called graduates, a pamphlet purporting to be "The Annual Announcement of the American University of Philadelphia, and Eclectic Medical College of Pennsylvania," wherein it is set forth that said University possesses a "faculty" of sixteen professors, lecturing on a great variety of subjects, such as "nervous diseases," "electricity and jurisprudence" (united in one chair), etc.; that the graduates of said University "may be numbered by thousands, and that they form the great representative men of North America and Great Britain," with much more to a like effect. There is an especial notice to their students, or would-be graduates, "to take advice from no one," for they must "bear in mind the Allopathic Bullies are so desperate, and the Swindling-shops of Bogus Colleges are so numerous, that our students must not be imposed upon." It appears that this rascally institution owes its existence to the fusion of two originally distinct bodies calling themselves "The Philadelphia University of Medicine and Surgery," and "The Eclectic College of Medicine." These two institutions, both before and after their fusion, had carried on a most nefarious traffic in diplomas without the pretence of exacting anything like a curriculum of study, or demanding the presence of the candidates for even a farcical examination. The diplomas, in fact, were simply sold at what they would bring to persons living in any part of the world, the only condition to be fulfilled being the payment of the fee. So notorious had these practices become that in 1872 an investigation was instituted by a committee of the State Legislature of Pennsylvania, the result being the repeal of the charters of the two corporations mentioned. By some hitch, however, it would seem that these practices have not been stamped out, the bogus diploma traffic being still a flourishing one in the hands of "Dr." John Buchanan, the Dean of the said "American University of Philadelphia." These revelations speak for themselves. It is unnecessary to point out how much harm has resulted to the character and influence of such respectable Philadelphian institutions as the University of Pennsylvania and the Jefferson Medical College, and, indeed, to all American medical institutions, from the undoubted existence of this illicit and disgraceful traffic in diplomas. Why do not our American cousins put an effectual stop to such proceedings at once and for ever? It seems, however, from the information sent from America, that there is also a person in Jersey who sells the diplomas of the so-called "American University of Philadelphia," and it is more than hinted that many of these diplomas are probably manufactured in that island. Before casting a stone, therefore, let us make sure that we ourselves are without a shadow of a sin in this matter.

DEATH OF THE REV. PEYTON BLAKISTON, M.D., F.R.S.

We much regret to have to announce the death of Dr. Peyton Blakiston, which took place suddenly on the 17th inst. To the greater number of young practitioners Dr. Blakiston is probably almost unknown, but older medical men remember him well as one of the most highly accomplished and distinguished physicians in the provinces twenty years ago. Gifted with a powerful intellect, an incisive and ready memory, powers of rapid, acute, and accurate observation, and a logical and penetrating judgment, and being an ardent worker, Dr. Blakiston was quick and clear in diagnosis, and eminently practical and successful in treatment. He entered the profession comparatively late in life, and, dreading the wear and tear of professional life in London, settled in practice in Birmingham, where, and in the Midland Counties, he soon became a medical power. After some years of work there, the overstrain of health and strength compelled him to retire to St. Leonards-on-Sea, in which health-resort he was for many years *the* medical adviser and guide of those who sought for renewed health. He made some very valuable and important additions to the science and art of medicine in the department of heart and lungs pathology, but we must content ourselves now with this brief reference to his labours, and shall take an early opportunity of more freely speaking of his life and work. He had retired for some years, and died at the age of seventy-seven.

REGISTRATION OF DEATHS IN WORKHOUSES.

The Registrar-General for Ireland has had on several occasions to complain of the very defective returns of medical certificates of deaths occurring in the South Dublin Union Workhouse. Some few weeks since the Board of Guardians of this Union called on the medical officers for an explanation. As the reply did not appear satisfactory, the matter was laid by the Guardians before the Local Government Board for Ireland. At the weekly meeting of the Guardians on December 12, it was stated by the Clerk that the Local Government Board had written with reference to the failure of the medical officers of the workhouse to supply the Registrar-General with the weekly returns of deaths in the workhouse hospital. The Board desired to state that the South Dublin Union appears to be the only case in which the slightest difficulty is experienced by the medical officers in supplying the cause of death for registration purposes, and it should be distinctly understood that the punctual performance of this *duty* will be strictly required. It is to be hoped that the medical officers will see the expediency of performing this important *duty*, and that in future the Registrar-General will not be obliged to write, as he did on November 11—"It is to be regretted that, as regards nine out of twelve deaths in the South Dublin Union Workhouse last week, no information has been afforded as to the cause of death, the entry in each case being 'Unknown.'"

THE PHYSIOLOGICAL AND THERAPEUTIC EFFECTS OF THYMOL.

Dr. B. Kuessner, of Halle, has found that the direct injection of thymol in emulsion (1 : 100—200) into the veins of warm-blooded animals (dogs and rabbits) kills them by paralysis of the respiratory centre when given in quantities not greater than 0·10 gramme per kilogramme of body weight. The dose given by the stomach may be enormously greater, and yet, owing to inadequate absorption, produce no effect except local irritation. In the poisoned animals, even at a late period, artificial respiration saved their lives. The blood of those which died was dark and fluid, but the corpuscles were intact, and the number of red cells undiminished. Kuessner invariably found albumen and hyaline casts in the urine, but no blood-colouring matter. Thymol produces deep coma previous to death. In the preliminary drowsy stage the pulse and blood-pressure are uninfluenced, but with the advent of coma the pressure falls steadily, and the pulse becomes at first quickened and then retarded. In the stage of coma the largest doses of strychnia fail to excite convulsions. Repeated injections of small doses of thymol reduce the temperature of healthy animals, the depression being to a certain extent inversely as their age. No after ill-effects result. Rabbits which had from five to twenty cubic centimetres of a 1 per cent. thymol emulsion injected into the stomach once or twice a day, suffered no alteration of temperature, pulse, or respirations; they only became thinner in spite of abundant food. Post-mortem, general anæmia of all organs was discovered, but the blood was apparently normal, and no signs of fatty degeneration were detected either in these or any of the animals experimented on. Kuessner himself took 1·0 gramme per diem in pills for four days without observing any physiological effects except a feeling of burning or tenderness at the epigastrium, which continued for a fortnight after leaving off the drug. The sugar in the urine of a patient with diabetes was reduced by from one to two grammes thymol per diem; but Fürbringer (*Deutsches Archiv für Klin. Med.*, xxi.), on the other hand, found in a patient in Friedrich's Clinic that one gramme daily increased the sugar. Kuessner thinks thymol (three to five minims of a 1 per cent. solution three times a day) of value in vesical catarrh and in infantile diarrhœa, and inhalations (one part to 1000) diminished the fever and expectoration of phthisical patients.

RE-APPOINTMENT OF MR. TURNER AS MEMBER OF GENERAL MEDICAL COUNCIL.

Mr. Turner's term of office as Representative of the Universities of Aberdeen and Edinburgh in the General Medical Council having lately expired, we have great pleasure in recording his re-appointment for another term of five years. Mr. Turner has won for himself quite a peculiar and exceptional position among the members of the Council, from which his straightforward conduct and eminent business capacity could ill be spared at the present time.

THE HEALTH OF PADDINGTON PARISH.

The annual reports of medical officers of health all over the country, which from time to time we feel called upon to notice, bear testimony to the great advantages to the community which have resulted from their appointment. In very few cases have we to record an unsatisfactory sanitary condition of affairs, and in these rare cases the fault is mostly referable to the supineness or ignorance of the governing bodies. The foregoing remarks are prompted by a perusal of the Annual Report on the Health of the Parish of Paddington for the year 1877, by Dr. James Stevenson, Medical Officer to the Vestry. He remarks:—"It is a matter of certainty that, during the last few years, although there has been an increase in the population, and in the number of inhabited houses in the parish, there has nevertheless been an absolute decrease in the mortality. A comparison of the total deaths from all causes during the past five years gives more reliable evidence upon this point than a comparison of the death-rates during the same period, as these latter would necessarily be derived from an estimate of the population of the parish which might possibly be erroneous." The total deaths from all causes for the five years, from 1873 to 1877 have been respectively 2014, 1945, 1992, 1967, and 1886. These figures show all the deaths registered in the parish, including those in the Lock Hospital, and in St. Mary's Hospital, though many of these

latter were not those of parishioners. The number of births registered during the year under notice was 2921, being at the rate of 26·7 per 1000 of the population, which is below that of any one of the ten previous years. Last year 380 infants, or 13 per cent. of all that were born in the parish, died during their first year of life; and 649, or 38 per cent. of all who died, were children under five years of age.

MEDICAL PARLIAMENTARY AFFAIRS.

Disqualification by Medical Relief Bill.—In the House of Commons, on Wednesday, December 11, Mr. Rathbone, in moving the second reading of this Bill, said that the object was to do away with the disqualification as voters that ensued upon the acceptance of parochial medical relief by persons who were entitled of right to the municipal and political franchise. It was most desirable, in the case of infectious diseases, such as typhus fever, scarlet fever, small-pox, and cholera, that the parochial authorities should have complete control over them, and a difficulty was put in the way by reason of the fact that persons were removed to a hospital so that the cases might be isolated, which deprived them of the franchise. It had been held in a recent case by a revising barrister that a person who had been removed to a hospital during an epidemic had become disqualified in respect of his right to vote. About 90 per cent. of the persons receiving hospital treatment for infectious diseases are not paupers. The object of this Bill is simply to regard treatment for infectious disease in the same light as public vaccination. This was not an instance in which the danger of pauperising by relief arose, because a man would not take small-pox or scarlet fever in order to become a recipient of medical relief. The only cases that were meant to be touched by the Bill were those in which neglect would mean public danger. It might be said with apparent reason that a man should be reinstated in his voting right upon payment of the cost of his treatment while in hospital. But it would be impracticable to make that a condition, and, moreover, the man might very well say, "If you wish to take me or members of my family away from home for the benefit of the public, it is only right that they should pay the expense." Mr. Watney objected to out-patients being included in the provisions of the Bill. Mr. Salt thought it was necessary that they should not be driven from the general principle of the Poor-law, which was that when a man accepted parochial relief he subjected himself to certain disqualifications. There might be sufficient reason for deviating from that principle in the case under discussion. That, however, was a matter for consideration in committee, and therefore he did not think he would be justified on behalf of the Government in opposing the second reading. In assenting to the second reading he could not say anything as to the course his right hon. friend (Mr. Sclater-Booth) might think fit to take in committee. The Bill was then read a second time.

Army Medical Department.—In the House of Commons, on Thursday, December 12, Colonel Stanley, in reply to Dr. Lyon Playfair, said it was true that the Committee of the War Office had recommended that open competition for appointments of medical officers should be discontinued, and a system of nomination from the medical schools substituted for it. He had no objection to lay the report of the Committee, and the reply thereto of the Board of Examiners, on the table of the House, though, being marked "confidential," it would be necessary to communicate with the Board first. Mr. E. Stanhope, in reply to Major O'Beirne, said that the Government of India have never required officers coming to England on sick leave to appear before a medical board on arrival. The War Office regulation referred to has been abolished as regards India and the colonies.

Mr. Errington obtained leave to introduce a Bill to amend the law relating to the qualifications required for holding certain medical appointments; and Mr. Marten, for a Bill to amend the Public Health Act, 1875, as to interments. Both these Bills were read the first time.

The Lunacy Laws.—Mr. Cross, in reply to Mr. P. A. Taylor, stated that the report of the Committee which sat last session on the Lunacy Laws was at present engaging the attention of the Lord Chancellor, and the course which Government intended to adopt with reference to their reform would be stated to the House as soon as possible after the recess.

The Medical Act, 1858.—On Monday, December 17, Lord George Hamilton, in reply to Mr. Arthur Mills, said that the Government hope to introduce and pass this session a measure amending the Medical Act, as the constitution of the Medical Council is a matter of considerable difficulty and importance, in respect to which further inquiry is necessary before any legislation can be attempted.

A GLIMPSE OF PRINCESS ALICE AND HER SISTER.

A CORRESPONDENT has favoured us with the following extract from a letter written by the late Dr. Charles Mayo, and describing his experiences as Medical Officer under the Red Cross during the Franco-Prussian war.

Dr. Mayo was first of all sent to Berlin; thence he had the good fortune to be sent on to Darmstadt, where he erected a hospital under the auspices of the Princess Alice, and called by her name.

The simple narrative needs no other eulogy; it shows both sisters actuated by the highest motives of duty and kindness, and proving

> "Quid mens recte quid indoles
> Nutrita faustis sub penetralibus
> Posset."

The slight indication which Dr. Mayo gives, that the Princess Alice's health was scarcely robust enough for her benevolent exertions, seems like a foreboding of the unhappy event which has just cast its gloom over every English-speaking community.

"Darmstadt, August 21, 1870.

"There is now, I hope, a certainty of our being useful. After four days' delay in Berlin the prospect of moving forward seemed no nearer than at first, and I determined to break through official obstacles if possible. I therefore wrote to the Crown Princess, asking her Royal Highness to use her influence to get us sent on. On Friday I received a telegram desiring me to attend her Royal Highness at the Crown Prince's palace in Berlin on the following afternoon; but as I had succeeded by Friday afternoon in getting my papers complete, I thought it right to go to Potsdam to see the Princess's Chamberlain, and to ask to be excused from the audience, so that I might save twelve or twenty-four hours in going to the front, by starting the same evening. Her Royal Highness, however, desired to see me immediately, and received me very kindly. She spoke of various matters relating to the war, and particularly to the medical business of the campaign. I was surprised to find her so conversant with medical terms, and so well informed as to the requirements of the army. She inquired particularly as to the supplies that we had brought with us, and in several cases I was able to answer her questions in the affirmative; but she was disappointed that we had not brought a considerable stock of surgical instruments and chloroform. The instruments, she said, were badly needed, and no good English chloroform was obtainable. She also said that instruments were often thrown aside and lost, from the impossibility of getting them repaired on the field. The Princess took me into the Crown Prince's room, where a table stood partly covered with bandages, compresses, charpie, etc., made by her own hands. She took all the charpie from a box on the table, and rolled it up in my pocket-handkerchief, asking me to tell the wounded man for whom I used it that it was of her making. The Crown Princess looked well, but was at no pains to conceal her anxiety and distress about the fearful losses of the German Army.

"I have come forward as fast as possible to Darmstadt, and have this morning been received in the kindest manner by the Princess Louis of Hesse (Princess Alice of England), who took me in her carriage to a hospital established at the Orangerie, and sent for the local chairman of the Hülfs-Verein, to whom she entrusted me. A large part of the Princess's palace is given up to the work of collecting and packing charpie, bandages, linen, and all kinds of necessaries for the army, and the whole of her time seems to be given up to care for the sick and wounded. I noticed that in the hospital she knew nearly all the patients who were in bed, by sight, and in many cases remembered what their injuries were. I am

told also that she goes to meet nearly every train that arrives with wounded, and visits the hospitals two or three times a day. Indeed, in view of the excitement and exertion which she every day undergoes, one cannot but regard her state of health with some apprehension, lest her kindness and self-sacrifice should lead her beyond the bounds of prudence."

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Further Report on the Erasmus Wilson Endowment.

In accordance with the resolution of the Council of June 6 last, the President and Vice-Presidents have carefully considered with Mr. Wilson in what form it might be agreeable to him, and desirable for the College, to give effect to the principle, already accepted between them, that the scope of his Endowment should be enlarged; and the President and Vice-Presidents now beg leave to submit to the Council a scheme, approved by Mr. Wilson, for certain such modifications of the Trust as would, they believe, enable the endowment to produce its best and most far-reaching effect.

Before stating the scheme, the President and Vice-Presidents would briefly explain certain restrictive considerations which, in framing it, they have had to hear in mind; for, as they need hardly submit to the Council, the problem of the best possible use for this endowment of £150 per annum is not an abstract question without regard to time and place and circumstances, but is essentially a question of adaptation to the College, with due regard to its special functions, and to arrangements which are already in force for them.

Thus, first, as regards the question of subject-matter, the President and Vice-Presidents, considering what resources the College already possesses, and what provision it has already made, for the teaching of anatomy and physiology on the one hand, and of practical surgery on the other, have, on the whole, thought it best to assume that at present no further claim in either of those directions could be entertained; but that the special subject of pathology, conceived as a distinct third division of College teaching, would undoubtedly be judged the most proper field to receive benefit from Mr. Wilson's endowment.

Proceeding then to consider, in detail, what, within that province, would be the most advantageous application of the fund, the President and Vice-Presidents first find, among the conditions of the case, that lectures, in any considerable number, must rather be deprecated than desired: for the College establishment will not bear more than a limited total number of lectures; and that limit would certainly be exceeded, if more than a very few lectures on account of pathology were added to the thirty which the College already has on account of anatomy and physiology and surgery. This reason, even were there no other, would sufficiently forbid the founding of any professorship in the College for the systematic teaching of pathology *in extenso;* while equally strong reasons of another kind are suggested by the fact that courses of systematic pathology are presumably now given, of private enterprise, in all the medical schools of the United Kingdom. It appears, then, to the President and Vice-Presidents that, since lectures to be given under Mr. Wilson's Endowment could not suitably be more than very few, the principle of the Trust in this respect should be only to accept such (few) lectures as would be necessary to tell the results of original researches recently made by the lecturer himself in some department of pathology; or, in other words, that the promotion, not of lectures as such, but of researches which would give original material for lectures, should be taken as the aim of the expenditure.

The President and Vice-Presidents think it quite superfluous to insist that genuine research in pathology is of supreme interest to the profession. They take for granted that the promoting of such research would universally be regarded as among the fittest and most fruitful functions which a great corporation, with means at its disposal, could fulfil. They believe, too, that the Council of the College, having regard to the great and constantly increasing activity which several foreign countries are showing in that field of science, would wish to see members of the College distinguish themselves more largely than at present as contributors to the total of European work. It is of course well known to the Council that many of the younger members of English medical schools are already more or less inclining themselves to pathological research, and that some seem to be zealously interested in it; and it has appeared certain to the President and Vice-Presidents that encouragements and inducements, which the Council, by means of Mr. Wilson's Endowment, could appropriately hold out to members of the College who should be successful workers in pathology, would operate as a most valuable influence over the whole of that field of work.

Accordingly, with regard to the annual appropriation of income from Mr. Wilson's Endowment, under such enlarged conditions of trust as are proposed, the principles which the President and Vice-Presidents, with Mr. Wilson's approval, would recommend to the Council for acceptance are the following:—

(1.) That the field of application be Pathology;

(2.) That within this field the special aim be to encourage original research;

(3.) That lectures be not an object of the scheme except as means for first promulgating from time to time results which the researches may have gained;

(4.) That payments out of the fund be assigned quite subordinately to the lectures as such, and be mainly applied to remunerate the research;

(5.) That the persons to be benefited out of the moneys of the Trust be members (including fellows) of the College, not being at the time members of the Council.

If Mr. Wilson, in consent with the Council of the College and with the trustees of his Endowment, proceeds to give effect to the principles which have been stated, the fundamental change to be made in the trust-deed would apparently be as follows:—That, whereas the original intention of the Endowment was "to promote the study of pathology, together with the anatomy and physiology, human and comparative, of the skin and its appendages," the new Trust would withdraw the special reference to anatomy and physiology; would provide that the trustees may promote "not only the pathology of the skin and its appendages, but in general any studies which are for the advancement of pathology in any of its relations or parts"; and would direct the trustees "especially to promote the making of original researches in pathology by members of the Royal College of Surgeons of England, and the publication of the results of such researches by lectures to be delivered in the College."

The mode of giving effect to the suggested Trust not only would not need to be of like detail in all circumstances, but would certainly from time to time require its details to be varied. It would evidently be essential that, as regards the individual persons and researches to be benefited under the Trust, the administrators should (within the fixed conditions) be at liberty to vary from year to year the bestowal of money, and should be responsible for judging from year to year to what particular aim or aims the money could most usefully be applied. There would be times when they could do nothing better for the purpose of the Trust than reappoint, year after year, some specially diligent original investigator, who would give to the College on each new occasion a fresh harvest of pathological discovery: there would be other times when one man would in one year complete whatever present usefulness he could render under the Trust: there would be yet other times, when the best arrangement for the year would be that two men or three, each representing a minor research, should each give a single lecture on his work. The administrators ought to be free in all such respects as those: and moreover, since there might now and then be an absence of acceptable matter for their purpose, they ought also to be free, where seeing fit, to refrain partly or wholly from expenditure of their year's income, on condition of adding the unexpended moneys to the capital account of the Trust.

The general plan of action, then, for the intended purpose must apparently be: that the Council would at some fixed time in each year publicly invite new candidatures for engagement under the Trust; giving notice of the intentions and limitations of the Endowment; and requiring each candidate to furnish, to such extent as should be needful, information with regard to the pathological research he has made, and on which he desires to lecture, and with regard to the results which he has ready for promulgation. And among the general conditions to be notified, the following would, in the opinion of the President and Vice-Presidents, be desirable:—(1) That the year's lectures do not exceed three in number; but, subject to that limit, may, if the Council should see fit, be on more than one research, and by more than one person; (2) that the fact of having once or more lectured under the Trust does not disqualify to be again appointed; (3) that the Council, if not receiving applications which it deems acceptable, may refrain from making any appointment; (4) that the remuneration for persons appointed by the Council will be (*a*) to receive, in respect of the lecture or lectures delivered, an honorarium of five guineas per lecture, and (*b*) to receive, in respect of the research lectured on, such sum as the Council, having regard to the value of the research and to the expenses incurred for it, shall, after delivery of the lecture or lectures, see fit to award.

The Presidents and Vice-Presidents recommend that, if the scheme which they submit is carried into effect, the Council should, in all matters relating to it, advise with a special standing committee to be appointed for the purpose; and they suggest that, if this course be taken, Mr. Wilson, while he may be willing and able so to act, should be a permanent (supernumerary) member of the committee. Also, feeling sure that the Council would wish to distinguish the new Trust by the name of its very liberal founder, they suggest that each person holding appointment to lecture under the Trust should for the time be entitled "Erasmus Wilson Professor of Pathology."

Edward Trimmer, Secretary.

November 25, 1878.

FROM ABROAD.

Dr. Dieulafoy on Cataplasms in Arthritis.

Dr. Dieulafoy, in an article inserted in the *Gaz. Hebdomadaire* for November 29, observes that a considerable number of cases of inflammation of the joints pass into the chronic condition. Among scrofulous and lymphatic subjects, persons having gonorrhœa, and in women during the puerperal condition, arthritis has a great tendency to assume the chronic form. The disease, it is true, rarely goes on to a white swelling or an anchylosis, but, without attaining this extremity, a chronic arthritis may last months or years, entailing all the well-known ill consequences. For such arthrites the most varied treatment has been employed. Internally, cod-liver oil and preparations of arsenic or iodine have been given, while locally blistering or cauterisation, according to the case, has been resorted to, the limbs having been rendered immovable by some form of apparatus; and, thanks to these various means, used separately or in combination, good results are generally obtained. Trousseau, who had so fertile an imagination for therapeutical procedures, was in the habit of resorting to an application in these cases, the efficacy of which Dr. Dieulafoy has had frequent opportunities of witnessing both under Trousseau and in his own cases. This consists in the employment of a cataplasm, the description of which requires to be detailed.

According to the size of the joint, from one and a half to two kilogrammes of bread (two kilogrammes being required for the knee-joint, and one sufficing for the wrist) are to be cut up into pieces, care being taken to remove the hard portions of the crust; and these pieces are to be steeped in water for about a quarter of an hour. By this time the bread is

strongly imbibed with water, and a portion of this is to be pressed out by means of a cloth or napkin, so as to leave the bread merely in a moist state. So prepared, the bread is placed in a water-bath (*bain-marie*), where it should remain three hours; and when it is taken out it forms a kind of dry paste, which is to be moistened gradually by the addition of spirit of camphor. This mass is to be kneaded for about five minutes until it has acquired the tolerably firm consistence of "plum pudding," or of glazier's putty. Here, indeed, is the delicate part in the preparation of the cataplasm, a firm consistence being essential; for if it is too soft it will become too diffused by the compression exerted over the joint, while if too hard it ceases to be homogeneous, breaking up into fragments, the indurated portions irritating the skin. The attainment of this consistence must be very carefully attended to, the tendency of those unaccustomed to the preparation of the cataplasm always being to make it too soft, either because they have not sufficiently pressed the water out of the bread before placing it in the bath, or that they have poured over it too rapidly too much of the camphorated spirit. The poultice thus prepared is to be spread upon a piece of cloth, the shape of an elongated rectangle, of a sufficient size to allow of the entire joint being enveloped in it. It is desirable that the edges of the cataplasm should be at least a centimetre in thickness, in order to avoid the rapid desiccation which takes place when the edges are thin. Over the surface of the cataplasm is spread a very liquid mixture, composed of camphor seven grammes, extract of opium and extract of belladonna of each five grammes, and alcohol q.s. It is to be applied direct to the joint, and covered with oiled silk. The whole is fixed, and a somewhat energetic compression is exerted by means of a flannel bandage several metres in length, a calico bandage of the same length being applied over the flannel one, the length of these two bandages depending upon the dimensions of the cataplasm, which has to cover the entire joint; and, to prevent their detachment, the folds may be sewn together. The compression exerted must be considerable, but not to the extent of producing œdema. So applied, the bandage should remain on eight or ten days, and, on its being then removed, it is found to be as fresh, moist, and pleasant-smelling as when first put on, the skin upon which it has reposed being in a perfectly healthy state. The price of the cataplasm (six francs, and three in hospitals) may seem an objection to its employment; but this ceases to have any value when it is considered that the application remains *in situ* for at least a week.

The indications for its employment need not be specified beyond saying that in all chronic or subacute arthrites, whatever may be their nature or cause, when other means have failed, or before these have been employed, Trousseau's cataplasm may render the highest service. Dr. Dieulafoy has already published several cases proving this, and concludes this communication with two others. The duration of the treatment necessary varies frequently: a single application will not always suffice, and a second or third, or even a fourth, may be required; the treatment thus, even in obstinate cases, not exceeding a month in duration. Of course the local treatment does not exclude the employment of general remedies.

Congenital Hydrocele.

In a report upon a memoir upon this subject by Dr. Gaillard, made to the Société de Chirurgie by M. de St. Germain (*Gaz. des Hop.*, December 10), he observed that the author sought to demonstrate that in young children these cases did best when left to themselves, and that an operation should not be performed upon a child of less than four or five years of age. Of thirteen cases which had come under his care, six had been treated by puncture or by astringents, and seven had been left absolutely to themselves. As these latter cases did perfectly well, he concludes that this should be the general rule of treatment. But M. de St. Germain thought, to say nothing as to the problematical duration of the treatment, that no rule of treatment can be laid down from so few as seven cases. Hydroceles, in fact, abound in the children's hospitals, and no child less than a year old is ever operated upon. Resolvents are employed, and when these, and especially the hydrochlorate of ammonia, fail, an operation is performed if the hydrocele assumes inconvenient operations. The operation consists either in puncture and injection, or in following the procedure of Defer, rendered popular by Maisonneuve and Desormeaux. M. de St. Germain operates upon hydrocele in children three years of age when it attains the size of an egg, puncturing it and then cauterising the sac, as practised by Defer; and he has never met with any accidents.

M. Boinet observed that accoucheurs had long insisted upon the spontaneous cure of the hydrocele of new-born infants. But congenital hydroceles should be operated upon towards the age of five or six, because, when they persist too long, they predispose to the formation of hernia. M. Desprès agreed with Dr. Gaillard, and is of opinion that the operation is often abused—being lucrative, if useless. He has never operated upon a congenital hydrocele, as when these lesions are left to themselves they disappear spontaneously. On the other hand, he has never known hydrocele in the adult become cured under the influence of astringents. M. Tarnier formerly was in the habit of applying compresses dipped in aromatic wine for the treatment of hydroceles in new-born infants, which are by no means rare, generally appearing about the second or third day. Having afterwards left them to their natural course, he found that they did just as well without any treatment. M. Houel had seen a great number of these cases, and on several occasions he has found that they could not be reduced, although communicating with the peritoneal cavity. The conclusion that such communication does not exist must not, therefore, be inferred because reduction cannot be obtained. It is just as with irreducible spina bifida. M. Berger observed that Mr. Curling was only able to obtain reduction in one case after compression which lasted three-quarters of an hour; and M. Lannelongue added that no certainty can be obtained from the failure of the measures when these have only been continued for a short time. He has met with hydroceles which could only be slowly reduced by prolonged compression made in the horizontal posture.

REVIEWS.

On Consumption, and on certain Diseases of the Lungs and Pleura. Being a Second Edition, revised and extended, of "The Varieties of Pulmonary Consumption." By R. Douglas Powell, M.D., F.R.C.P.L., Physician to the Brompton Hospital for Consumption and Diseases of the Chest; etc. London: H. K. Lewis. Pp. 291.

As will be seen from its title, this volume is partly an old, partly a new production. The first part discusses questions more immediately connected with Pulmonary Consumption, and is in the main a revised edition of Dr. Powell's former treatise on the varieties of that disease. In the second part the author has put together, for the first time in a collected form, what he has to say on certain other diseases of the respiratory organs. Thus the volume, though confessedly incomplete as a general treatise on diseases of the lungs and pleura, will nevertheless be found to discuss more or less fully all the more common pulmonary affections. But even the second part of the work can hardly be said to be new, as some of the chapters only reproduce the observations and conclusions the author had already put before the profession in communications to societies, etc. Indeed the volume as a whole has the character rather of a collected series of essays than of a systematic treatise—a character which is at once the strong and the weak point of the work: the weak point because most of the diseases are considered with far more fulness and detail in one or two aspects than in the others; and the strong point because, by thus dwelling on those features of disease and its treatment to which his attention had been chiefly directed, the author has produced a much more useful clinical volume than if he had attempted systematic exposition. This being the fact, we think he has now and then made a mistake in plan, besides wasting space, in devoting a sentence or a section here and there to the wants of the mere beginner, the great bulk of the volume being totally unsuitable to those who have not something more than a student's acquaintance with the clinical and pathological bearings of pulmonary lesions. Thus the chapter on Physical Diagnosis had better have been entirely omitted, more especially as it is too meagre and wanting in detail to be of use to anyone, whether a tyro or an expert in clinical medicine.

In an early chapter, Dr. Powell gives a summary of the modern doctrines regarding the pathology of Pulmonary Phthisis, Tubercle, and Tuberculosis, his statements agreeing in the main with those enunciated by Dr. Green in his

"Pathology of Pulmonary Consumption," recently noticed in these columns. We are pleased to find that Dr. Powell seems to agree with us in regarding the recent discovery of the so-called "giant cell" as a very doubtful addition to the histology of tubercle. He says that the appearances to which this name is applied may probably "be produced in several ways, and it is certain that tubercle may exist without it." In regard to tubercle Dr. Powell expresses his firm conviction that the researches of Klein, Sanderson, and other pathologists, render it tolerably certain that tubercle is not to be classed among the ordinary products of inflammation, but "is a morbid growth of the lymphatic gland class, and that it may be a mere hyperplasia of the gland-tissue normally minutely disseminated through the organs of the body." On this theory, and in view of the ubiquitous distribution of lymphatic elements through the lung, he holds "that it is easy to conceive that we may have tubercle not only in the form of isolated nodules (miliary tubercle), but also in a more diffused form thickening alveoli, and consolidating the lung by more or less extensive tracts of adenoid tissue (diffused tubercle)." This last form of so-called tubercular development, which he describes as resulting in bands or tracts of uniform homogeneous texture, and ending in fatty degeneration and removal, he takes care to remark, may exist without any tubercle proper, in any ordinary sense of the term. He also distinguishes it from the usual fibrous hyperplasia so common in chronic pulmonary mischief. And, though he admits that many distinguished pathologists, both in this country and abroad, deny altogether the adenoid structure of tubercle, and further confesses that the usual explanation of this peculiar fibroid or adenoid thickening or grey induration of lung refers it to chronic inflammatory and irritative changes, he allows himself to be so far carried away by his theory as to propose as the best name for such a condition of lung "Pulmonary Tuberculisation," and for the general disease "Chronic Tubercular Phthisis."—(See Chapter VIII.) The general opinion has hitherto been that there was quite sufficient confusion already in the use of the words "tubercle" and "tubercular" as applied to lung lesions; and we are all the more surprised to find Dr. Powell advisedly adding to this confusion after observing his punctiliousness in regard to some names, as when, in speaking of fibroid phthisis, he objects to the term "cirrhosis of the lung" as misleading.

Having already occupied too much space on the always interesting questions of pathology, we may say in a word that we have nothing but praise for the more practical portions of the volume, dealing with diagnosis and treatment. The chapters on Pulmonary Cavities and on Tubercular Ulceration of the Bowels in the first part, and the long detailed one on the treatment of Pleural Effusions in the second part, strike us as being especially good. The last chapter of all is devoted to some considerations on the mechanism of respiration, and to the description of the author's Schema of the chest. This instrument, as described and figured in the book, may illustrate admirably certain abnormal conditions, such as pneumothorax; but in making wider applications of it to the conditions in health, the author allows himself to fall into errors, both of physics and of physiology, notably the fundamental one of assuming that in health there is a distinct interval between the costal and pulmonary pleuræ.

In conclusion, we repeat that the volume must prove a very acceptable one to all who have had some little experience in the management of chest diseases, and wish to know the methods and results of those who have had more. We have read the work with much appreciation, often receiving a valuable suggestion even where we were obliged to disagree.

Consumption: its Nature, Symptoms, Causes, Prevention, Curability, and Treatment. By Peter Gowan, M.D., etc., late Physician and Surgeon in Ordinary to His Majesty the King of Siam. London: J. and A. Churchill. Pp. 156.

In his preface, Dr. Gowan mentions as the chief claim his little work has on the attention of medical men, that it contains the first exposition in the English language of Dr. Brehmer's theory of the causation of consumption, which theory he (Dr. Gowan) considers to be the only one quite "adequate to render intelligible the many facts known on this subject, but of which an explanation was not even attempted until the appearance of Dr. Brehmer's inaugural thesis for his doctorate in medicine." Turning eagerly to the exposition of this theory, we find it has at least the merit of simplicity. It appears that it was first put before the profession at Berlin in 1856, and that it seeks to show that certain anatomical characters—namely, "long necks; flat, long, shallow chests, with wide hollow spaces between the ribs; and projecting collar-bones and shoulder-blades," conditions which collectively characterise what Dr. Gowan calls "the consumptive or phthisical habit of body,"—are "of themselves adequate to explain the frequency with which phthisis is developed in persons presenting them."—(Pages 44, 45.) He concludes that the circulation in the lungs of such persons is less rapid than in healthily constituted bodies, and that there is in this way a tendency to recurrent localised pulmonary inflammation. But as the persons presenting these anatomical characters form but a very small percentage of all phthisical patients, Dr. Gowan yet contends that "the essential principle of causation is, however, the same in each class of sufferers—namely, diminished and retarded supply of blood to the lungs and body generally."—(Page 49.) Following out this theory, he holds that "abdominal tumours, by pressing the midriff upwards, squeeze the lungs into a smaller space, rendering necessary increased rapidity of respiration, and consequently of circulation. In this case the flow of blood through the minute vessels of the lungs is further quickened by the reduction in their calibre which is a necessary consequence of the compression to which the organs are subjected."—(Page 53.) In this way he holds that lung lesions are prevented by the existence of abdominal tumours. But perhaps our readers have had enough of this theory.

For the rest, the author, as we think, vitiates the sensible portions of his volume by advisedly giving it too popular a character. Thus in the chapter on the symptoms of consumption he makes some decidedly mischievous statements, as that certain symptoms premonitory of phthisis can be detected not only by the physician, but "even by non-professional persons, before the characteristic physical signs can be discovered."—(Page 17.) He also states that the physical signs "may be detected by any person who chooses to procure a stethoscope."—(Page 7.) Let us hope that laymen, for their own sakes, will carefully eschew such advice, even though one result would certainly be more numerous consultation fees for the physician.

On the Treatment of Pulmonary Consumption by Hygiene, Climate, and Medicine. By James Henry Bennet, M.D., M.R.C.P.L., etc. London: J. and A. Churchill. Pp. 286.

It is unnecessary to do more than note the appearance of the third edition of this work. Its strongest point is undoubtedly the discussion of the climatic treatment of phthisis, and this part of the volume has received most additions in the present issue. The author still upholds the tubercular pathology of pulmonary phthisis advocated by the late Professor Bennett of Edinburgh, and seems to regard the teaching of that great physician and pathologist on this particular subject as a sacred trust, to be maintained against all opposing evidence.

The Charge of Neglect against an Irish Dispensary Medical Officer.—At the adjourned special meeting of the Managing Committee of the Kilbeggan (Co. Westmeath) Dispensary District, held on Wednesday, December 11, the recommendation of the Local Government Board for Ireland, that Dr. James B. Barry, Medical Officer, be called on to resign for neglect of duty, was again discussed. The charges of neglect were in connexion with small-pox cases, which disease was until recently epidemic in the town, and at a sworn investigation they were held proved by Dr. Brodie, the Local Government Inspector. The matter was now gone into by the Committee, and after a protracted discussion, and the hearing of a statement from the medical officers, a division was taken, and it was decided by eight votes to five to call on the doctor to send in his resignation by January 10 next. There are already some candidates in the field for the appointment, which is worth about £150 a year, irrespective of private practice, which is pretty extensive.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

TUESDAY, DECEMBER 3.

CHARLES MURCHISON, M.D., LL.D., F.R.S., President, in the Chair.

PECULIAR DEGENERATION OF THE LUNG.

DR. SAMUEL WEST showed icroscopical sections and drawings illustrative of a case of lung disease of uncertain nature. The subject, a tailor, aged fifty-two, applied at the City of London Hospital, complaining of cough and debility, having been ill for six months. His health had remained fair until six weeks before, when the cough increased, and was attended with thick expectoration and loss of flesh and strength. Dulness and crepitation were discovered at the apex, but the patient was too ill for elaborate physical examination. The temperature varied from 103° to 105°. Death occurred in five days, preceded by delirium. Post-mortem the viscera, with the exception of the lungs, were found to be healthy. The left pleura was adherent; the corresponding lower lobe was congested and œdematous, the upper lobe enlarged, swollen, and solid. On section, greenish puriform and serous fluid was discovered in cavities of a sinuous character, quite superficially under the pleura. In the deeper parts of the lung there were neither cavities nor dilated bronchi. The walls of the cavities contained no cheesy matter; trabeculæ stretched across them. The upper lobe, as a whole, was in substance solid, grey, and granular; the consolidation for the superficial inch and a half being due to pneumonic-like infiltration, and beneath this to a solid œdema. The bronchi were congested. On microscopical examination, smaller cavities were discovered, decreasing in size from the surface. Certain of the cavities contained a transparent homogeneous substance pervaded by a peculiar network, whilst their walls were found to be formed by new growth. The pleura was scarcely thickened. Around the cavities was found consolidated lung-tissue, which presented still smaller cavities, the smallest of all being single alveoli. The consolidation proved to be due to closely aggregated cells lying in a coarse fibrinous network, the cells not being leucocytes, but epithelium. The degeneration of the infiltration appeared to have given rise to the excavation. With respect to the details of the process, they were probably these—that the large cells became transparent in the centre; their nuclei disappeared; and the whole cell was transformed into a transparent granular substance, which could not be stained. Amongst the resulting colloid matter the fibrinous network persisted. The process being centrifugal, the walls themselves became involved in the same change, and thus cavities resulted. In many of the cavities a remarkable concentric arrangement was seen; the lamellæ probably being remains of walls, and the whole indicating pressure from within. There was hardly a trace of caseous degeneration to be discovered. Dr. West said that it was very difficult to refer this specimen to any class of disease. In its localisation it resembled pneumonia; but it was, on the other hand, superficial only, and unaccompanied by pleurisy, and the microscopical appearances were against inflammation. The process was more like a growth of epitheliomatous character, and the degeneration was like that seen in such new growths.

DR. HARE asked whether any of the cavities occurred in the lung-tissue proper; they appeared as if they had all commenced in the sub-pleural connective tissue. Did any cavity commence elsewhere?

DR. DOUGLAS POWELL said that he had observed a case somewhat like the present in a patient who had for some time suffered from ozæna. Pleuro-pneumonia occurred, and rapidly carried off the patient. The cells found in the affected part were much more like epithelium than he had ever seen elsewhere. Still, he would regard such cases as of an inflammatory nature, for the epithelium of the lungs might well take on a hyperplasia. The situation of the cavities so near the surface seemed to indicate that the interstitial tissue there had broken down.

THE PRESIDENT pointed out that the specimens showed that the process in an early stage occurred within the alveoli.

DR. GOODHART said that he should be disposed to agree with Dr. Powell. He had seen gross appearances similar to the present, the disease probably beginning in an emphysematous bleb, and burrowing under the pleura. He had also seen a very similar appearance produced in a case where vomited matters had been inhaled, and a kind of ante-mortem digestion of the lung had occurred.

DR. WEST replied, confirming the President's remark that the disease apparently began in the alveoli. The appearance did not resemble pneumonia in an emphysematous lung, in which there would not be a destructive process involving the walls with epithelial deposit.

PRIMARY CANCER OF THE SUPRA-RENAL CAPSULÆ.

DR. SAMUEL WEST also showed a specimen of this nature. The subject was a patient at the City of London Hospital, who had had winter cough for six years, and for six months persistent cough, dyspnœa, and wasting, with viscid expectoration and hæmoptysis. On admission he suffered from pain and debility, which confined him to bed; the sputum was viscid, and streaked with blood; the temperature 102°. Consolidation was determined at the right base, and was supposed to be pneumonic. This increased in extent; the temperature persisted at 102°; and death occurred in three weeks. Post-mortem, the left lung was found to be emphysematous and congested. The right lung was solid throughout, the upper lobe being œdematous, and the lower pneumonic with a cavity full of a viscid substance streaked with blood, while the walls were irregular as if eroded. All the bronchi of the lower lobe were choked. Microscopically the consolidated lung presented polymorphic cells and detritus. The right bronchial glands were enlarged, and mottled white and grey. The liver was enlarged, without deposits. A large tumour was found behind the liver, five inches in length, which proved to be the supra-renal capsule. The kidney was distinct and healthy, as was also the left supra-renal capsule. No abnormal pigmentation was found in the skin. The microscopical examination of the supra-renal tumour was as yet incomplete, but it sufficed to indicate the malignant nature of the growth.

DR. GOODHART said that a specimen of large tumour of the supra-renal capsule was to be seen in the Hunterian Museum.

DR. COUPLAND said that a case of large cancerous tumour of the supra-renal capsule had been recorded by Dr. Henry Thompson in the *Medical Times and Gazette* (see vol. i. for 1874, page 31). That case was in a policeman who had met with an injury shortly before. The growth was three times as large as the kidney, and weighed two pounds, and the liver was also enlarged, weighing twelve pounds and a quarter. The growth was almost certainly primary in the capsule.

DR. HARE referred to a case of large tumour of the supra-renal capsule which had been under his care in University College Hospital. The left capsule was affected. During life a tumour, which was diagnosed to be the left kidney, was felt under the margin of the ribs; but a remarkable area of resonance could be detected between this tumour and the diaphragm. Post-mortem, it was found that there existed between the kidney and the diaphragm a large supra-renal tumour, which had pushed the kidney so far down that its upper part could be felt below the ribs.

PRIMARY EPITHELIOMA OF THE TONSIL.

MR. LENNOX BROWNE brought forward a man of thirty-nine, an engine-driver, who was suffering from primary epithelioma of the tonsil. Twelve months ago the patient began to feel discomfort when eating, and a "lump" was seen in the throat. His symptoms were now great difficulty in swallowing, obstruction of the left nostril, and nocturnal pain in the left ear. He had lost fifteen pounds weight in a few months. On examination, a large somewhat lobulated warty growth was found upon the left tonsil, which did not involve the neighbouring structures. Large portions of the tumour had twice been removed by operation, but growth had occurred between the two occasions. The microscope revealed the epitheliomatous nature of the growth. There was probably no syphilitic history. No hæmorrhage had occurred as yet. The glands were already infected.

MR. ROBERT PARKER said that he had seen two cases of epitbelioma of the tonsil at the London Hospital. In both cases the subject was young—about twelve years—and the growth slow. In both cases, also, the organs of respiration were invaded, and tracheotomy was performed, the patients living four or six months. The first of the two cases proved to be one of cylindrical epithelioma.

MR. BROWNE replied that he had seen, in all, eight cases of cancer of the tonsil, but the present case was the youngest of

all. Mr. Parker's cases in children were on that account of great interest.

Lung containing Gummata and Tubercle.

Dr. Goodhart showed this specimen, which had been taken from the body of a man of thirty-seven. The patient had been several times in Guy's Hospital, suffering from periostitis, etc., amyloid disease, and finally uræmia. Post-mortem, the lungs were found to contain large tough elastic yellow nodules like gummata, as well as scattered grey tubercle. The patient's father had died of phthisis. The intestine and the larynx were not ulcerated. There was general amyloid change. The question was whether the yellow nodules were gummata. Microscopically, abundant catarrhal products were found within the alveoli, so that the change might be considered to be a cheesy pneumonia. But it was peculiar inasmuch as it was not caseous to the naked eye. The specimen was interesting as probably presenting gummata and grey tubercles side by side, and as indicating that a non-tubercular inflammation might lead to tuberculosis of a local character. It had to be remembered that there was a family history of tubercle. Dr. Goodhart showed a second specimen of lung disease from the body of a man who suffered from repeated hæmoptysis, and died in ten minutes. In the upper lobe of one lung was a large fibroid mass, with a punched-out-looking cavity, and throughout the lung were tough masses like gummata, breaking away from the pulmonary tissue around. In this way perhaps the fatal hæmoptysis had been occasioned. It was probable that the patient had had syphilis, but there were no other evidences in the body of the fact. Besides these masses the lungs contained a number of small shot-like hard nodules, which looked like tubercular growth, but were of doubtful nature.

The President asked whether syphilis would have been suspected in the second case.

Dr. Douglas Powell asked whether there was any history of hæmoptysis in the first case. The changes somewhat resembled what Dr. Reginald Thompson had described as appearances due to old hæmorrhage. The second case seemed to be a specimen of old pneumonia.

Dr. Goodhart replied that he had suspected syphilis in the second case as soon as he saw the lungs. In the first case there was no history of hæmoptysis—indeed, the case had not been looked upon as a case of lung disease at all.

Dr. Green said that the multiplicity of the yellow nodules in the first case was in favour of the inflammatory nature of the process. Histologically it was not possible to distinguish between a syphilitic and a pneumonic growth. The multiplicity and the distribution of the disease were against the syphilitic view.

So-called Piedra.

Dr. Pye-Smith exhibited specimens of the disease of the hair which had lately been described under the name of *piedra*. Some weeks ago a correspondence had been carried on in a medical journal of a "new disease" of the hair. But the various changes which had been included under this name in the discussion were not true examples of piedra, which occurred in Spanish America, and was a disease of the hair of a fungous nature, in which the hair was said to become so hard as to scratch glass. An account of this kind was of course vague and uncertain. Whatever that might be, the present specimens were of a different nature, and the disease of which they were examples was not new, but had been described by Dr. Wilks as long ago as 1859. The hair was said by Dr. Wilks to break into a brush after presenting a number of white swellings; and to contain no fungi. Beigel, of Vienna, had described it even earlier; and the disease was recognised in Hebra's work on Diseases of the Skin. In the present case a man with dark-reddish whiskers complained of numerous white spots by which they were disfigured, and which were not unlike the ova of pediculi, except that they were smaller and not triangular. Under the microscope the white spots showed a regular swelling of the hair in its diameter, and at a short distance a similar change, and so on, three or four spots being found on a single hair. The superficial layer of the hair then became split like the fibres of a green bough when it is twisted into longitudinal fibres. This splitting advanced until the whole of the cortex yielded, and the hair broke across. The specimens of hairs were difficult to preserve on account of their friability. The question arose—Did the diseased hairs contain spores? It was true that the soft cells oozing through the broken cortex looked like spores, but there were no true spores; and the disease was not parasitic. The real nature of it was difficult to suggest. Beigel had spoken of the development of gas in the medulla which led to rupture of the hair. But there was no evidence of the presence of gas. Perhaps the hair became dry and split superficially, and thus continuity of the internal parts became impossible. The hairs were affected at intervals only. The root and the root-sheath, and the skin, were perfectly normal. The disease was not contagious. The cure was simple—namely, to shave off all the hair, whereupon the new crop grew perfectly healthy.

Mr. Kesteven said that he had seen a case of this disease. The hair affected was of a light-reddish colour, and the hair on the pubes was also affected. The disease appeared to him to be due to a swelling of the medulla which caused rupture.

Dr. Hoggan said that Dr. Pye-Smith's specimens did not resemble those which he had himself described in the discussion referred to. In these fungi were seen, and appeared to grow in the interior of the hair and to give rise to rupture. The word *piedra* was Spanish for *stone*. The cause of the disease might be either a granular degeneration of the cells of the hair, or the growth of the spores of a fungus.

Recent Specimen of Hip-Joint Disease.

Mr. Morgan showed the structures of the hip-joint of a child that had died of tubercular meningitis, taken from the body only four hours before. The patient had suffered from symptoms of hip-joint disease since July. The ligamentum teres was found to have disappeared completely; the cartilages had lost their glossiness, but nothing more; the synovial membrane was lying in a bunch at the bottom of the cavity. There were bodies or elevations to be seen upon the surface, which might be tubercles. General miliary tuberculosis and cheesy change were found throughout the viscera.

Mr. Morrant Baker asked how often the head of the femur had been found fairly dislocated on to the dorsum ilii in disease of the joint. He had himself on one occasion only seen it dislocated to such an extent, and even in that case the bone was not absolutely clear of the acetabulum. He believed that in these cases what did occur was either, first, a partial dislocation from destruction of the tissues; or, secondly, displacement from destruction of the head of the femur, by pulling-up of the trochanter.

Mr. Walsham suggested that the present case might be an example of congenital absence of the ligamentum teres.

Dr. Lediard said that he had at present under his care a boy of fourteen, with complete dislocation of the head of the femur; and he would be glad to bring him before the Society.

Multiple Sarcoma in an Infant.

Mr. Morgan also related the case of an infant in which sarcoma of the scapula was rapidly followed by similar growths throughout the body. The mother of the patient was a perfectly healthy woman of forty-five, and its grandmother was alive; its father was healthy; but nine out of thirteen of its brothers and sisters had died of various diseases. At the age of four weeks a small lump as large as a nut appeared on the left acromion, the skin being freely movable over it. Three days later it was found to be larger, while another nodule was discovered at the angle of the same scapula. Three days later, lumps were found on the skin of the abdomen and back. The child wasted, was hungry, and slept much; and it died at the end of five weeks. Post-mortem, the body was much emaciated, while the belly was big. A tumour as large as a pigeon's egg was found growing from beneath the periosteum of the spine of the left scapula. A similar but smaller nodule was found at the scapular apex; and numerous small tumours of a similar appearance were scattered through the skin. Five different nodules were found connected with the heart. Behind the abdominal peritoneum a large mass was discovered which proved to be the right kidney, while the left kidney and left supra-renal capsule contained smaller growths. The liver also presented encephaloid nodules; but the spleen was healthy. Microscopical sections of the tumours showed no alveolar structure, but densely aggregated cells lying in a fibrillated or granular basis, whilst in some parts the cells were elongated, and somewhat parallel in disposition. A nodule from the liver presented the same appearance as the "original tumour." The case seemed to be remarkable from the early age of the subject, though previous cases of the same kind had probably been described under the name of "cancer."

In reply to the President, Mr. Morgan said that it was in the scapula that the disease first made its appearance.

EPIDEMIOLOGICAL SOCIETY.

WEDNESDAY, DECEMBER 4.

Surgeon-General JOHN MURRAY, M.D., President, in the Chair.

INFECTION REGARDED FROM A DARWINIAN POINT OF VIEW.

DR. HUBERT AIRY read a paper on the above subject. He said:—Those who accept the principle of the law of resolution by natural selection will readily admit that not only has bodily structure undergone modification in the course of ages, but also there must have been modification of functional properties. In order to fully understand the form and function of any organ, we ought to study it in relation to its historical development. This is now the object of the science of comparative anatomy. In like manner it must be admitted that disease, consisting as it does for the most part in disorder of form or function of certain organs, must itself be liable to variation. This feature must be one element in the rivalry of variant forms. The form which brings with it the least fatal appanage of disease will so far have the advantage over its rivals, and be more likely to survive. It is, however, possible that in some cases a greater liability to disease might be more than counterbalanced by some concurrent advantage gained in another direction. A disease, in short, has a history and a pedigree which we ought to know if we are to obtain a full scientific insight into its nature and relations. This should be the object of a new science of comparative pathology parallel to that of comparative anatomy. A comparative study of disease in different races of mankind, especially in the lowest, extending to the quadrumana, and thence downward through the whole animal kingdom, might be expected to throw light on many of the simple elements of disease, on inflammatory and degenerative changes, on malignant growths and functional aberrations. Confining attention to the communicable diseases, there is ground for believing that in any disease in which a tendency to become infectious is at all possible, that tendency is likely to be developed and intensified in course of time. The more infectious the disease becomes, the more numerous will be the persons attacked by it, and the greater will be its chances of survival by reproduction. Similar reasoning leads to a similar conclusion in respect of hereditary disease. In either case the conditions are practically the same as those of a favoured variation in animal life, enabling its possessors to leave more offspring after their own likeness than other less favoured forms. The two theories of infection which demand especial consideration are (1) the germ theory, or theory of *contagium vivum*, of which perhaps Dr. William Roberts is the foremost advocate in the British medical world; and (2) the glandular secretion theory of Dr. Benjamin Richardson. On the former hypothesis it is plain that we are dealing with a case of parasitic adaptation. If the contagium is a living organism, depending for its support upon human susceptibility, it must itself be capable of variation to match the variability of its human home and food. As the human syncrasy varies in the direction of insusceptibility, so the parasitic microzyme will, step for step, attain new virulence; and as long as man and microzyme are allowed to meet, there would seem to be no possibility of a cessation of the process. Natural selection would, however, be fairly satisfied by so much variation on both sides as should leave men susceptible of infection, but not in a fatal degree. The bearing of the Darwinian theory on the problem of infection, and especially on the *quasi de novo* appearance of infectious disease, is fully recognised by Dr. Roberts from the germ theorists' point of view in his address to the British Medical Association, August, 1877, and also by Dr. Thorne Thorne in the paper already referred to. Dr. Richardson's theory, supported by striking experiments, that the contagium is the diseased secretion of one or other of the glands of the human body itself, which possesses the property of altering the kindred secretion in a previously healthy body by catalytic action, might at first sight appear to give little scope for the operation of natural selection; but it will be admitted, on consideration, that any matter which possesses the property—never mind how—of reproducing its like with possible variations is, *ipso facto*, subject to that law. If the first step be granted, that a morbid secretion can in any degree induce a similar morbid action in another body, there is no reason for denying that the process might in time attain the most virulent infectiousness. Spontaneous origination of infectious disease on the glandular hypothesis can hardly be understood unless we suppose that for each gland there is a certain specific disorder of function into which it is liable to fall either under intrinsic nervous disturbance or under the contact influence of foreign morbid secretion. The facts concerning diphtheria which suggested to Dr. Thorne the idea of progressive development of infectiousness were provisionally explained by him in terms of the germ theory, but they also admit of explanation on the glandular theory when taken in connexion with Dr. Sanderson's experiments on the infectious properties of the exudation of simple peritonitis. It does not appear that the foregoing considerations lead to any decision respecting the intimate nature of infectious disease.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, DECEMBER 10.

CHARLES WEST, M.D., F.R.C.P., President, in the Chair.

THREE CASES OF DISTAL DELIGATION OF THE CAROTID AND SUBCLAVIAN ARTERIES FOR INNOMINATE ANEURISM.

MR. RICHARD BARWELL read this paper. After referring to a case of innominate aneurism which he had successfully treated by double distal deligation, and which is published in the *Transactions* of the present year, the author related the case of J. B., a man aged forty-eight, who died from the effects of the anæsthetics thirty hours after the operation. The parts, showing very large aorto-innominate aneurism, were exhibited. This operation was performed on December 6, 1877. On the same day Mr. Barwell tied the same vessels for Laura G., aged thirty-seven, who had a pulsating aneurismal tumour perforating the upper anterior walls of the chest on the right side, and also above the clavicle. Except for the aneurism the patient appeared healthy, but extremely nervous and excitable. After the operation no brain symptoms were developed, nor any pyrexia, but her progress was fluctuating, the variations appearing to be in part connected with the catamenial period, in part with her mental condition. The patient left the hospital in July, having no tumour, though pulsation from the solidified aneurism, communicated by the aorta, could still be felt. On January 10, 1878, Mr. Barwell tied the same vessels for Catherine H., aged twenty-seven, who had a visible pulsating tumour, about the size of a small walnut, above and a little outside the sterno-clavicular joint, and also intra-thoracic aneurism. This patient, rather feeble and extremely nervous, also made a fluctuating recovery. She had no cerebral symptoms, and no pyrexia. She left the hospital on July 22, a tumour remaining in the above situation, which, though probably not quite, yet is nearly, Mr. Barwell believes, solid. The cough and dyspnœa, from which she had previously suffered, have quite disappeared. After some remarks concerning the excitability of the vaso-motor system, which in these patients always accompanied the menstrual period, the author gave his views concerning the use of catgut as a ligature, and stated his belief that with such material it is advisable to tie the vessels with very moderate force, so as not to divide the middle coat. He attributed his success to this mode of tying. The statistics of these operations are as follows:—Including the subjects of the present paper, eleven cases in all have been thus treated; of these eight have been unsuccessful, all of them dying at various periods from the effects either of the aneurism or of the operation. The case Mr. Barwell recorded last year, and the two now related, constitute the three successful ones.

Mr. BROOKE asked if Mr. Barwell, when he found it difficult to tie the subclavian, had used his needle. It consisted of a spiral about three-quarters of a turn of an ordinary cork-screw. There was no difficulty in using it, but it seemed to have dropped out of sight.

Mr. HEATH was specially interested in Mr. Barwell's case, inasmuch as one of his own had been the first successful case of ligaturing the carotid and subclavian for innominate aneurism as was then supposed. After death, however, it was found that the disease was aortic, not innominate; and he thought that in all probability the case of L. G., recorded by Mr. Barwell, would drop out of the list of innominate into that of aortic aneurisms thus treated. The sphygmographic tracings indicated the same thing. There could be no doubt, however, as to the great benefit received from the operation, though this was no proof that the aneurism was innominate.

In the other case the persistent pulsation below the ligature was peculiar. He could not think that it was possible to be so exact as Mr. Barwell said in drawing a ligature so as to divide the internal coat only. He thought it best to cut both; he had failed in this way himself, and had been compelled to tie elsewhere. He thought the hempen ligature quite as good as the catgut.

Mr. Holmes considered that there was a great deal of difficulty in distinguishing aortic from innominate aneurism. But he narrated an instance where in a case of aortic aneurism he tied the carotid only. The patient was then dying, but recovered, and is now able to earn her bread. He could not understand the good that tying the subclavian would do. If Mr. Barwell's account was exact, it was difficult to understand how the circulation was carried on. There was a specimen in the museum of St. George's Hospital showing consolidation of an aneurism after the patient had become hemiplegic. The aneurism did not, however, consolidate completely, for it was shown post-mortem that an open channel was left through it in the direction of the subclavian. All tended to show that tying the subclavian was rather a hindrance than an aid to the success of the operation. He thought it best to tie the carotid only. One of the cases exhibited by Mr. Barwell seemed to go against this theory, but part of the aneurism seemed pervious. He believed with Mr. Heath as to the ligature. He would tie catgut as tight as hemp. He hardly thought it possible to cut through the inner coat only. A catgut ligature remained *in situ* for a good long time, and he had shown a specimen illustrative of this. He held that it was much more risky to tie it loosely than tight. There were cases where circulation was re-established after tying by catgut, and this was probably due to the ligature not being drawn tight enough.

Mr. Heath reminded Mr. Holmes that the case in which he tied the carotid only was a ligature of the left carotid—quite a different condition of things from that recorded by Mr. Barwell.

Mr. Holmes said that was so, but he maintained that the principle was the same. The clot from the tied vessel extended into the aneurism in all cases.

Dr. Kelburne King said that in his case the pulsation in both vessels was abnormally strong, and the aneurism extended close up to the arteries tied. If one vessel only had been tied, then the aneurism would have extended into the other. The clot extended to both ligatures. The left subclavian had been almost entirely divided, so that only the left carotid and a portion of the subclavian were left to carry on the circulation. The stoppage must have been gradual, or the symptoms would have been more distinct and abrupt.

Mr. Barwell, in reply, said that the condition of the carotid in C. H. was very peculiar, for there was pulsation in it quite up to the point of ligature, but none beyond. He thought the whole would ultimately consolidate. Mr. Heath's case was the first successful one of double distal ligature, but he thought L. G.'s case was mainly innominate. He did not hold Mr. Holmes' view as to the propriety of tying the carotid only. The sets of cases were not analogous. Mr. Holmes seemed to think that by tying the subclavian he would increase the blood-stream; that was hardly possible. At all events, the aim in all these cases was to diminish the blood-flow as much as possible. The longer the radial pulse was absent, he thought, the better for the patient. Arrest of the flow through the subclavian was really more important than the other. As to the ligature, he did not care whether he cut through the inner coat or not; but he did not want the middle coat divided. The hempen ligature must cut its way through the vessel before it could be removed; that was not the case with catgut. But with the latter there was a risk of slipping or slackening, so that the knot should be carefully tied.

LIVERPOOL MEDICAL INSTITUTION.

Thursday, November 7.

Dr. W. Carter, Vice-President, in the Chair.

Specimen of Arrest of Development at the Shoulder.

Mr. Paul exhibited a specimen of arrest of development at the shoulder, which had been removed by Mr. Bickersteth from an adult gentleman. It consisted of an inverted V-shaped bone, representing the metacarpal bones united at their bases, to which were attached two sets of modified phalangeal bones, corresponding to a thumb and one finger. The apex of the V was attached to a small scapula by fibrous tissue; the other joints were covered with articular cartilage. On the palmar aspect was a fair-sized artery, corresponding to the radial, forming a small palmar arch, the distribution of its branches being nearly normal, as also was that of the nerve corresponding to the median nerve. On the dorsum there were a vein and a nerve, but no artery. No muscular structure was found in it. The measurement of the member was four to five inches by two inches and a half. The skin resembled that of the hand, but there was no separation of it corresponding to the interval between the bony digits; at the end were attached two nails.

Renal Calculus.

Mr. Paul also showed (for Mr. Bickersteth) a specimen of renal calculus from a man who died in the Royal Infirmary. There was a history of four or five months' pain in the loins, and vesical calculus was detected two months and a half before admission. The man was admitted with retention of urine owing to obstruction of urethra by impacted calculus. This was extracted; and a day or two after, a stone was found in the bladder, and crushed. The man's condition became worse, and, a fortnight after, he had a "rigor," and increased dulness in the left loin was detected. A week later he died, having been unconscious for four days. A post-mortem examination showed a beautifully branched calculus, the size of a walnut, in the pelvis of the right kidney; also two smaller calculi, the size of a marble and of a small bean respectively. Suppurative nephritis was commencing. The left ureter was completely blocked with a calculus. The pelvis of the left kidney was much dilated, and filled with pus; the cortical substance much thinned. There was a perinephritic abscess, and left empyema. There was some cystitis, and the urethra presented a ragged cavity, where one of the calculi had lodged.

Kidneys and Ureters after Lithotomy.

Dr. Rawdon exhibited the kidneys and ureters of a boy who died thirty-three days after lithotomy. The left ureter was much dilated, and blocked with friable cretaceous substance, in which two calculi were embedded, the larger resembling a date-stone. The left kidney was much atrophied, and there was a large perinephritic abscess in connexion with it. The right kidney and ureter were normal, except that the kidney was somewhat hypertrophied. The calculous deposit in the ureter was diagnosed a few days before death by digital examination per rectum, this examination having been made in consequence of the serious symptoms which suddenly set in three or four days before the child's death.

Round-celled Sarcoma of Buttock.

Mr. Rushton Parker showed a large round-celled sarcoma, which he had removed from the buttock of a boy fourteen years of age. It had commenced as a small lump on the inner side of the buttock nine months before Mr. Parker first saw it. The growth was slow at first, rapid afterwards. When Mr. Parker first saw it, it was large, ovoid, vegetable-marrow-shaped, elastic, freely movable under the skin, but not so freely over the bone. It was excised on October 2, and was found to arise from the fascia of the gluteus maximus; the sciatic nerve was slightly adherent to it. There was but little hæmorrhage, and that principally from large cutaneous veins, the deep vessels being secured by aneurism-needle and ligature before division. The patient was not yet convalescent.

Exophthalmos.

Mr. George Walker related details of two cases of exophthalmos—(1) caused by intracranial aneurism; (2) caused by orbital tumour. The first case was that of a woman aged thirty-three, who came with an account of having received a round-handed blow on the right side of her head a month previously. Immediately after the blow, she said, she felt as if something had given way in her head, and she felt a "beating" in it. Fourteen days later she noticed swelling of the eyelids and slight protrusion of the eye. Mr. Walker found considerable swelling of the lids and protrusion of the globe. Ophthalmoscopic examination revealed general obstruction of the venous and lymphatic circulation. A bruit could be heard on auscultation over the temporal region, this bruit being absolutely stopped by pressure on the common carotid. The patient disappeared for six or seven weeks, and then returned with the symptoms aggravated; the vision of the

affected eye was almost *nil*. After a few days' preparation Mr. Walker tied the common carotid. Next day there was somewhat less swelling in the orbital region, and ten days later, improvement in this respect was manifest. Three weeks after the operation she could read large type, and now (when the woman was brought before the Society) she said her seeing power was nearly as good as ever, and there was very little prominence of the eye. The second case was that of a woman, aged sixty-four, who was first seen by Mr. G. Walker three years ago. She had then slight protrusion of the eye. She made her appearance again before him in September last with the eye excessively protruded, the lower lid everted, and the conjunctiva much chemosed. The intra-ocular pressure was not much; but in the outer and lower part of the orbit a somewhat nodulated body could be felt, but not with sufficient distinctness to allow of a positive inference being drawn as to its nature. Pressure on the carotid did not affect this case. As it was clear, however, that the disease was in the orbit, the conjunctiva was dissected up from the floor of the orbit, so that the swelling could be examined with the finger. It was found to be solid, apparently filling up the orbit, and adherent to the outer wall. The eyeball was enucleated, and the tumour removed by means of a straight bistoury passed down the apex of the orbit, and carried round with a sawing motion; traction with the finger then sufficed to tear it from the pediculated portion remaining. The patient suffered much from febrile reaction, but was doing well at the time of the relation of the case. Mr. Walker then made some remarks upon the leading features of the two cases, principally from a diagnostic point of view. He directed attention principally to the first case, which he believed to have been one of aneurism of the internal carotid after its emergence from the petrous bone.

Aneurism of the Abdominal Aorta.

Mr. Banks related the details of a case of aneurism of the abdominal aorta, in which abdominal section was performed with the purpose of placing a ligature round the vessel. The patient was a man fifty-six years of age, who had always enjoyed good health until recently, when he had been out of work, and, in consequence, in rather low condition. Three weeks before Mr. Banks saw him the man walked from Manchester to New Brighton (a distance of about forty miles) in one day. During the latter part of his journey he suffered much from pain in the left side of the abdomen, extending down the leg. This pain never altogether left him. He obtained some light employment, at which he continued for a week, but on two occasions he felt such violent pain, accompanied by a sensation of "something giving way," in his abdomen, that he fainted and fell down. The symptoms became more severe, and three weeks after his long walk he was admitted into the Liverpool Royal Infirmary under Mr. Banks's care. There was by that time an obvious swelling in the lower part of the left side of the abdomen: posteriorly it reached back from the last rib to the crest of the ilium; anteriorly, it ran down along the iliac fossa almost to Poupart's ligament; internally, it passed inwards to about three inches from the middle line, as high up as the umbilicus. There was distinct lateral expansile pulsation; and an aneurismal bruit could be heard posteriorly. The thigh was in a semi-flexed position, and any attempt to straighten the limb caused great pain. The question, first of all, as to the exact situation of the aneurism, and next, of the best mode of procedure to be adopted, was anxiously considered by Mr. Banks and his colleagues; and compression of the aorta having been found next to impracticable in this instance, it was decided that abdominal section (performed with full antiseptic precautions), with the view of placing a ligature round the healthy portion of common iliac or aorta, would give the patient the best, though not a very promising, chance of cure. This operation was undertaken, therefore, on July 3. The patient being under the influence of ether, a long incision was made in the middle line, extending above the umbilicus. But on pulling aside the intestines, nothing but a large dark heaving mass, with the peritoneum tightly stretched over it, could be seen. No vessels, not even the lower part of the aorta, could be made out until the finger was pushed up as far as the renal arteries; everything, in fact, was so matted together or so absorbed by pressure into the pulsating tumour, as to be practically indistinguishable. The abdominal opening was therefore closed again. The operation had been performed under a cloud of carbolic spray. Patient did not seem much depressed by it; and for two days appeared in much the same condition as before the operation; then he commenced to sink, and died, apparently from exhaustion. Post-mortem, the great portion of the aneurismal mass (which occupied the left iliac and lumbar regions, pushing its way up into the left hypochondrium, and extending inwards a little beyond the median line) was seen to be composed of a diffuse aneurism originating in a small true aneurism which sprang from about half an inch above the bifurcation of the aorta, at its posterior aspect and right side. There were distinct traces of the several fresh starts that had been made in the course of this false aneurism, explaining some of the peculiar features in the symptoms described. The colon, from the splenic to the sigmoid flexure, was adherent to its anterior aspect; the ureter and inferior mesenteric artery passed over it, and the iliac vessels were pushed down into the basin of the pelvis. Mr. Banks discussed at length various pointed in the diagnosis and treatment of the case; and in concluding his remarks observed that it has of late years been pretty conclusively shown that the peritoneal cavity may be explored without such necessarily fatal results as were formerly anticipated, and that many operations involving abdominal section may now be performed with comparative impunity. He thought that the progress in surgery which had already been made in this respect would in future result in the cure by operative measures of many cases which had been hitherto looked upon as desperate and beyond the reach of surgical interference.

OBITUARY.

JOHN BIRT DAVIES, M.D. Edin., F.R.C.P. Lond.

Dr. Birt Davies passed quietly away, seated in a chair, and surrounded by his books and papers, at his residence, in the Hagley-road, Birmingham, on the 11th inst., at the ripe age of seventy-nine years. He was a native of Natley Scures, Hampshire, and born on May 30, 1799. His father was of Welsh birth, and he himself passed his early school-days in the Principality. He pursued his medical studies at the University of Edinburgh, where he graduated in 1822. Subsequently he became a Fellow of the Royal College of Physicians, London. Soon after taking his degree he settled in Birmingham, and before long obtained the appointment of Physician in the General Dispensary. He was unsuccessful in his endeavours to be elected a member of the honorary staff of the General Hospital—other than medical qualifications at that time exercising their preponderating influence on these occasions. But Dr. Davies' ability found scope in his connexion with the Birmingham School of Medicine, of which (with the late Mr. Sands-Cox and Mr. Edward Johnstone) he was one of the founders, and subsequently in the Queen's College (an offspring of the School), in which for twenty years he held the chair of Forensic Medicine. During his efforts in promoting the School of Medicine, Dr. Davies established in Bath-row a fever hospital, now known as the Bath House; and here he treated the only cases of Asiatic cholera which occurred in Birmingham during the epidemic of 1832. On the founding of the Queen's Hospital, in 1844, in connexion with Queen's College, Dr. Davies was elected one of the first three Physicians, and for sixteen years was the Senior Physician to the Hospital. Here, as in the Queen's College, he identified himself with the policy of his friend Mr. Sands-Cox, whom he supported in many contests, both in the College and Hospital. Dr. Davies was early in life a warm politician. He strongly advocated the incorporation of the borough, and on the granting of the Charter was elected by the Town Council as the first Coroner, and included in the first batch of borough magistrates. His appointment as Coroner led to some litigation, his legal right to the office being disputed by the late Mr. Welchman Whateley, who had been the faculty Coroner for the division of Warwickshire in which Birmingham is situated. The confirmation of the Charter by Act of Parliament, however, settled the point challenged. Mr. Whateley received a compensation allowance, and Mr. Davies retained the Coronership until June 8, 1875, when he resigned, having held the office for thirty-six years. The Town Council, on accepting Mr. Davies' resignation, passed a resolution recording its high appreciation of the zeal and ability with which he had discharged his onerous judicial duties. During these thirty-six years he held about thirty thousand inquests, and in the whole of that time, we believe, he never took a holiday or appointed a deputy.

MEDICAL NEWS.

UNIVERSITY OF DUBLIN.—At the Michaelmas Term Examination for the degree of Bachelor of Medicine, held in Trinity College, on Monday and Tuesday, December 2 and 3, the successful candidates were arranged in the following order of merit:—

Yourdi, John R.	Wilson, West.
Gubbins, Charles O'G.	Deane-Freeman, William.
Moore, Thomas T.	Baker, Fausset M.
Myles, Edmund H.	Westby, Ashley J.
Murray, Henry W.	Gage, Robert C.

Love, Henry.

At the Examination for the degree of Bachelor in Surgery, held on Monday and Tuesday, December 9 and 10, the following candidates were successful—the names being arranged in the order of merit:—

Baker, Fausset M.	Myles, Edmund H.
Gubbins, Charles O'G.	Deane-Freeman, William.
Hetherington, Reynolds P.	Westby, Ashley J.
Yourdi, Joseph R.	Campbell, Arthur J.
Gibson, Joseph.	Gage, Robert C.

At the Examination for the diploma in State Medicine, held on Thursday, December 12, and the following days, the diploma was granted to—

James C. Hall, M.B., B.Ch. Univ. Dub.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were admitted Licentiates on December 16:—

Courtenay, John Hoysted, 35, Richmond-terrace, Clapham-road, S.W.
Dennys, George William Patrick, 24, Claremont-square, N.
Gill, John Wallis, St. Bartholomew's Hospital, E.C.
Hallsworth, Francis Arthur, 17, Claremont-square, N.
Leak, Hector, Royal Infirmary, Manchester.
Le Cronier, Hardwick, St. Helier's, Jersey.
McCausland, Albert Stanley, 11, Glo'ster-place, Lancaster-gate, W.
Messum, Gordon Bonnington Willie, Guy's Hospital, S.E.
Morley, Edward John, 29, Merrick-square, S.E.
Shann, William Arthur, 42, Halsey-street, S.W.
Wickers, Henry Adolphus, Charing-cross Hospital, W.C.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the ordinary monthly examinations for the licences of the College, held on Monday, Tuesday, Wednesday, and Thursday, December 9, 10, 11, and 12, the following candidates were successful:—

For the licence to practise Medicine—

Baxter, James Clement.	McDonnell, Edward Patrick.
Butt, Edward.	Moffitt, John Ernest James.
Dahms, Anna.	Nicolls, Archibald John.
Fennell, James Patrick.	Poett, Patrick Matthias.
Gordon, Robert.	Smartt, Thomas William.
Horne, Andrew John.	Volatti, William Joseph.
McArdle, Edward Laurence.	Woolstencroft, Joseph.

For the licence to practise Midwifery—

Dahms, Anna.	Nicolls, Archibald John.
Fennell, James Patrick.	O'Connor, Daniel Roderick.
Horne, Andrew John.	Poett, Patrick Matthias.
McDonnell, Edward Patrick.	Roberts, James Dixon.
McLearn, Isaac Crawford.	Smartt, Thomas William.
Moffitt, John Ernest James.	Woolstencroft, Joseph.

For the licence as Midwives and Nursetenders—

Bolger, Catherine.	Mackie, Catherine.
Gavin, Catherine.	Romeril, Maria.

APOTHECARIES' HALL, LONDON.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, December 12:—

Davy, David Henry, Oakleigh-park, N.
Dismorr, Henry, Gravesend.
Sanctuary, Thomas, Hayle, Cornwall.
Warner, James, Bonner's-road, Victoria-park.
Waghorn, James, Redhill, Reigate.

The following gentleman also on the same day passed his Primary Professional Examination:—

Baker, Wm. J., St. Bartholomew's Hospital.

BIRTHS.

BRUCE.—On December 14, at Cheltenham, the wife of Lewis Stanhope Bruce, M.R.C.S. Eng., Surgeon-Major Bombay Army, of a daughter.

DARKE.—On December 11, at Salisbury, the wife of F. R. P. Darke, M.R.C.S. Eng., of a son.

DOUGLAS.—On December 11, at Tantallon, Bournemouth, the wife of Justyn G. D. Douglas, M.D., of a son.

EASTON.—On December 15, at 19, Norfolk-crescent, Hyde-park, the wife of John Easton, M.D., of a son.

SELLON.—On November 19, at Grays, Essex, the wife of J. W. Gore Sellon, L.R.C.P. Lond., M.R.C.S., of a son.

MARRIAGES.

HANDYSIDE—SMITH.—On December 9, at Glasgow, William L. B. Handyside, eldest son of William Handyside, to Adelaide Isabella, eldest daughter of William Towers Smith, F.R.C.S., of 21, Upper Phillimore-place, Kensington.

HENDERSON—MACLAGAN.—On December 11, at Berwick, James Henderson, of the National Bank of Scotland, Berwick, to Katherine Charlotte, eldest daughter of Philip W. Maclagan, M.D.

HEWAT—FERGUS.—On December 10, at Glasgow, Archibald Hewat, actuary, of Glasgow, to Elizabeth, only daughter of Andrew Fergus, M.D.

HORNER—CARDELL.—On December 16, at Lyonsdown Church, Hertfordshire, Arthur Claypon Horner, M.R.C.S., of Tonbridge, Kent, to Frances Cardell, third daughter of Edward Yalden Cooper, Esq., of Wincanton, Somerset, and widow of George Cardell, M.R.C.S., of the same place.

MARRECO—WAGGETT.—On December 12, at Notting-hill, Walter Freire-Marreco, of Park-villas West, Richmond, to Gertrude Blechynden, second daughter of John Waggett, M.D., of Ladbroke-grove, Kensington-park-gardens.

DEATHS.

BELL, WILLIAM, F.R.C.S., and J.P., at Eastgate, Rochester, on December 12, aged 75 years.

BLAKISTON, the Rev. PEYTON, M.D., F.R.S., late of St. Leonards-on-Sea, suddenly, at 140, Harley-street, on December 17, in his 78th year.

DAVIES, JOHN BIRT, J.P., F.R.C.P., late Coroner for Birmingham, at The Laurels, Hagley-road, Birmingham, on December 11, in his 80th year.

MOTYER, WILLIAM, M.D., at Redbrae, Maybole, Ayrshire, on December 11.

VACANCIES.

CARLISLE DISPENSARY.—Junior House-Surgeon. Applications, with copies of testimonials, stating age and qualifications, to Mr. J. H. W. Davidson, Hon. Sec., 8, Devonshire-street, Carlisle.

CENTRAL LONDON SICK ASYLUM DISTRICT.—Assistant Medical Officer and Dispenser. Applicants must be single men, with a good knowledge of dispensing, and must possess a double qualification according to the regulations of the Local Government Board. Applications on a printed form (which will be provided), with not more than four recent testimonials, to William Appleton, Clerk, on or before January 4, 1879.

CHORLTON-ON-MEDLOCK DISPENSARY, MANCHESTER.—Honorary Surgeon. Applications to the Secretary at the institution.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, VICTORIA-PARK.—Assistant-Physician. Applications to the office of the Hospital, 24, Finsbury-circus, E.C., on or before December 28.

EVELINA HOSPITAL FOR SICK CHILDREN, SOUTHWARK-BRIDGE-ROAD, S.E.—Registrar and Chloroformist. Applications, with testimonials, to the Secretary, on or before December 27.

GREAT NORTHERN HOSPITAL, CALEDONIAN-ROAD, N.—Ophthalmic Surgeon. Candidates must be Fellows of the Royal College of Surgeons of England. Applications, with copies of testimonials, to the Secretary, on or before January 6, 1879.

INFIRMARY FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST, 26, MARGARET-STREET, CAVENDISH-SQUARE, W.—Visiting Physician. Candidates must be Members of the Royal College of Physicians of London. Testimonials to the Secretary.

ST. GEORGE'S UNION: E AND F RELIEF DISTRICTS.—Outdoor Medical Officer. Candidates must be duly qualified medical practitioners. Applications, with testimonials, to Thomas Worlock, Clerk, on or before December 31, at the Clerk's Offices, Mount-street, W.

SALOP AND MONTGOMERY COUNTIES LUNATIC ASYLUM, BICTON, NEAR SHREWSBURY.—Assistant Medical Officer. Applications, stating age and qualifications, with testimonials, to the Medical Superintendent, on or before January 4, 1879.

UNIVERSITY OF LONDON.—Registrarship. Candidates are invited to send in their applications not later than February 1, 1879. Further information may be obtained on application to Thomas Douse, Clerk to the Senate, University of London, Burlington-gardens, W.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population in computed according to the census of 1871.

RESIGNATION.

Frome Union.—The Nunney District is vacant; area 13,881; population 2689; salary £77 per annum.

Petersfield Union.—Mr. G. Pink has resigned the First District; area 18,857; population 2559; salary £67 10s. per annum.

Redruth Union.—Mr. G. Vawdrey has resigned the Western District; area 9350; population 7572; salary £32 per annum.

Wigan Union.—The Wigan District is vacant; salary £81 per annum. Also the Workhouse; salary £49 per annum.

APPOINTMENTS.

Hanley.—Mr. James Baynes, jun., as Analyst for the Borough.

Hunslet Union.—Matthew Shirley, L.F.P.& S. Glasg., L.R.C.P. Edin., to the Workhouse.

Market Harborough Union.—Thos. Macaulay, M.R.C.S., L.S.A., to the Sixth District.

Saffron Walden Union.—John E. N. Whitlock, L.R.C.P. Edin., L.F.P.& S. Glasg., to the Seventh District.

Tenterden Union.—J. G. Terry, M.R.C.S., L.S.A., to the Wittersham District.

West Derby Union.—Robert S. Archer, M.B. and C.M., to the North Everton District.

EDINBURGH ROYAL MEDICAL SOCIETY.—The following gentlemen have been elected office-bearers for the current session:—*Presidents:* C. W. Cathcart, M.A., M.B., C.M.; Charles Begg, M.B., C.M.; G. Sims Woodhead, M.B., C.M.; Albert Wilson, M.B., C.M. *Hon. Secretaries:* E. H. Greves; Ed. Fowler Scougal, M.A., L.R.C.S. *Library Curator:* Fred. Cox. *Museum Curator:* William Fligg.

LOSSES OF THE RUSSIAN ARMY IN EUROPE.—The *Wien. Med. Wochenschrift* (November 16) quotes from the *Moniteur Universel* the following figures, as derived from authentic sources:—The entire Russian Army in Europe numbered 610,000 men. Of these, 800 officers and 58,000 men who were wounded, and 1500 officers and 62,000 men sick, were brought home by the railways. In Roumania 31,000 men died, and in Bulgaria 99,000 men—viz., 80,000 from wounds or disease, and 19,000 from frost. Moreover, forty-two ships transported 31,000 men from San Stefano to Odessa. The total losses in Roumania and Bulgaria amount to 130,000 deaths and 151,950 sick and wounded brought back to Russia. Of these, 80,000 have recovered and 29,000 yet remain in the hospitals, 42,950 having died, raising the total deaths to 172,950. These losses are those which are acknowledged by the Army officials themselves, and can only be regarded as the minimum of what really occurred at the European seat of war. The losses in Asia will probably never be exactly known.

ABSCESS OF THE KIDNEY IN AN INFANT.—Dr. Church related to the New York Academy of Medicine (*New York Med. Record*, November 2), the case of a child who, born apparently healthy, was suddenly attacked, when three weeks old, with severe pain in the abdomen, accompanied by considerable fever. At the end of ten days a tumour appeared in the left hypogastric region, whence, two or three days later, pus was drawn off by the aspirator. The infant dying, the left kidney was found filled with, and its substance infiltrated by, pus. Dr. Church regarded the case as very rare at the age, especially as abscess in that region does not often occur without calculus. Dr. Post, however, said that abscess of the kidney did occur, not infrequently, independently of calculus. Dr. Taylor referred to cases of perinephritic abscess reported by Dr. Gibney, and suspected that in this case the abscess originated outside the kidney. Dr. Peters referred to the case of a child who, perfectly well, while rolling on the floor was seized with intense pain. The entrance of a pin or needle was suspected, but no trace of such could be discovered. The child died, and at the autopsy abscess of the kidney was found, a needle having completely transfixed the organ.

A CONVENIENT INDEX RERUM.—Dr. Cleborne, in the *New York Med. Record* (October 26), describes a convenient mode of preserving references:—"I have a small set of pigeon-holes made to fit my desk. These holes are four and a half by three inches in size, and labelled from A to Z. I take foolscap, double each sheet twice upon itself, cut it into eight slips, and turn up a margin of half an inch on the left side of each slip, which is about eight inches by three in size, and large enough to note any important fact. In reading medical works or periodicals, I note down on one of these slips any fact or statement I wish to preserve, head it with its appropriate 'catchword' in a larger hand, noting the authority, volume and page. This slip I place in its proper pigeon-hole, and thus provide myself with an alphabetical register of medical and scientific facts (index and notes combined)—a *ready reference* which I have found of great value. The simplicity of this plan (which I have used satisfactorily for fifteen years) will commend it to the student and busy practitioner. At the end of the year the slips may be arranged in alphabetical order and pasted together by their folded margins into book form."

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—The next meeting will be held on Friday, December 20, at 7.30 p.m. The minutes of the last meeting will be read. Correspondence: Letter from the Local Government Board; letter from the Metropolitan Asylum District Board. Dr. J. F. W. Tatham, and Mr. F. W. Clarke, Medical Officers of Health for Salford and Bury St. Edmunds, respectively, will be balloted for as extra-metropolitan members. Dr. A. Collie, Resident Physician, Homerton Fever Hospital, and Dr. J. W. V. Bindon will be balloted for as associates. The evening will be devoted to short communications and discussions on the following subjects.—1. "The Scientific and Practical Aspects of Arresting Infectious Disease," by Dr. C. O. Baylis. 2. "The Admission into General Hospitals of Persons suffering from Infectious Diseases," by Dr. W. H. Corfield. 3. "The Spread of Infectious Diseases by Nurses and their Clothing, and the Best Method of Prevention," by Harry Leach, Esq. 4. "The Contagiousness of Typhoid Fever," by Dr. J. W. Tripe. 5. "The Practicability or otherwise of giving due effect to the intentions of Section 35 of the Sanitary Act, 1866, especially with regard to the amount of cubic space in dwelling-rooms; and the advisability of inviting the Local Government Board to obtain powers to enforce the provisions of the section: the desirability of the Society framing a uniform code of by-laws under the above section," by Dr. T. O. Dudfield. 6. "The promotion by the Society of the disuse of the term Diphtheria, and the return to the name Contagious Cynanche, which should include all cases of contagious sore throat, mild or severe," by Dr. Thursfield, Shrewsbury.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Interested in Indian Statistics.—The census of Bengal was taken in 1872. It was the first attempt at anything like a systematic enumeration of the people in that part of India. The result was that this census brought to light some twenty-five millions of people of whose existence the Government had previously been in complete ignorance. The population of Bengal rose in one day from forty-two to sixty-seven millions!

Paterfamilias.—The climate of Queensland, according to the Hon. E. O. Macdevitt, Attorney-General of Queensland, is different in different places. In Rockhampton, within the tropics, the climate resembles that of Algiers; in Brisbane the climate almost exactly resembles that of Madeira; while in some parts of the elevated regions of the south the winters are nearly as cold as those of Scotland. The climate of Stanthorp, the capital of the tin country, resembles that of London. Bright skies, warm sunshine, a dry and exhilarating atmosphere, are in the main the characteristics of the climate. The people of Queensland enjoy greater immunity from disease than perhaps those of any other country. So healthy is the climate that epidemics are unknown. Many forms of disease, unfortunately too familiar here, have not yet made their appearance in Queensland.

A Parish Doctor.—There are now, we believe, 650 Poor-law unions constituted, the guardians charged with the administration of which number (or numbered) 27,616, of whom 7004 are *ex officio* guardians. They employ the paid services of between 18,000 and 19,000 officials.

The Scurvy.—Three vessels are reported as having lately arrived in the Thames with cases of scurvy on board—namely, the *Red Gauntlet*, the barque *Eagle*, and the *Ning-Po*. Cases of scurvy are the result of such wanton carelessness that we hope those responsible for such negligence in regard to proper remedial measures will meet the punishment it deserves.

The Army Medical Department and the War at the Cape.—A contemporary writes that the statement that the Army Medical Department is much under-officered is practically proved by the authorities at Whitehall-yard being unable to provide military surgeons sufficient for the comparatively small force now fighting at the Cape and for the regiments which have sailed to strengthen it. Seven private medical practitioners have already embarked for South Africa for the purpose of doing duty with the troops.

Dwellings erected on Dustbin and other Refuse.—Several well-known citizens in New Orleans have made a report on the late terrible yellow fever epidemic which has been so fatal in the valley of the Mississippi, in connexion with which the city of New Orleans was the centre, which is well entitled to attention and consideration here. It appears that in the formation of certain new streets and squares lately added to the city, the constructors made the roads and filled in the ground on which houses were to be built with the dustbin and other refuse of the town. In September last it was publicly pointed out that the district in which this method of making soil had been adopted was exactly where the plague first showed itself; and the statement had such a *p imâ facie* appearance of veracity about it that the Mayor of New Orleans appointed a committee to investigate the matter. The report in question on the whole fully endorses the opinion expressed as to the local origin of the disease. The Committee found that some 4000 loads of kitchen garbage and other refuse of the kind had been employed in the manner described, and that the condition of the locality was something horrible. "If the fearful pestilence did not originate there," say the Committee—though the facts they had brought before them seemed convincingly to prove that it did,—"it was largely fed by the evils made known, until the material was exhausted, when the roll of death added new victims to the feast."

M. D.—The vacancy caused by the resignation of Dr. Carpenter of the Registrarship of the University of London will be filled up early in the ensuing year. The gentleman elected will be required to enter on the duties on June 1. The salary commences at £800 per annum, and will increase by £25 annually until it reaches the maximum of £1000 per annum.

F.R.C.S., Southampton.—At the annual election of Fellows into the Council of the College of Surgeons in July last, 307 voted, and four papers were declared invalid. Of the sixty-eight plumpers, Mr. Lund received twenty-four, Mr. Gay eleven, and Mr. Wilson three.

The Medical Profession and Architects.—A paper, showing how the medical men and architects might work together for the public good, was read by Mr. F. W. Waller at a recent meeting of the Gloucestershire Branch of the British Medical Association. He drew attention to the important aid the medical profession could render the architect in designing and constructing public institutions and private dwellings, more particularly those of the middle and lower classes, in devising the best means of providing good sanitary arrangements. If the two professions could be got to co-operate for this end, the architect would be able to make health conditions an essential of his plans. The means suggested *inter alia* for carrying into effect the co-operation proposed, were the interchange of professional books and periodicals, and the arrangement between the two professions for meetings.

COMMUNICATIONS have been received from—

Dr. Tilbury Fox, London; Mr. William Fearnley, Blackheath; Mr. John Chatto, London; Dr. F. Churchill, London; Dr. J. M. Bruce, London; Mr. T. M. Stone, London; Dr. Octavius Sturges, London; Mr. Chauncy Puzey, Liverpool; Mr. D. Colquhoun, London; Mr. R. W. Parker, London; Dr. R. H. Semple, London; Mr. Jonathan Hutchinson, London; Messrs. John Richardson and Co., Leicester; The Registrar of Apothecaries' Hall, London; Mr. G. R. De Stefano, London; Mr. J. C. Breitbart, London; Mr. Robert Rae, London; Dr. John Beddoe, Clifton; Mr. E. L. Hussey, Oxford; The Honorary Secretary of the Society of Medical Officers of Health, London; Mr. Wickers, London; Mr. William Boulting, Ludlow; Dr. Clement Godson, London; Dr. R. Eaton, Liverpool; Mr. J. Woodland, Dewsbury; Mr. A. A. Knight, London; Dr. Edward Sparks, Mentone; Dr. Dunglison, Philadelphia; The Registrar of the Royal College of Physicians, London; Dr. R. Druitt, London; Mr. J. E. Ingpen, London; The Registrar-General, Edinburgh; The Honorary Secretary of the Royal Medical Society, Edinburgh; Mr. M. Becher, London; The Secretary of the Statistical Society, London; Mr. G. B. Jenkins, Dulwich; Mr. George Brown, London.

BOOKS AND PAMPHLETS RECEIVED—

Year-Book of Pharmacy, 1878—Horace Dobell, M.D., On Loss of Weight, Blood-Spitting, and Lung Disease—Letts, Son, and Co., Diaries for 1879—William Carter, M.B., etc., Reports on Renal and Urinary Diseases, with Comments.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hopitaux—Gazette Médicale—Le Progrès Médical—Bulletin de l'Académie de Médecine—Pharmaceutical Journal—Wiener Medizinische Wochenschrift—Centralblatt für die Medicinischen Wissenschaften—Gazette Hebdomadaire—Boston Medical and Surgical Journal—Philadelphia Medical Times—Dublin Journal of Medical Science—Guy's Hospital Gazette—Estudos Medicos—North Carolina Medical Journal—Canada Lancet—Boston Journal of Chemistry.

APPOINTMENTS FOR THE WEEK.

December 21. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

23. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

24. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

25. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1¼ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 1½ p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

26. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

27. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

Quekett Microscopical Club, 8 p.m. Meeting.

VITAL STATISTICS OF LONDON.

Week ending Saturday, December 14, 1878.

BIRTHS.

Births of Boys, 1263; Girls, 1134; Total, 2397.
Average of 10 corresponding years 1868-77, 2312·2.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	877	821	1698
Average of the ten years 1868-77	852·6	817·9	1670·5
Average corrected to increased population ...	...	...	1787
Deaths of people aged 80 and upwards ...	...	...	91

Note.—The births and deaths registered last week may be compared with the average numbers in the corresponding weeks of the ten years 1868-77 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	3	11	1	8	...	4	...	2
North ...	751729	...	2	16	4	10	...	2	...	4
Central ...	334369	...	...	1	2	8	...	1	...	2
East	639111	...	9	6	4	12	...	5	3	3
South	967692	17	20	12	3	9	2	14	2	...
Total	3254260	17	34	46	14	47	2	26	5	11

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·531 in.
Mean temperature	28·4°
Highest point of thermometer	34·4°
Lowest point of thermometer	20·5°
Mean dew-point temperature	26·3°
General direction of wind	N.
Whole amount of rain in the week	0·00 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, December 14, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1878.*	Persons to an Acre. (1878.)	Births Registered during the week ending Dec. 14.	Deaths Registered during the week ending Dec. 14.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Centimetres.
London	3577304	47·5	2397	1698	34·4	20·5	28·4	−2·01	0·00	0·00
Brighton	103923	44·1	48	44	35·0	24·0	29·2	−1·56	0·21	0·53
Portsmouth ...	129461	28·9	73	46	...	...	...	...	...	...
Norwich	84620	11·3	46	37	37·0	19·5	28·1	−2·17	0·11	0·28
Plymouth	73599	52·8	34	40	43·5	20·5	31·4	−0·34	0·26	0·66
Bristol	206419	46·4	149	138	36·3	19·8	28·1	−2·17	0·01	0·03
Wolverhampton ...	74240	21·9	34	50	35·8	16·6	25·4	−3·67	0·08	0·20
Birmingham ...	383117	45·6	295	227	...	...	...	...	...	...
Leicester	121473	38·0	100	57	33·5	18·2	26·7	−2·95	0·03	0·08
Nottingham ...	165267	16·6	105	83	37·5	18·0	26·9	−2·84	0·03	0·08
Liverpool	532681	102·2	331	384	36·0	22·6	29·1	−1·61	0·22	0·56
Manchester ...	360514	84·0	249	244	...	...	...	...	...	...
Salford	170251	32·9	124	109	...	...	...	...	...	...
Oldham	107366	23·0	71	60	...	...	...	...	...	...
Bradford	185088	25·6	123	121	37·7	16·2	27·7	−2·39	0·00	0·00
Leeds	304948	14·1	177	181	39·0	19·0	30·1	−1·06	0·03	0·08
Sheffield	289537	14·7	187	158	...	...	...	...	...	...
Hull	143139	39·4	102	57	...	...	...	...	...	...
Sunderland ...	112459	40·6	86	54	36·0	13·0	28·9	−1·73	2·06	5·23
Newcastle-on-Tyne	144570	26·9	82	56	...	...	...	...	...	...
Edinburgh	222371	53·1	119	86	35·0	9·0	28·0	−2·22	...	...
Glasgow	566940	94·0	365	330	...	...	...	...	...	...
Dublin	314666	31·3	170	230	38·5	16·0	28·7	−1·84	1·14	2·90
Total of 23 Towns in United Kingdom	8373953	38·0	5467	4484	43·5	9·0	28·3	−2·06	0·32	0·81

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·53 in. The lowest reading was 29·29 in. on Sunday, and the highest 29·71 in. on Wednesday morning.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1878 by the addition of seven years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. Nottingham, Salford, and Oldham, however, form exceptions to this rule, as the estimates for these three towns have been revised with the aid of local information as to the rate of increase of inhabited houses. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

ORIGINAL LECTURES.

VI.

CLINICAL LECTURE
ON MISSED ABORTION.

BEING THE SIXTH OF A COURSE OF LECTURES DELIVERED AT ST. BARTHOLOMEW'S HOSPITAL

By J. MATTHEWS DUNCAN, M.D., LL.D.,
Physician-Accoucheur and Lecturer on Midwifery to the Hospital.

MISSED ABORTION is a subject that lies between obstetrics and gynæcology; the cases indeed that I am particularly to dwell upon to-day were brought into Martha as gynæcological cases, or cases of diseases of women, more than as obstetrical cases. I do not know any subject better than this for illustrating the value or necessity of extensive knowledge with a view to good diagnosis. If you do not know of a thing, you are quite sure not to supect it; and, in all cases of difficult diagnosis, if you do not suspect a thing you are almost certain not to find it. And this remark is especially true of the subject I have to consider to-day.

A missed abortion is not a threatened abortion, nor is it an imperfect abortion. A threatened abortion is a very common occurrence. When a woman has a threatened abortion she suffers pain, she has bloody discharge, and the mouth of the womb may be found to open. I believe that an abortion may only get the length of being threatened; that is to say, the abortion may be averted and pregnancy may go on healthily,—even when you can feel through the neck of the womb the ovum as it hangs in the cavity of the body of the uterus. I have known also two cases in which, no doubt from the lower part of the body of the womb, a considerable piece of decidua was separated and discharged without abortion taking place. These are cases of threatened abortion, and among them may be included cases of extreme rarity of abortion of one of twins, while the other remains in utero, and goes on in its development. This abortion of one of twins may be a missed abortion; or the miscarriage of one of twins may be a missed miscarriage. In that case the fœtus and its envelopes, instead of getting rolled up into a parcel-like form, as I shall describe to you, become compressed and squeezed flat into the condition which, when extreme, is called fœtus papyraceus. I have here a beautiful specimen of fœtus papyraceus, occurring in a case of twins where there was missed miscarriage.

To recapitulate: In cases of threatened abortion you may have a discharge of a bit of decidua; you may have the neck of the womb open to the extent of allowing the finger to pass, and to feel the ovum: and you may have a missed abortion or a missed miscarriage in the case of twins.

Missed abortion is neither a threatened miscarriage nor an imperfect miscarriage. In order that you may understand an imperfect miscarriage (of which I have a remarkable instance to describe to you to-day), I must tell you what is a complete or perfect miscarriage. If the fœtus alone, or the entire ovum alone, comes away, the woman has miscarried, or aborted, as it may be; but the coming away of the ovum does not involve a complete miscarriage; and an imperfect miscarriage is often a very disastrous thing. The ovum sometimes comes away alone, without any of its uterine or maternal membranes. Sometimes the fœtus comes away alone, without even the ovuline membranes. Sometimes the ovum comes away, and the maternal membranes or decidua imperfectly. Sometimes only a bit of the placenta is left, as in the case that I am to relate. Imperfect miscarriage is a dangerous thing, frequently in consequence of the very serious and recurrent bleedings that result from it. Imperfect miscarriage not very rarely leads to death from septicæmia or pyæmia, just as a woman dies after delivery at the full time. This is especially liable to happen if the miscarriage has come on in consequence of extensive endometritis such as is found in pregnancies occurring during typhoid fever. Imperfect miscarriage is also often disastrous by inducing endometritis, generally purulent endometritis, and this frequently in connexion with putrefaction of the parts left behind.

The case of imperfect miscarriage which I am about to read is in every respect remarkable, and illustrates the subject admirably. M. C., aged thirty-eight, married for sixteen years, has had six children, the last two years ago. On March 14—that is, eight months ago—she miscarried with a three-months child. The placenta did not come away till three weeks after the fœtus. (Subsequent history shows that the whole placenta did not come away even then.) For a fortnight before, and for six weeks after the miscarriage, she had considerable bloody discharges. Since then losses of blood have occurred occasionally. She is feeble and anæmic, but otherwise healthy. Nothing abnormal, except suprapubic dulness, discovered on examination of the hypogastrium. Digital examination per vaginam finds the cervix uteri largely patulous, greatly hypertrophied, but not softened as in pregnancy. Through the speculum it is observed to be pale in colour, and to have on its inner surface slight abrasions. The vagina contains some bloody discharge, which is not fetid. To have daily a drachm of liquid extract of ergot. After a fortnight, there being no diminution of the bulk of the uterus, and irregular hæmorrhagic losses persisting, the cervix was dilated by tangle-tent. After the introduction of the tent, hæmorrhage began suddenly, and proceeded to an alarming extent, two pints being the quantity estimated as lost within fifteen minutes. Mr. Garstang injected through a hollow probe a drachm of tincture of perchloride of iron diluted with an equal quantity of water, with no result. A small indiarubber bag was now introduced within the cervix. It stopped the hæmorrhage. At 11 a.m., about thirteen hours after the hæmorrhage, the bag was a second time expelled. No recurrence of hæmorrhage. At 3 p.m. she was placed under the influence of ether, and the hand introduced into the vagina, two fingers with some difficulty into the uterus. On the posterior wall of the uterus was felt a projecting, moderately hard, wart-like mass of irregular form, and of extent equal to nearly two inches square. At first it was supposed to be a malignant outgrowth, but as a line was found at which it could be detached, it was recognised as placental. Some difficulty was experienced in removing it by a sawing motion of the nails of the fingers in the uterus. About eight ounces of blood were lost during the operation; but afterwards there was only a moderate amount of blood-tinted discharge. The mass was placental. On its fœtal surface were only small patches of chorion. It was about a third of an inch thick, and dense in structure. The section was greyish-yellow, and bloody, it being almost certain that blood had continued to circulate in some of the sinuses, so maintaining the vitality of the mass. From these sinuses, where utero-placental, the flooding took place. The use of ergot was continued. Nine days after the operation the uterus measured nearly three inches and a half only. The cervix felt not more than half as bulky as it was. Fourteen days after the operation the uterus measured two inches and a half, and the cervix was reduced to natural dimensions.

This woman was very ill; her case was recognised as probably dependent upon miscarriage, although the miscarriage was the enormous distance backwards of eight months. I see no reason to think that if this woman had not been properly treated she could have escaped death from continuance of discharge, for the placental mass was alive, and had firm adhesion to the uterus; and when separation would have taken place I do not know,—I should think it would not have taken place, but have led to the wo man's being drained of blood, and dying. The case was supposed to be connected with a recent miscarriage, because there was no evidence of fibrous tumour nor of anything else to account for the bleedings and the great size of the uterus. Had this woman's uterus been enlarged by a fibrous tumour so big as to make the cavity measure five inches, the tumour would have been easily felt; but no tumour was felt. The uterus, instead of being enlarged as it would have been by a fibrous tumour, was a flattened mass which could not be distinctly felt through the anterior wall of this woman's abdomen. I call your attention to the great size of the uterus. There was no occasion for this size to include such a small thing as the bit of placenta which we took away, and the removal of which was followed by the complete cure of the woman, and the diminution of the uterus to its natural size. The case, then, is a very remarkable illustration of the power of a persistently attached piece of living placenta in maintaining the development of the organ, or, in other words, preventing its involution. In this it contrasts with the comparatively small size of the uterus in the next case—that of missed abortion. The case is quite clear. The woman had

decidual endometritis affecting a part of her placenta, and making it adherent. The placental decidual endometritis was probably also the cause of her abortion.

Before leaving the case, I call your attention to the circumstance of the great rapidity with which the uterus returned to its natural dimensions after the offending bit of placenta was removed. Fourteen days after the removal of the placenta the uterus and its cervix had both returned to the natural size, after eight months of permanent hypertrophy.

I now come to the subject proper of my lecture—Missed Abortion. Before entering upon that, I shall say a few words explanatory of rare conditions that occur in connexion with this department of obstetrics. Protracted pregnancy is entirely denied by some eminent obstetricians; I believe, however, in its occasional occurrence. Protracted pregnancy is the condition of a woman who has passed 278 days—the interval between the last day of last menstruation and the expected confinement—and at least a fortnight more than this. There is, indeed, no very exact definition of the number of days at the end of which pregnancy becomes protracted. If, at this time, a woman's child dies in utero, there is not then protracted pregnancy; she is in a state of missed labour.

It is necessary to say something as to this point—namely, when a protracted pregnancy ends, or when a pregnancy of any kind ends, and the condition of missed labour or missed abortion begins. You cannot say that a woman is pregnant, without misleading your hearers, if she has only a lithopædion in her abdomen; neither is a woman properly described as pregnant who is in the condition of missed labour or missed abortion. This subject is of great medico-legal importance, as I shall show you presently.

Let me now give you the particulars of a remarkable case of protracted pregnancy and missed labour, which occurred in my private practice, and which forms a good illustration of these morbid conditions. The lady was forty-one years of age when she became pregnant for the first time. The uterus was, from the earliest time after its ascent into the abdomen, anteverted or pendulous. It was not the common form of pendulous belly, which can be replaced by bandage and held up; it could not be replaced. This impossibility of replacement was also observed during her confinement; and there was no reason to believe that there were any adhesions of the uterus. Her pregnancy up to the end of the natural term was otherwise perfectly healthy. She had a slight degree of generally contracted pelvis. Before giving you the dates I may tell you that none, in the most careful ordinary life, could be more accurately ascertained or more reliable than those I give you. Her menses ended on December 12. On December 15 her husband left home, and did not return for nearly two months. Her confinement was expected on September 17. The motion of the child ceased on September 26. On October 17 she shivered and became feverish without any indication of labour commencing. It was considered necessary to deliver her. The mouth of the womb was dilated, and she was artificially delivered on the following day, October 18. The child was enormous—a female. The mother died on October 24. This is a case in which you have, with almost scientific certainty, slight protraction of pregnancy, and then the condition of missed labour. After a child's death under any circumstances it is generally discharged within a fortnight. In this case more than a fortnight elapsed after the full time, and there were never any symptoms of labour.

In some respects missed miscarriage or missed abortion is even more important than missed labour; for in a case of missed abortion the history of the woman and her size may have led either to no suspicion of pregnancy having commenced, or to suspicions which may have been dissipated by the further history of the case. In a case of missed abortion or missed miscarriage the important element of suspicion as to the real condition may not have come into the mind either of the patient or her physician. Mistake is then extremely liable to occur. This is not so likely in missed labour; for in that condition the woman's size will almost certainly have made her aware that she is in an advanced state of pregnancy; and her friends will also know it. I told you that missed labour may be a subject of great medico-legal importance. The same is true, and even more so, of missed abortion or missed miscarriage. Take the case that I am going to read, where a woman passed a fœtus of about two months after a pregnancy (if you so miscalled it) which lasted for five months. If in such a case the practitioner, without sufficient care, were to tell the husband that his wife had had a two-months child, you can easily understand that his natural rejoinder might be, "That cannot be my child, for I have been away from home five months!" Such unfortunate misapprehensions have happened, and the occurrence shows the importance of counting the term of a woman's pregnancy, not up to the time when the fœtus is discharged, but back to the time when it died. If this is kept in mind, the practitioner, in the imaginary case that I have given, will not make the mistake of leading the husband to think that the fœtus just born could not have been begotten by him. It is sufficient to allude to this, the medico-legal importance of it is so plain.

Now, when a woman has a missed miscarriage or a missed abortion, what is the course of events? The fœtus dies; the symptoms of pregnancy are arrested; milk sometimes appears in the breasts; hæmorrhages from the uterus may occur, or they may not. If the liquor amnii is not discharged it is absorbed, and the contents of the uterus either macerate or become mummified (it is a bad term, but I have no better). If the membranes remain entire, the process undergone by the uterine contents is that of mummification. It is only when germs are admitted, and generally after rupture of the bag of membranes, that putrefaction and maceration take place, and the more or less complete dissolution of the ovum. If the uterus has been felt, the remarkable observation may be made, that a woman going on apparently in pregnancy has the uterus steadily diminishing in size, instead of getting bigger, and at last, and almost invariably (not invariably), before the full time of pregnancy, counting from the commencement of it, would have been reached, the ovum is expelled. The expulsion is frequently unexpected. When it is expelled you have a mass in a state of mummification, nearly dry, of a dirty-brown colour, and the fœtus and membranes are concealed, being rolled up in the placenta, which is too firm to be compressed, and embraces the whole ovum. Such ova I have had sent to me more than once by practitioners, saying truly that the fœtus appeared rolled up neatly in the membranes and the placenta as in a parcel. That was exactly the case in this instance. In this preparation you will see that the placenta and membranes have been opened up to show the fœtus inside. In our case the edges of the placenta met over the fœtus, embracing it entirely, rolling it up in a parcel-like form. I will now read to you the case.

S. K., aged thirty-one, married eight years, has had four children (the last two years ago), no miscarriages. Had not menstruated for five months when a bloody discharge began. After this had continued for three weeks she became an out-patient under Dr. Godson. She was ordered ergot and strychnine, and the discharge ceased. But it soon recommenced, and she came into the hospital. Examination now discovered a dilated heart with a mitral regurgitant murmur. There was dulness above the pubes for an inch, but nothing abnormal could be felt. Digital examination per vaginam discovered the brim of the pelvis occupied by a moderately hard mass, with which the cervix, which is patulous, is connected by continuity. The uterine probe passes easily into the uterus three inches and a half. The uterus is mobile, not tender, and forms the mass occupying the pelvic brim. About six hours after this use of the probe, which was withdrawn untinted by blood, pains began. After about eight hours of pains a mass as big as an orange was expelled. Very little hæmorrhage accompanied and followed the birth of the mass. The patient rapidly recovered. The mass was found to consist of the entire ovum in a state of decomposition: except the liquor amnii, of which there was not a trace. The whole presented a dirty-brown colour, somewhat like that of decolorised blood. The decidua and other membranes were rolled tightly around the fœtus, the edges of the placenta meeting over it. The fœtus was of the size of about two months' growth. On the fœtal surface the placenta was covered with rounded projecting masses of various sizes, as of a field bean, or of a hazel-nut. They were beneath the chorion, and were formed of blood-clot in various stages of decolorisation.

This is as perfect a case of missed abortion as you could desire to see. The length of detention, after the death of the fœtus, is five months; the woman then began to feel

herself ill because she began to bleed. Observe, in this case, that the membranes remained entire; therefore there was no putrefaction. The whole ovum was in a state of decomposition. Here I cannot avoid pointing out a common mistake in obstetrical writing. Some of the best books on obstetrics divide all children and abortions as either living or putrid. That is a very great mistake. Dead children, dead abortions, in various stages of decomposition, are quite common; but putrid fœtus or putrid abortion is quite a rarity. Your nose is a sufficient instrument of diagnosis. A decomposed fœtus is very seldom putrid, and it should not be so described. In our case there was no putridity, but there was the peculiar condition of decomposition which I have called "mummification."

In this case I call your attention to what is perhaps a very important element—the disease of the heart. It is only recently that great care has begun to be paid to the bearings of disease of the heart upon pregnancy and parturition; I know of none paid to the bearings of disease of the heart upon abortion. It is a subject well worthy of attention and study. It would be quite easy to erect a theory of this woman's abortion founded upon disease of the heart. Disease of the heart induces miscarriage frequently. This is not a case of miscarriage; it is a case of missed abortion: therefore, the explanation of the dependence of the death of this child upon the disease of the heart '(mitral regurgitation) is far from being made out. This is, as I have said, a subject which, like innumerable others, remains for you to investigate.

You will notice in this case that I introduced the probe, and those who were present will remember that I said at the time, "I do this without hesitation, because, if the woman is pregnant, I wish the pregnancy to end." Before you decide to introduce a probe into the uterus you should always consider the question of pregnancy. In this case it was considered, and the probe was deliberately introduced. You see also beautifully illustrated, in this case, the power of what is called uterine catheterism in inducing labour. A single introduction of a uterine probe within six hours set the machinery of uterine pains a-going efficiently.

ORIGINAL COMMUNICATIONS.

THE DEVELOPMENT OF THE FILARIA SANGUINIS HOMINIS.

By PATRICK MANSON, M.D.,
Amoy, China.

In an article on the "Development of Filaria Sanguinis Hominis," in your issue of September 7, after briefly describing the results of my observations on this subject, you remark—"Our object in recapitulating these statements is to impress upon our readers that more recent observations would seem to disprove or render very doubtful the theory that the mosquito acts in the manner mentioned, as the particular intermediate host of Filaria sanguinis hominis."

The recent observations you refer to are, I presume, those of Dr. Lewis, published in the *Proceedings of the Asiatic Society*, Bengal, for March; at least, these are the only observations you mention. Dr. Lewis is well known as an accurate, highly accomplished, and thoroughly reliable observer. The conclusion he comes to is, that it may be "confidently anticipated that observers in this country (India) will soon be able conclusively to satisfy themselves that in most particulars, at least, Dr. Manson's observations apply to India as well as to China." This is quite opposed to the view you express.

You appear to have been misled by the first part of Dr. Lewis's paper, unfortunately the only part read before the Society. Therein he certainly describes the digestion of filaria embyros by the mosquito. These embryos I feel assured were not the young of Filaria sanguinis hominis, but of some other species of blood-worm. Dr. Lewis has himself shown, not many years ago, that a very large proportion of the dogs in Calcutta are infected with hæmatozoa. Now, as he took no particular steps to insure his mosquitos feeding on human blood, it is more than probable that the insects he first examined, and which he himself says were captured at random, contained dog-hæmatozoa, and not Filaria sanguinis hominis. I have many times witnessed the digestion of the embyro of Filaria immitis of the dog by the mosquito, and what I saw corresponded exactly with Dr. Lewis's description. But though the hæmatozoa of the dog are digested by the mosquito, it does not follow that those of man have a similar fate.

In the addendum to Dr. Lewis's paper, after mentioning that he had observed developmental changes, such as I have described, in another batch of mosquitos, he adds that "the blood of one of the five persons who were in the habit of sleeping in the house in which these particular insects were captured, was found to contain hæmatozoa in considerable numbers." The inference from this is obvious. Dr. Lewis observed in his mosquitos, in the first instance the digestion of *canine* hæmatozoa, and in the second instance the development of *human* hæmatozoa. I fail to see how these observations tend to disprove or render very doubtful the theory that the mosquito acts as the intermediary host of Filaria sanguinis hominis.

Again, from your remarks your readers might infer that because all embryos ingested by the mosquito do not proceed in development, but only a very few of them, my theory must be incorrect. The rejection of embryos is too common a phenomenon in the history of the more prolific of the lower animals, especially of the entozoa, to allow of any weight being accorded to this as an argument. That a few do advance is sufficient to prove the mosquito a promoter of developmental changes, and if we find that these changes are carried sufficiently far to make independent existence possible just at the time the death of the mosquito renders an independent existence necessary, the inference that the mosquito is the proper intermediary host cannot be avoided. This has been found, and I have little doubt that many observers in India and elsewhere have by this time amply confirmed my statements.

That the mosquito is the intermediary host for one species of blood-worm found in man in this part of China, there is no reason whatever to doubt; and if this insect plays the *rôle* of nurse to the parasite here, it is more than probable that it serves the same purpose elsewhere. I purposely say *one* form of blood-worm, as it is just possible, though not very likely, that observers have been dealing with the progeny of two or more species of filaria, under the name of Filaria sanguinis hominis. The dog has certainly two species of blood-worm—one, the Filaria immitis; and another, whose progeny Dr. Lewis has described, but whose mature form, as far as I know, has not yet been discovered. If this is the case with the dog, we should be alive to the possibility of the same being the case with man; and intermediary hosts other than the mosquito may have to be sought for.

From what I have said, I believe your readers will see that recent observations, so far from disproving or rendering very doubtful the theory that the mosquito acts as the particular intermediary host of Filaria sanguinis hominis, rather tend to confirm it.

Gillibert's Liniment for Chilblains.—Venice turpentine twelve, castor oil six, and collodion thirty parts. This is to be applied by means of a pencil to the parts which are the seats of the chilblains, whether these are ulcerated or not. The application is to be renewed as often as necessary in order to protect the chilblains from contact with the air, until the cure is complete.—*Union Méd.*, Dec. 17.

Wound of the Abdomen complicating Delivery.—M. Richard relates (*Révue Méd.*, December 6) the case of a woman, aged twenty-two, who, having some empty bottles in her arm, fell into a cellar. Brought to the Lille Hospital, it was found that she had a penetrating wound situated above the umbilicus, and that the great omentum, small intestines, and transverse colon had issued through it, the hernial tumour being as large as the head of an adult. This was reduced immediately, and the wound united by the twisted suture. She had gone her full time with her first child, and three days after the accident she was delivered—after scarcely four hours' labour—of a living and well-formed child. Notwithstanding her labour, and subsequent complications of metro-peritonitis and pleuro-pneumonia, the sutures were undisturbed, and the wound healed regularly, so that cicatrisation was completed about three weeks after the accident.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

CHARING-CROSS HOSPITAL.

CASE OF TALIPES EQUINUS—OSTEOTOMY OF TARSUS.

(Under the care of Mr. BARWELL.)

GEORGE M., aged twenty-one, was admitted on February 19 with talipes equinus of the left side of somewhat extreme character. This condition had existed as long as he could recollect, and as the deformity was a serious hindrance to him in his business—that of a grocer,—he was anxious to have something done for it. Patient's family history was fairly good. He was a well-nourished, robust-looking man, and the only point noticeable about his previous history was the fact that he had been for many years a vegetarian and total abstainer.

February 28.—To-day Mr. Barwell performed the following operation:—He made a longitudinal incision along the outer side of the foot, and a transverse one across the bases of the metatarsal bones on their dorsal aspect, meeting the first about its middle. He then turned up the skin flaps, peeled off the peronei and extensor tendons, and laid bare the anterior row of the tarsal bones. Next, using the saw and chisel, he removed a wedge from the tarsus, and several bleeding vessels having been tied, the foot was straightened and put up in plaster. Antiseptic precautions were observed.

March 1.—In the course of the night much oozing took place from the wound, and, in checking this, antiseptics were left off. The subsequent treatment of the wound was of course carried out on ordinary surgical principles.

4th.—Patient looks markedly anæmic. The wound discharges healthy pus, but temperature is rising—morning 102·2°, evening 102·8°; pulse 120; respiration hurried.

29th.—Patient has had an attack of pneumonia, probably induced by the loss of blood. The symptoms have been somewhat anomalous, and such as to give rise to the suspicion of pyæmia, but there have been apparently no secondary deposits. The wound has kept healthy, and patient seems now to be improving. The temperature has been twice up to 105° in the evening, but now runs from 99° in the morning to about 102° in the evening. Patient is much enfeebled.

April 4.—Patient has still a little trouble from his cough. The wound is healthy, but there is very considerable discharge from it, and union between the two bony surfaces has not begun.

13th.—Patient grows stronger daily. Temperature runs from 99° to 101°. The wound does not discharge so much, and there seems now to be some bony union towards the outer aspect of the wound.

21st.—The foot and ankle have been put up in plaster, with a window cut in it for dressing. The wound still discharges freely, but the general condition of patient is remarkably good.

May 15.—To-day a piece of loose bone was removed from the wound, which on examination proved to be the anterior articular surface of the scaphoid. Temperature for the last fortnight has once been a little above 100°, but has averaged 99°.

22.—Since removal of loose bone the wound has rapidly healed, and patient was to-day able to sit up for a short time in the ward. The foot is still tender, but it is firm, and the deformity existing before the operation can now be seen to have been very markedly relieved.

Patient remained in the hospital until the beginning of July. Convalescence was slow, but uninterrupted. On leaving, the patient still used crutches, the foot, although quite sound, being still somewhat tender on pressure. After a few weeks at a convalescent home the condition of the foot improved still more, the wounds having completely healed and given no trouble, and the foot being sound and strong.

Mr. Barwell remarked that twice in the course of his experience he has had to operate on vegetarians. Both patients made very slow convalescence, and both suppurated freely. In such persons the vitality of the tissues is very low; hence, probably, the necrosis of a portion of the scaphoid, and the very slow healing of the wound. The piece of bone removed was wedge-shaped in two directions—namely, from above downwards and from within outwards,—and the foot, when the remaining portions were adapted, was in very good position. The after-bleeding came from the cut osseous surfaces; and this tendency, when it occurs, will always present a difficulty and an impediment to the healing process. The termination of the case is very satisfactory, the man having a strong, useful, and well-shaped, though rather short, foot. Such operation is undoubtedly valuable and justifiable when the patient fully understands the prospects and probable results, as well as the risks.

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Medical Times and Gazette.

SATURDAY, DECEMBER 28, 1878.

ANNUS MEDICUS 1878.

THE year now so nearly closed will certainly not be marked in the national memory by a white stone. It will, on the contrary, be remembered as a year of agitation, strife, and disaster. Its course has been marked by serious and prolonged depression in commerce and trade, by strikes and calamitous failures; by such terrible disasters as the loss of the *Eurydice*, the loss of the *Princess Alice*, and the Abercarne colliery explosion; by political agitation and passion; by rumours of war, and at last by war itself. But the Medical Year of 1878 has run a comparatively smooth and equable course. Several localised epidemics of disease have occurred—of diphtheria in the North and the North-West districts of London, and in Wales; of typhoid fever in Moss Side, in Glasgow, and in Bristol; and a severe epidemic of whooping-cough in London—but, on the whole, the state of the public health has been satisfactory, the death-rate having, throughout the year, been low in London and in the country. The earnest endeavour made by the Government to pass a Medical Act Amendment Bill caused considerable and rather prolonged agitation in the profession;

but the Bill was a failure, and had to be withdrawn. There has been a quiet and steady advance in medical science and art, but no startling conquest like that made in the domain of chemistry by MM. Louis Paul Cailletet and Paul Pictet, when they succeeded in liquefying some of the so-called permanent gases—a discovery made, indeed, at the end of 1877, but only announced this year; nor any such marked advance in art as the command over the electric light for practical use.

Parliament met earlier than usual, but the Queen's Speech dealt almost exclusively with Imperial questions of large and general policy, and gave scarcely a hope that any measures regarding the health and physical prosperity of the people would be brought forward. Urgent and difficult questions of foreign policy almost entirely absorbed the attention of Government, and the echoes of the distant war, in Turkey, resounded through our own land, so that it seemed likely that sanitary legislation would be entirely thrust aside. The session proved, however, more fruitful in performance than in promises, and some important sanitary measures were passed, though this result was due more to the efforts of private members of Parliament than to those of Government. In the Queen's Speech promise was made to introduce a Bill on the subject of Cattle Diseases, and a County Government Bill, which possessed some interest from a sanitary point of view. The latter of the two Government had to throw over, but with the former they were more fortunate, and it became law. This Act, called "The Contagious Diseases (Animals) Act, 1878," enlarges the powers of the Privy Council so as to enable them to cope more effectually with the importation and the spread of cattle plague, pleuro-pneumonia, and foot-and-mouth disease; and it contains also provisions relating to dairies, cowsheds, and milkshops, which have very great sanitary importance. Section 34 provides that the Privy Council may from time to time make such general or special orders as they think fit, and subject to the provisions of the Act, for the following purposes:—"1. For the registration with the local authority of all persons carrying on the trade of cowkeepers, dairymen, or purveyors of milk. 2. For the inspection of cattle in dairies, and for prescribing and regulating the lighting, ventilation, cleansing, drainage, and water-supply of dairies and cowsheds, in the occupation of persons following the trade of cowkeepers or dairymen. 3. For securing the cleanliness of milk-stores, milk-shops, and of milk-vessels used for containing milk for sale by such persons. 4. For prescribing precautions to be taken for protecting milk against infection or contamination. 5. For authorising a local authority to make regulations for the purposes aforesaid, or any of them, subject to such conditions, if any, as the Privy Council may prescribe." These provisions are in themselves very valuable, and are such as we have long urged the necessity of; but it must be considered very unfortunate that they were not added, by an amendment, to the Public Health Act, instead of being dissociated from the general sanitary administration of the country by being inserted in the Contagious Diseases (Animals) Act. "The Factory and Workshops Act, 1878," consolidates and amends the Acts relating to factories and workshops. It provides more efficient sanitary supervision of the sheds and houses in which textile fabrics are manufactured, gives some power of control over the smaller and private workshops in which only a few hands are employed, limits the hours for employing children, and provides for their education. "The Public Health (Water) Act, 1878," is an amendment of the Public Health Act, 1875. It provides that "it shall be the duty of every Rural Sanitary Authority, regard being had to the provisions in this Act contained, to see that every occupied dwelling-house within their district has within a reasonable distance an available supply of wholesome water sufficient for the consumption and use for domestic purposes of the inmates of the house." Owners of dwelling-houses will not, after the Act comes into operation, be allowed to occupy, or cause or permit to be occupied, any houses built or rebuilt, unless and until they have obtained from the sanitary authorities certificates that there is provided, within reasonable distance, an available and sufficient supply of wholesome water. The Act, which is a very important one, and comes into operation on March 25, 1879, was introduced and pushed by private members, though in the end it received the support of the Government. The "Baths and Washhouses Act, 1878," enables urban sanitary authorities to provide covered swimming-baths, to make all necessary regulations for their use, and to appoint and pay needful officers. It also empowers the authorities to close the swimming-baths for a period not exceeding five months, from the beginning of November to the end of March, and during those months to use the enclosure, or allow it to be used, as a gymnasium, or for other purposes of healthful recreation or exercise, excepting music and dancing. And the baths are made public and open places, so that offences against decency committed in them are made criminal. The Metropolitan Management and Buildings Act Amendment Bill forbids the removal of gravel from the foundations of houses with an idea of substituting decaying refuse and the contents of ashpits as a foundation for dwelling-houses, and provides that the waste-pipes of baths, cisterns, and other house-drainage shall be disconnected entirely from all closet-traps and other arrangements by which the possible in-draught of sewer-gas may be permitted to the interior of houses. "The Public Health (Ireland) Act, 1878," has been fully explained in our columns. It was introduced by Sir M. Hicks-Beach in January, and though it met with but little opposition, did not reach the third reading till the end of June. It passed quickly through the Upper House, and became law.

The Dental Practitioners Act, with the provisions of which our readers have been made sufficiently well acquainted, was coached through Parliament by its promoters with marked tact and skill and quiet perseverance, which were rewarded by the Act receiving the Royal Assent at the end of the session; while the Medical Act (1858) Amendment Bill, which was introduced by the Government, had to be withdrawn. When Parliament met, no intimation was given that the Government intended to bring forward a Medical Act Amendment Bill; but very shortly afterwards it was rumoured that the Lord President of the Privy Council, the Duke of Richmond and Gordon, was to introduce a Medical Bill into the House of Lords; and early in March we were enabled to state that the rumour was true; that his Grace had sought the advice and assistance of individual members of the Executive Committee of the General Medical Council in the preparation of his Bill, which would deal with most of the subjects that had been said to require legislation; and that among its provisions would be one confirming the Conjoint Board of Examining Bodies in England, and recommending —previous to compulsion if necessary—similar conjunction in Scotland and Ireland. Some surprise was felt at the Duke's having seen fit to consult individual members only of the Executive Committee instead of going to it as a body, or to the Medical Council itself, for aid in a matter of such national importance as legislation for the medical profession; but still greater was the surprise when, on the introduction of the Bill, on March 19, it was found that it did not contain any provision for the compulsory formation of Conjoint Examining Boards. The Bill did indeed approve of the formation of such Boards, or at least sanctioned such formation, and so did the Medical Act of 1858; but it left it permissive still, as it had been for twenty years. Such action,

or rather inaction, could only be interpreted as signifying that the Government did not believe much in the value, and still less in the necessity, of any union of the licensing bodies for examination purposes, as a means of lessening the confusion and abuse arising from the existence of a multiplicity of examining bodies, conferring undistinguishable varieties —in point of value—of qualifications. There was ground even for inferring that the Government was not merely indifferent, but even hostile, to Conjoint Boards, for it contained a provision requiring that, should such Boards be formed, women should be admitted to examination by them, and, on obtaining pass certificates, should be able to claim a qualification from any of the co-operating Corporations. But in England, where alone any earnest and successful effort had been made for the formation of a Conjoint Board, the College of Physicians and the College of Surgeons had decided against admitting women to any of the qualifications conferred by them. The compulsory woman-qualifying provision of the Act threatened, therefore, to prevent the carrying out of the one Conjoint Scheme in existence. These points, letting alone all other parts of the Bill, invited, and even compelled, all the English licensing bodies to offer a determined opposition to it. As the Bill did not become law, we do not propose to enter fully here into the history of the various changes it underwent, or to describe in detail its provisions. A sketch only will be sufficient. The principal objects of the Bill were to require every person registered in the Medical Register to have both a medical and a surgical qualification; to provide for the registration of foreign and colonial practitioners; to strengthen the clause forbidding unqualified persons to use designations implying qualification; to make further—but, as we have pointed out, very imperfect—provision for uniformity of standard of the minimum qualifications granted in the United Kingdom; to enable women to obtain qualifications to practise; to provide for the education, examination, and registration of dentists and of midwives; and to make amendments in the Medical Act, 1858, with respect to the Register, erasures from the Register, the certificates of medical practitioners under the Lunacy Acts, and the qualification of medical officers to colonial ships. But it did not touch the constitution of the Medical Council, and thereby it insured the hostility of the managing body of the British Medical Association; and that of the promoters and supporters of the medical women movement, because it did not treat female in every way as male candidates.

The Duke of Richmond, when introducing his Bill, acknowledged the weakness of the clause relating to the union of licensing bodies for examination purposes, and excused it by a reference to the opposition a compulsory clause would have been certain to meet with in certain quarters; and he invited criticism of the measure. This criticism he received in full measure, given frankly and without stint; and, it must be owned, patiently and as frankly received. His Grace granted audiences to deputations from Universities, Corporations, associations, societies, and other bodies much too numerous to be mentioned here, and listened to them all with a degree of courtesy, consideration, and patience beyond praise. The General Medical Council also met early in April, and devoted nearly the whole of a session, lasting seven days, to the consideration and criticism of the Bill. Numerous amendments in it were agreed to and presented to the Duke for his consideration, the most important being to the effect that "no medical legislation relating to examinations will be satisfactory which does not provide for the formation of an Examining Board in each of the three divisions of the kingdom, and direct that every person who desires to be registered under the Medical Act shall be required to appear before one of these Boards and be examined in the subjects which may be deemed necessary by the Medical Council." This was, however, carried only by fourteen votes against ten, the majority consisting of all the English and one Irish representative, with all the Crown nominees except that for Scotland; and could hardly, therefore, be expected to have much effect in encouraging the Lord President of the Privy Council to defy the "cauld, cauld blast" from north of the Tweed, the dread of which had made him refuse, against his own opinion and judgment, to make the formation of Conjoint Examining Boards compulsory. And his Grace seemed to be immovable on this point till nearly the end of May, when he announced to some deputations on the subject of the Bill that he had made up his mind to a compromise, which he hoped would be generally acceptable, viz., to make combination compulsory on the Corporations in the three divisions of the kingdom, but to leave the Universities free. This, however well intended, only called forth fresh remonstrances, as in Scotland especially the Universities stand, in regard to the mass of the profession, in the same position as do the Corporations in England. The Duke, quickly recognising this, again changed his mind; and when, on March 24, the motion for going into committee on the Bill came on, stated that he had determined to make the formation of Conjoint Boards compulsory upon all the medical authorities in each division of the kingdom. He accepted also some others of the various amendments that had been urged upon him, though he still refused to weight his Bill by any provision for "reforming" the constitution of the Medical Council; and, though he made some alterations in the clauses relating to the admission of women to the profession, did not succeed in satisfying any of the objectors to the original provisions on that head. Still, his amendment disarmed all serious opponents in the House of Lords. The Bill was passed rapidly through committee, and the Duke showed so much anxiety to send it down early to the Lower House, that the Marquis of Ripon, taking advantage of his eagerness and pliancy, obtained his assent to an alteration by which the words which compelled the production, on application to be placed on the Medical Register, of medical and surgical diplomas, were omitted from Clause 4, and the certificate of a Joint Board was made the sole requirement for registration. The alteration made in the Bill by this most mischievous and ill-judged concession was of a highly revolutionary character, its effect being to transfer the power of conferring the licence to practise from the Universities, Colleges, and Corporations to the Joint Boards, though leaving it, for the present, optional with candidates who passed the conjoint examinations to affiliate themselves with any of the old medical authorities on the Register on a Joint Board certificate only. The concession was, moreover, an unmitigated blunder; it raised a fresh storm of remonstrance and opposition, and it failed to satisfy the medical-woman party, the conciliation of which was probably its chief, if not its sole, intention. In this shape the Bill was sent down to the House of Commons. The Medical Council again met on June 28, in order to consider for a second time the amendments desirable in the Bill, and, with regard to the alterations last named, passed resolutions disapproving of the House of Lords' amendments with reference to registration; providing that any person passing the examinations of a Joint Board shall receive a diploma or diplomas from one or more of the Corporations combining in the scheme, but leaving this optional for graduates of a University in the United Kingdom; and providing for the registration of such diploma or diplomas. And they offered a compromise on the medical-woman difficulty by resolving that any woman who shall have passed the examination shall have the right to obtain a diploma of any one or more of the co-operating Corporations. The Government were

very unwilling to give up the hope of carrying the Bill, even when July had passed and the "slaughter of the innocents" had begun. The second reading was put down for August 5, and Government amendments making the possession of a diploma or diplomas necessary for admission to the Medical Register, and providing for registration without any diploma in certain special circumstances, were placed on the business paper; but the order for the second reading had to be discharged, and the Bill to be withdrawn. The Government are not, however, dismayed by the many difficulties they met with. They informed the House of Commons, on December 17, that they hope to introduce and "to pass" a Medical Acts Amendment Bill next year; and added that, as the constitution of the Medical Council is a matter of considerable difficulty and importance, further inquiry will be necessary with respect to it before any legislation can be attempted.

The General Medical Council held three sessions during the year—an unprecedented occurrence, but rendered necessary by the efforts of the Government to pass the Medical Acts Amendment Bill, and by the passing of the Dentists Act. The Council first met on April 10, and sat seven days. Three new members were introduced. Dr. Andrew Fergus took his seat as Crown member for Scotland, in the place of Mr. Lister, whose resignation had been necessitated by his having left Edinburgh to reside in London; Dr. James Bell Pettigrew, as representative of the Universities of Glasgow and St. Andrews, in the place of Dr. Allen Thomson, resigned; and Dr. Robert Scott Orr, as representative of the Faculty of Physicians and Surgeons of Glasgow, in place of Dr. John Gibson Fleming, resigned. The session was almost entirely devoted to the consideration and amendment of the Government Medical Bill, and that work was thoroughly done; and done in a manner highly creditable to the Council. The speaking was, as a rule, good, and in not a few instances remarkably good, and very little time, comparatively, was spent in talking instead of debating. The results of the session, so far as the Bill was concerned, have been already noticed sufficiently; and we need only add here that on the morning of the last day of the session the President of the Council, and several of the members, received a deputation from the Medical Reform Committee of the British Medical Association. The latter body, which was represented by its chairman, Dr. Waters of Chester, and some other members, desired to impress on the Medical Council the importance and necessity of a change in the constitution of the Council, especially in such a way as to admit of what is known as "direct representation" of the profession. The interview was a long, wordy, and not very dignified one, and had no direct or immediate practical results.

The second meeting of the Council, which was summoned in order to consider the amendments introduced into the Medical Bill in the House of Lords, began on June 28, and lasted six days. These amendments were very numerous, but the most important of them related to the registration clauses of the Bill, and the clauses regarding the examination and licensing of women. On the first day the Council spent a considerable amount of time in going over old ground in debating a motion for the establishment of "a single Examining Board for the entire of the United Kingdom," and an amendment, proposed by Sir Dominic Corrigan and Dr. Andrew Wood, to defer medical legislation with a view of having the whole question referred to a Select Committee of the House of Commons. Both the amendment and the original motion were negatived, and then the Council went steadily to work at the business for which it had specially been summoned. The only other matter before the Council was the question of its own revision. Dr. Pyle and Dr. Leet proposed that as a mode of granting a larger representation of the profession in the Council, every graduate of a University, or licentiate or member of a Corporation, should be entitled to vote for the representation of the University or Corporation to which he belonged. This gave rise to a long and interesting debate, in the course of which Mr. Teale made a speech deserving of special note for the ability and breadth of view with which the question was handled; and eventually the Council resolved that "the constitution of this Council needs revision, and that the Council do affirm and represent to the Government that, at its first meeting after the present session of Parliament, it will consider what modifications of its constitution are demanded and are required, and will report to the Government accordingly." This was agreed to without a dissentient voice, eighteen members voting for it, five (the President, Drs. Andrew Wood and Quain, and Messrs. Turner and Simon) declining to vote, and one member (Dr. Hudson) being absent. The members of the Council were thus, in the most formal way possible, committed to the consideration of the revision of its constitution—some, judging from their speeches, because they really considered a revision of some kind necessary; and some only or chiefly because an apparently considerable body of the profession clamoured for it. Whether the decision thus come to was a wise one, is, to say the least, open to doubt, for the Council is not a legislative, but only an executive or administrative, body, and it is not, it appears to us, usual to ask such a body to consider and advise upon a question of its own reform. Before separating the Council laid upon the Executive Committee the very onerous task of preparing for it, "before its next meeting," a report "on the present constitution and working of the Council, and on the changes (if any) of constitution by which, in the opinion of the Executive Committee, the Council might be rendered more efficient for the duties which it has or will have to discharge,"—such report to be in the hands of the members of the Council at least one month before the meeting at which it should be discussed.

It became necessary to summon the Council, for the third time in the year, in order to give the directions requisite for putting the Dentists Act in force. On this occasion one new member was introduced, the Rev. S. Haughton, M.D., having been elected representative of the University of Dublin, in place of Dr. Apjohn, resigned. The Council met on October 17, and got through the business in two days. But this result was attained by heaping still more work on the Executive Committee, to which hard-worked body the Council remitted the labour of requiring from the medical authorities that grant dental qualifications information as to the course of study and the examinations to be gone through in order to obtain such qualification; and of obtaining information respecting the education and examination of applicants for registration holding colonial and foreign qualifications. The Council did not consider it either necessary or expedient to attempt to define, or limit in any way, the interpretation to be given to Clause (C) of Section 6 of the Act, which provides that any person is entitled to be registered, under the Act, who "was at the passing of the Act *bonâ fide* engaged in the practice of dentistry or dental surgery," either separately or in conjunction with the practice of medicine, surgery, or pharmacy. It is therefore left to every applicant for registration to define the clause himself, at the risk of being proceeded against under Section 36, the clause imposing penalties for obtaining registration by false representations—a risk which most probably may be safely considered to be infinitesimally small. Thanks to the tact of the promoters of the Act, and to the concentration of attention on the Medical Bill, the dental clauses of which

would, it was supposed, take the place of the Dentists Act, the latter was allowed, after its earliest stages, to pass with but very little remark or opposition, and it became law on July 22. The vast majority of those who have registered under it have no surgical or medical education of any kind; and there is nothing in the Act to prevent any of them from assuming the title of Surgeon-Dentist or Dental-Surgeon. Up to the present date some 3100 "Dentists" have been registered, of whom about 250 possess the Licence in Dentistry of the Royal College of Surgeons of England, and about seventy that of the Royal College of Surgeons in Ireland. Nearly all the rest have claimed admission to the Dentists' Register on the ground that they had been *bonâ fide* engaged in the practice of dentistry alone, or in conjunction with pharmacy—the latter signifying, we suppose, that they were chemists and druggists.

An effort was made to compel the Medical Council at its last sitting to enter on the subject of the revision of its constitution. Sir Dominic Corrigan urged that it was obliged to do so by the resolutions passed on the subject on July 3 and 4; and a motion was proposed and seconded for at once taking the subject into consideration, though the Executive Committee had not been able to really take up the labour imposed upon them with regard to it, much less to prepare a report. But it was agreed, by a large majority, that a discussion on the constitution of the Council would, during that session, be "premature, inopportune, and not in accord with the spirit" of the resolutions passed in July.

At the end of January, a case of considerable importance with respect to the judicial functions of the Medical Council was heard in the Queen's Bench Division of the High Court of Justice. A medical man, who had been struck off the Medical Register, applied for an order to the Medical Council to restore him, on the ground that his name had been removed on some charge of misconduct without a hearing. The particulars of the case were not gone into, as the object of the trial was to obtain the opinion of the Court for the guidance of the Medical Council. It was contended that that body had a discretion as to removing or restoring names of medical men on the Register. But the Lord Chief Justice observed that he did not think that the Council had power to remove the name of a medical man on representations of professional misconduct without granting him a hearing. He ought to know what the charge against him was, and to have an opportunity of making a defence. The Council ought, in the opinion of the Court—assuming the proper qualification, and on proper application—to entertain the application for restoring the applicants' names. Counsel for the Medical Council said they would act in accordance with the opinion of the Court.

The serious dispute between the Senate and the Convocation of the University of London, which arose out of the action of the Senate in deciding to take advantage of the Russell-Gurney Act, and admit women to examination for its medical degrees, without any communication to or consultation with Convocation, was settled early in this year. We reported very fully on the whole matter last year, and need not again repeat the points in dispute. But it may be well to remind our readers that at one meeting of Convocation the resolution that "this House is of opinion that it is undesirable for this University to admit women to degrees in medicine before it shall have considered the advisability of admitting women to degrees in all the Faculties," was carried by a decided majority; and that the Senate having decided nevertheless to pursue the course they had determined upon, another very large meeting of Convocation was held, at which it was resolved by a large majority—"That this House regrets that the Senate has, by adopting a permissive Act of Parliament, without reference to or consultation with Convocation, materially altered the constitution of the University, and has thus practically superseded the privilege of Convocation." The Senate at last gave way in some degree, and agreed to apply for a new Supplemental Charter for the admission of women to all degrees; and the document, as prepared by the Senate, was submitted to Convocation on January 19. The meeting was a most unusually large one, 374 graduates voting on the question that the Charter be approved. Its purpose was to grant to the Chancellor, Vice-Chancellor, and Fellows—that is, the Senate—enlarged powers, so as to enable them to examine women; and, after examination, to grant to women any degree or certificate of proficiency that they had power to grant to men—a proviso being added, that no female graduate of the University shall be a member of Convocation, unless and until Convocation shall have passed a resolution for their admission. The approval of it was opposed, and very ably, by many of the most eminent medical graduates of the University, and by some of the graduates in other Faculties; but the general feeling of the House was against them. Mr. Farrer-Herschell and Dr. Pye-Smith argued with much ability that the new Charter should be accepted in the interest of "peace and reform," and there appeared to be a prevalent feeling that Convocation had obtained a victory in extorting the Charter from the Senate, and could afford to give way now; and in the end the House "approved" the Supplemental Charter by 242 votes to 132. At the annual meeting of Convocation, in May, the Charter, dated the 4th of that month, was formally accepted, and some resolutions were passed suggesting as "desirable" some important changes in the University. One affirmed that "it is desirable" that the University should promote, "by the institution of University chairs or otherwise, the cultivation of such higher or less usual branches of study as can be more conveniently or more efficiently taught by a central body"—that is, that the University should cease to be only a machine for examining, and conferring degrees, and should become a teaching body; and another resolution, of special importance to the Medical Faculty, declared "that it is desirable for the Senate to consider the importance of recognising independent research in the examinations for the higher degrees, in such way as the Senate may approve."

The Royal College of Physicians, London, again elected Dr. Risdon Bennett to the high and honourable office of President of the College for the ensuing year. Some important regulations were passed with respect to exemptions to be made in the examination of candidates for the licence of the College, who shall produce evidence of having passed elsewhere a satisfactory examination in chemistry and materia medica, or of having already obtained a satisfactory qualification to practise medicine or surgery. Regulations were also enacted with regard to exemptions in the examinations of candidates for the Membership. On March 18 an extraordinary meeting of the College was held for the purpose of considering "whether, under any circumstances, the Royal College of Physicians of London is prepared to grant its licence to practise physic to women." The meeting was a very large one, some ninety of the Fellows of the College attending. The question was put before them by the following resolution, very ably proposed and seconded by Sir George Burrows and Dr. West—"That the Royal College of Physicians, having considered the important question of granting licences to practise physic to women, resolve: That the College do steadily adhere to the terms of its Charter, and do not grant licences to practice physic to women." A long discussion followed, and Dr. Maudsley and Dr. J. E. Pollock proposed as an amendment—"That this College is prepared to grant its licence to women who submit to all the requirements of medical study and all the tests of examination which it con-

siders sufficient for men." But very few, comparatively, of the Fellows spoke in support of the amendment; and in the end the original motion was carried by an overwhelming majority. The customary courses of lectures at the College —the Goulstonian, the Croonian, and the Lumleian—were delivered by Dr. D. Ferrier, Dr. Pavy, and Dr. Bucknill—the first taking for his subject "The Localisation of Cerebral Diseases"; the second, "Points connected with Diabetes"; and the third, "Insanity in its Legal Relations." The names of the lecturers are a sufficient guarantee that the courses of lectures were worthy of the College, and some of them have been published in our columns. The Harveian Oration was given by Professor Burdon-Sanderson, who took for his chief theme one of the objects of its foundation—viz., that of exhorting the Fellows and Members of the College to the study of nature, after the example and method of Harvey. And in June the College, in commemoration of the tercentenary of the birth of Harvey, gave a banquet in the library of their hall, at which, in response to the toast of "The Memory of Harvey," Professor Huxley delivered what may be called a second Harveian Oration, on Harvey's three special titles to honour and respect—the discovery of the circulation of the blood; his work, "De Motu Cordis et Sanguinis"; and his treatise, "De Generatione." The election of members of the College to the honour of its Fellowship took place, as usual, on April 25.

At the Royal College of Surgeons, the Council, at the first meeting held in the year, decided, on the motion of Mr. Hancock, to discontinue the registration of medical students, the registration required from them by the General Medical Council being, very justly, held to be sufficient for all purposes. The Council having determined, last year, to act on the power conferred by Section 5 of the Charter, 15th Victoria, but hitherto not exercised, of electing each year two members, of twenty years' standing, to the fellowship without examination, on the ground of distinction in surgery or in the sciences relating to surgery, in January this year Mr. O. Pemberton, of Birmingham, and Sir Joseph Fayrer, K.C.S.I., F.R.S., were nominated, and in April were elected Fellows of the College. The annual election of Fellows into the Council of the College was made especially remarkable by the large number of candidates (ten) who presented themselves for the three vacancies, created by the retirement, in the prescribed order, of Messrs. Erasmus Wilson, Henry Lee, and Barnard Holt. These three gentlemen all stood for re-election, and Mr. John Gay, Mr. Lister, Mr. T. Bryant, Sir Henry Thompson, Mr. John Wood, Mr. Henry Power, and Mr. Lund of Manchester, were also candidates. The distinction of election was conferred on Mr. Lund, Mr. E. Wilson, and Mr. Gay, who missed re-election in the previous year. Mr. Spencer Wells declined re-election to the Professorship of Surgery and Pathology after having held it for one year, and Mr. Jonathan Hutchinson was elected to the vacant chair. Mr. E. Wilson delivered his ninth course of lectures as Professor of Dermatology at the College, and at the conclusion resigned the chair, having, he said, fulfilled the task which he had set himself at the beginning of his undertaking it—that of going through the whole series of cutaneous diseases in regular succession, beginning with eczema, and ending with the disorders of the glandular system of the skin. It will be remembered that Mr. Wilson founded and endowed the chair in 1870, and shortly afterwards presented to the College his extensive and valuable collection of models of diseases of the skin. He was the first to hold the chair he thus created, and it was for a time thought probable that he would be succeeded in it by Mr. Jonathan Hutchinson. But the President and Vice-Presidents of the College suggested to the Council that the usefulness of the Erasmus Wilson Endowment would be much increased if the Trust, instead of being restricted to the promotion of dermatology only, could be enlarged so as to embrace the whole subject-matter of pathology, and especially if its conditions could be altered so that the hope of holding the professorship might act as a stimulus to original research in the sciences fundamental to surgery. On consultation with Mr. Wilson, it was ascertained that he was willing to join in modifying the terms of the Trust in the direction suggested, and a committee of the Council was appointed to draw up a new scheme. On December 12 the Committee reported, and presented a scheme for altering the terms of the Trust so as to promote the advancement of pathology in any of its relations or parts; and especially to promote original Research in pathology, by payments in aid of Researches, as well as for Lectures. The scheme was adopted by the Council, and each lecturer under the Trust is, during the appointment, to be entitled "Erasmus Wilson Professor of Pathology."

There is still no Conjoint Examination Board for England. Last year—seven years after the General Medical Council had sent to all the licensing bodies in the United Kingdom a message strongly urging the desirability of a Conjoint Examining Board for each division of the kingdom—a Conjoint Scheme for England was at last agreed upon by the English medical authorities, and was in May presented to and sanctioned by the Medical Council. The co-operating authorities next severally appointed their representatives on the Committee of Reference—the all-powerful body which is to work the scheme, and regulate and control everything and everybody; and this Committee worked with a will for some time at drawing up a scheme of education and examination, so that months ago it was rumoured that the scheme was ready, or all but ready, to be submitted to the several medical authorities for approval. But then came the proposed Government Medical Bill, which for months put a stop to all progress in carrying out the Conjoint Scheme. Lately the Committee have again taken up their work; but their plan has not yet been sent to the medical authorities, and it is not certain even now that the Conjoint Scheme for England may not be broken up. Such a result, though it would involve the throwing away of an incalculable expenditure of labour and thought unsparingly and ungrudgingly bestowed on the Scheme by men in the highest ranks of the profession, seems at any rate not impossible, unless Government should next year bring in and carry a Bill making the formation of a Conjoint Board in each division of the kingdom compulsory.

The Medical Societies of the metropolis, and the various Provincial Societies, have had active and busy sessions, and, as usual, done good work for the advancement of both the science and the art of medicine.

The report of the Royal Medical and Chirurgical Society gave some details of the founding, and the settlement of the regulations of the Marshall Hall Memorial Prize, and stated that the Council recommended the Prize should be awarded to Dr. Hughlings-Jackson, for his investigations into the pathology of the nervous system. This recommendation the Society, at its annual meeting, adopted unanimously; and the President, in handing to Dr. Jackson the diploma recording his selection as the first Marshall Hall Prizeman, observed that the award to him was made on three chief grounds—1, his contributions to the increase of our knowledge of aphasia; 2, his careful clinical observations on epilepsy; and 3, his researches with the ophthalmoscope. The Committee appointed, at the close of 1875, "to examine into the relation existing between the diseases commonly known respectively as Membranous Croup and Diphtheria," presented their report on October 22 last. It is a very elaborate document, and sets forth several important conclusions at which the Committee had arrived. But it would be premature and

inopportune to note them here, as all discussion of them was postponed till the report itself shall have been placed in the hands of the Fellows of the Society. The interest of the profession in everything that can throw a light on the disease known as diphtheria has meanwhile been intensified by the terrible outbreak of it in the Grand-Ducal family of Hesse-Darmstadt, and the piteously pathetic death of the Princess Alice.

At the Pathological Society the most marked feature of the meetings during the year was the "exhibition" of specimens of lymphadenoma and leukæmia, with the discussions on them. On this occasion the title of "exhibition" was given to the meetings devoted especially to the consideration of the subject, instead of the designation "discussion" or "debate," which were used when syphilis, cancer, and tubercle were made special subjects of consideration by the Society; and there was, therefore, perhaps a closer adherence to statements of observation, and fewer attempts than usual at generalisation. It must be said that the result of the exhibition was chiefly negative—a result not to be wondered at, as any really fruitful discussion on lymphatic diseases must include, not only the morbid anatomy, but also the whole natural history, and the results of treatment of these affections. For a summary of the discussion and notices of our chief pathological and therapeutical gains during the year we must refer our readers to our reports of the Pathological and Clinical Societies, and to various scientific editorial articles. The Clinical Society appointed early in the year two scientific committees, one "to investigate what deleterious effects follow the prolonged and continuous use of chloral in ordinary doses"; the other "to investigate the periods of *incubation* and *contagiousness* of scarlatina, diphtheria, erysipelas, typhoid fever, mumps, varicella, variola, and allied diseases." Neither committee has reported yet, and we may observe here that both investigations are of great practical importance, and that the committees have invited the co-operation of all practitioners who have it in their power to assist them in the labour they have undertaken.

The Fothergillian Gold Medal of the Medical Society was awarded to Dr. Milner Fothergill for the best essay on "The Antagonism of Therapeutic Agents."

In the "Annus Medicus" of 1877 we had to point out that in the Army Medical Department matters were apparently rapidly coming to a dead-lock. Some important and praiseworthy reforms had been made. A General Order had been issued, providing that Army Medical Officers doing duty with regiments should not in future be called upon to contribute to mess and band funds; and a new Army Hospital Corps Warrant had greatly improved the Field Medical Service, and had made a change of great importance in the position of Army Medical Officers, by investing them with disciplinary power over all persons connected with military hospitals and with medical service in the field, and with real and complete authority in their own department; and by relieving them from the pressure of some administrative details. But this had not been enough to make the Service again popular, and still the candidates for admission into it were always in number far below the advertised vacancies. The then Secretary of State for War, Mr. Hardy—now Lord Cranbrook—persisted, notwithstanding, in taking a most cheerful view of the state of affairs; and, in reply to questions put on the subject in the House of Commons, declared that everything possible had been done to make the Army Medical Department a happy and contented one; and held to the belief that his short-service scheme would prove a success, and that everything would come right. Things, however, went from bad to worse, and the dead-lock was arrived at. In February, this year, Mr. Hardy even was obliged to own that the state of matters was far from satisfactory; and he appointed a small Committee—consisting of Sir William Muir, the Director-General of the Army Medical Department; Mr. Ralph Thompson, Assistant Under-Secretary of State at the War Office; and Mr. Denham Robinson, Actuary to the War Office—to inquire into the causes which prevent a sufficient number of eligible candidates from coming forward for the Army Medical Department, and to point out the remedies which might appear to be called for. The Committee addressed to each of the various licensing bodies and medical schools in the United Kingdom a letter stating that Mr. Secretary Hardy was most anxious to place the Army Medical Department in such a condition as to attract the best candidates in the profession, and requesting to be favoured unreservedly with "an opinion as to the specific causes producing the existing difficulty in obtaining candidates." The authorities thus appealed to replied, stating in varying degrees of fulness of detail, but with general unanimity of opinion, the causes of the unpopularity of the Service—causes sufficiently well known to our readers; and the Committee endeavoured to obtain from other sources also the information required to guide them in their work. At the end of September they made their report, and we were enabled at once to make known its character, and the "recommendations" of the Committee to the Secretary of State for War on the steps to be taken to make the Service attractive and popular. The opinion expressed by the Committee, which was composed entirely of officials, on the State of the Department confirms all that we have so often said about it, and forms a curious contrast to the statements of "Mr. Secretary Hardy" on the subject. The Committee say—"Candidates have become progressively scarcer in proportion to the vacancies. The diminished supply has necessitated the employment of medical men lower and lower down the pass-lists, although even then the establishment has not been kept full. Such a result is eminently unsatisfactory." We have fully commented upon the Recommendations of the Committee, and have pointed out that while some of them are well calculated to satisfy some grievances of long standing, and to remove some of the objections that deter men from seeking to enter the Service, others are of a very doubtful character. The Committee recommend that the ten-years system of service be abolished, but that the medical officer shall have the option of retiring after ten years' service with a somewhat increased bonus; and further, that he shall be given the option of retiring after fifteen or ten years' service on a fairly good gratuity, or after twenty, twenty-five, or thirty years' service on an increased scale of pension, without having to go before a medical board; and the rates of pay and retired pay recommended are increased so as to meet reasonable expectations. It is recommended also that in case of sickness a medical officer be allowed, if necessary, leave on full pay up to one year for the recovery of his health; that half-pay in case of wounds or ill-health be governed by the rules applicable to combatant officers; and that honours and good-service rewards be bestowed on the scale applicable to combatants. But the forage grievance is left unaltered, and no suggestion is made for any partial readoption of the regimental system, the Committee considering that subject as settled; while the recommendation that medical institutes be formed at certain large stations, in order to make up, in some degree, for the loss of the regimental home, appears singularly inadequate and inefficient. Some of the recommendations and of the observations and suggestions contained in the report are very remarkable, when it is remembered that the Director-General of the Army Medical Department was a member of the Committee. The Com-

mittee appear to think that Army Surgeons do not require any special training, and suggest that civil practitioners may with advantage be largely employed to supplement or replace their services. They find fault with the character of the competitive entrance examination, and say that it has not been sufficiently practical, but has been made a test of memory rather than of real professional knowledge; and they recommend that in future one-half of the vacancies shall be filled by competitive examinations in advanced practical subjects, and one-half by nomination. The last-mentioned recommendation is a very bold one, considering how strongly the "spirit of the age" is in favour of competitive examinations on every conceivable occasion; but it must be admitted in favour of it that the education and acquirements demanded for the minimum qualifications to practise have been largely heightened of late years, so that very few candidates now fail to pass the examination for entrance into the Army Medical Service. Should a nomination system be adopted, however, it must clearly be under very careful restrictions and safeguards, and it is very questionable, to say the least, whether the recommendation that it shall apply to "registered surgeons nominated and vouched by the medical schools of Great Britain, Canada, and Australia, in rotation," will be considered satisfactory. The report has not yet been placed before Parliament, and no new Medical Warrant has yet been issued, but on the whole it seems very doubtful whether the adoption of all the recommendations of the Committee would suffice to make the Service "attractive to a sufficient number of eligible candidates"; and it may fairly be suspected that this opinion is shared in by the Committee, as they not only suggest the employment of civil practitioners to undertake the duties of Army Surgeons, but also recommend a reduction of the numbers of the executive ranks of the Service.

The course of the British Medical Association was not so smooth and unchequered during the year as it has usually been of late. Very early in the year two questions were raised which seemed at one time to threaten rather seriously the harmony and prosperity of the Association. Dr. Wilson Fox had, at the end of the previous year, addressed to the Secretary a letter, inquiring of the Council whether "women are to be permitted in the future to attend the meetings of the medical, surgical, and other sections of the Association, and to take part in the discussions at the meetings?" To this he received the reply that "the Council have no power to prevent ladies who are members of the Association from attending the meetings of the Association." In his letter Dr. Fox had referred to the fact that in 1876 the question whether women should be admitted to the membership of the Association had been put to all the then members of it and negatived by three out of four of all who had answered, and this question was the real one raised by Dr. Fox. But the Council in their reply to him ignored that point altogether, and the result was that he withdrew from the Association. About the same time the Secretary of the Metropolitan Counties Branch of the Association challenged opinion on the management of the Association, alleging that the proceedings of a meeting of the Committee of Council were not published till a month after the meeting, and that when published the report was a curt and mutilated statement, which concealed a great part of the proceedings that it pretended to support, some of the omitted matters being resolutions which committed the Association to a large and doubtful pecuniary outlay. The result of all that was that an extraordinary general meeting of the Association was summoned in April to consider the two questions thus raised, the requisition for the meeting being signed, it was said, by 300 members of the Metropolitan Counties Branch. According to precedent, the meeting was held in Birmingham—not, as might have been expected, in London,—and was attended by about 145 members only, of whom some sixty were Birmingham men; though it was stated that Dr. Grigg's resolutions, for a reform in the publication of the reports of the Committee of Council, and against some of their business arrangements, had received, on paper, the support of some 2000 members of the Association; and only five London members were present at the meeting. Dr. Grigg received very little support, and resolutions upholding the Committee of Council were passed by very large majorities. The interest of the woman-member question had been discounted by the Committee of Council having resolved, at their last previous meeting, "That women should not be admitted as members of the Association, and that a by-law be submitted to that effect to the annual meeting." Some members insisted on questioning the position and rights of lady-members, and there was a considerable difference of opinion as to whether an inquiry into this matter should be made by a special sub-committee, or be entrusted to the Committee of Council. In the end the meeting resolved by a very narrow majority to direct the Committee of Council to take the opinion of counsel as to the rights of lady-members, and to report to the annual meeting. At the annual meeting it was formally proposed to add to the articles of the Association the following:—"No female shall be eligible for election as a member of the Association," and after a rather long discussion, the most interesting feature of which was a very able speech by Mrs. Garrett-Anderson, the new article was carried. No question was raised as to the rights of ladies who were already members of the Association, but one lady who was supposed to be a member lost that position in rather a curious way. It was reported to the meeting that a number of members had been elected in the interval between the time when application was made for incorporation of the Association and the actual incorporation, and that the legal adviser of the Association had pointed out that during that interval there was no power of election, and that therefore those members had been illegally elected. It was proposed therefore to pass a resolution authorising the Committee of Council to declare all the gentlemen so elected duly elected. Among the illegally elected was one lady, but it appeared that her election had been doubly illegal, for she did not possess at the time any registrable qualification. She was therefore omitted from the resolution, which was carried, and there is at present only one lady-member of the Association; and can be no more so long as the new article stands. This meeting of the Association—the forty-sixth annual meeting—was held at Bath under the presidency of Dr. Falconer, and was not, as regards the number of members present, such a successful one as the annual meetings have been of late years; but as regards the character of the addresses given, and the amount and interest of the work done in the sections, the members had certainly good reason to be satisfied. The most interesting of the addresses-in-chief were, perhaps, the Address in Surgery, by Mr. Wheelhouse, of Leeds, which included a review of the advances made in surgery during his professional life-time; and the Address in Forensic Medicine by Dr. Maclagan, the Professor of Forensic Medicine in the University of Edinburgh, who took for his subject, "Forensic Medicine from a Scotch Point of View," and gave a most interesting and instructive description of the advantages that the Scottish system of preliminary inquiry into cases of a suspicious character, which involve medical consideration, by a Procurator-Fiscal, possesses over the English system of inquiry by a Coroner's Jury. In the several sections excellent addresses were deliveved by the Presidents—in that of Medicine, by Dr. Grainger Stewart, Professor of the Practice

of Physic and of Clinical Medicine in the University of Edinburgh, on "Certain Morbid States of the Kidney"; in that of Obstetric Medicine, by Dr. A. H. McClintock, of Dublin, on "Death-rates in Childbed;" in that of Surgery, by Mr. Callender, on "The Avoidance of Pain"; and in that of Public Medicine, by Dr. Arlidge, "On Occupations in their Relations to Health and Life." At the end of 1877 the Committee of Council of the Association appointed a Committee to carry out a scheme for the investigation of the Pathology and Treatment of Rabies and Hydrophobia, and made a grant of £100 towards the expenses of the work. This year the Committee made a preliminary report, showing the manner in which the inquiry entrusted to them was being carried on. The Association again this year made a grant "of a sum not exceeding £300" for scientific researches.

The Sanitary Institute of Great Britain held its Congress at Stafford during the first week in October, and Dr. B. W. Richardson delivered a very able address "On the Constitution and Functions of a Minister of Health for the United Kingdom." We have more than once urged that the public health will never be efficiently cared for till we have a Public Health Department of the Government, presided over by a responsible Minister, who would represent State Medicine in the Legislature at least, if not in the Cabinet also; while, apparently, Dr. Richardson's Minister of Health would be only a sanitary councillor, who should take no part in Parliamentary struggles. We venture to differ from him; but he has done a good work in bringing the question prominently before the public.

The Annual Congress of the National Association for the Promotion of Social Science was held at Cheltenham, and we may mention two of the many papers read during the sitting of the Congress. Mr. W. H. Michael, Q.C., as President of the Public Health Section, gave a very suggestive and highly practical address on questions of public health legislation and administration. One of the important changes he advocated, and which will recommend itself to everyone, is the employment of an official draughtsman, who would be responsible for the construction of Acts of Parliament when Parliament itself has agreed on the principle of clauses and amendments, and would take care that these are consistent with themselves. Further, he would have metropolitan sanitary law consolidated and made to accord more closely with the general sanitary law of the kingdom; and he would do away with the sanitary-law distinctions between urban and rural districts. And he urged a remodelling of the central sanitary administration, under the form of a Ministry of Health and Justice; but how this reformation is exactly to be carried out he did not explain. The other paper to which we have alluded was communicated by Professor John Marshall, of University College, and was "On a Circular System of Hospital Wards." There appears to have been some discussion going on as to the rebuilding of the hospital to which Mr. Marshall is attached, and that considerable difficulty has been found in planning a sufficiently capacious hospital, according to the commonly-accepted principles of ward-construction, on the contracted site of the hospital. And when considering this, Mr. Marshall has been led to think that the substitution of circular for oblong wards would get rid of great difficulties in the arrangement of blocks of buildings, and in ward-lighting, ventilation, and warming, and would moreover give great advantages in the capacity and the administration of wards. Mr. Marshall's paper was supplemented by some remarks and illustrations by Mr. Percival Gordon Smith, an architect to the Local Government Board. Mr. Smith agrees with Mr. Marshall as to all the advantages claimed by him for the circular system, and is almost enthusiastic on its capacities for the production of admirable architectural effects. The idea was received, according to the newspaper reports, with great disfavour. But the question raised is a very important one, and it is to be hoped that the "Marshall System of Hospital Wards," as Mr. Smith calls it, may be brought under the notice of, and be thoroughly considered by, Dr. J. S. Billings, to whom is entrusted the consideration of all known plans of hospital construction, in connexion with the project of the John Hopkins Hospital at Baltimore; the plan for which has not yet, so far as we know, been finally decided. The only objection that Mr. Smith finds to the circular system is that it would cost more than the longitudinal.

The question of the principle of counter-prescribing was again raised in three cases during the year. The matter in dispute is, as is well known, whether a chemist and druggist has the right to prescribe for persons who apply to him for medicine at his own shop. On behalf of medical men it is contended that by the Apothecaries Act of 1815 chemists are prevented from doing more than dispensing, compounding, and vending drugs; while the chemists claim that the Act expressly reserved to them the right of carrying on their business in the same manner as before the passing of the Act, and that at that time prescribing over the counter was recognised as coming within the lawful functions of a chemist and druggist. The chemists and druggists rely in their defence on Section 28 of the Act, which runs thus:—"Be it further enacted that nothing in this Act contained shall extend to prejudice or in any way affect the trade or business of a chemist and druggist in the buying, preparing, compounding, dispensing, and vending drugs, medicines, and medicinable compounds, wholesale and retail, but all persons using and exercising the said trade or business, or who shall or may hereafter use or exercise the same, shall and may use, exercise, and carry on the same trade or business in such manner, and as fully and amply to all intents and purposes, as the same trade or business was used, exercised, or carried on by chemists and druggists before the passing of this Act." The first case we propose to notice was argued in the Common Pleas Division of the High Court of Justice, before Mr. Justice Lindley; and the nominal defendants were the Society of Apothecaries, though the proceedings were really taken by the Medical Alliance Association. The defendant was a chemist and druggist named Hamilton, carrying on business in Oxford-street, and, the facts not being disputed, the case was, by consent, tried before Mr. Justice Lindley, without a jury, as a question of law rather than of fact. The judge said that he did not know what the exact duties of a chemist and druggist were when the Act was passed, and that no evidence had been laid before him to enlighten him on that subject. But, according to the Act, the duty of a chemist and druggist was to *buy, prepare, compound, dispense,* and *vend* drugs, etc. The defendant had clearly gone further than this. He had invited patients to come to his house, had seen them, consulted with them, examined them more or less, and then had given them medicine which was sold at his shop. It was suggested that the defendant as a registered chemist was protected by the Pharmacy Act, 1868, but Mr. Justice Lindley observed that that provided that registration under it should not entitle any person so registered "to practise medicine or surgery, or any branch of medicine or surgery," and he gave judgment for the plaintiff for the full penalty of £20.

The second case—the Society of Apothecaries *v.* Wiggins—was tried in the Court of Queen's Bench of the High Court of Justice, at the end of May, before Mr. Justice Field and a special jury. The defendant, a duly registered chemist, carrying on business in Bermondsey, was sued, under Section 20 of the Apothecaries Act, for having practised as

an apothecary without an apothecary's licence. He had prescribed and dispensed for four children, two of whom he had seen and examined before he prescribed, while the others had been treated by him after hearing a description of their symptoms from the mother. The children were afterwards attended by medical men, and it was found that one was suffering from bronchitis, a second from pneumonia, the third from scarlet fever, and the fourth from convulsions. Three out of the four died; but the question was not whether the defendant's treatment was improper, but whether or not such proceedings as his did not constitute a contravention of the Act. The defence was the same as in Hamilton's case; but this time some elderly chemists were called up to give evidence as to the custom of the trade before the passing of the Apothecaries Act. All stated that it was common for chemists to prescribe, and while some said that they had been in the habit of treating only simple ailments, one said that he used to treat bronchitis and other maladies. The jury, however, found that the defendant had practised as an apothecary, and that the complaints under which these children were suffering were not such complaints as a chemist would have prescribed for before the passing of the Act. The prosecution was instituted and carried on by the Medical Defence Association.

The third case—the Apothecaries' Society *v.* Shepperley—though it reaches back in last year, has only been very lately concluded. In 1877 a branch of the Medical Defence Association was formed in Nottingham, where it is believed that counter-prescribing is largely practised, with the object of endeavouring to check this injury to the public and the profession. Two men were engaged to get up evidence of medical practice against any chemist in the town; they went to a chemist named Shepperley, and complained—one of them of sore throat, and the other of pimples on the face—and got the chemist to prescribe medicines for them, for which they paid a trifling charge. The Branch Association then, in the name of the Apothecaries' Society, brought an action, in the Nottingham County Court, against the chemist for having in these two cases acted as an apothecary, and obtained a judgment against him. He applied for and obtained a case for the Superior Courts, and in November last year the case was in the Exchequer Court. The judges—the Lord Chief Baron and Mr. Baron Cleasby—after hearing at great length the counsel for the appellant, refused to give judgment, and ordered a new trial, on the grounds that the case was one of great importance, and that the Court had not before it sufficient material upon which to decide all the questions in dispute, especially the construction of Section 28 of the Apothecaries Act; and they directed that the case should be removed from the County Court to the High Court of Justice. The case was finally tried in the Exchequer Division of the High Court of Justice, before Mr. Baron Pollock, in November last. In this instance also evidence was given by elderly chemists to the effect that it was customary for chemists and druggists to prescribe for simple ailments before the passing of the Apothecaries Acts; and the defendant, who was also examined, deposed that he was not in the habit of prescribing, and that he never gave medicine for any serious malady without a prescription or the advice of a medical man. In summing up, the Judge said that the only question the jury had to decide was, whether the defendant had, in either of or both the cases set out, acted as an apothecary; and the jury returned a verdict for the defendant. The plaintiffs thereupon moved for a new trial, *non obstante veredicto*, on the grounds that the judge misdirected the jury, and that the verdict was against the weight of evidence. The motion for a new trial came on in the Exchequer Division of the High Court of Justice, before the Lord Chief Baron and Baron Pollock, and was at once refused. It was ruled that, under the whole circumstances, the case had been properly left to the jury; and the Court refused to interfere to review their verdict. The case was most unfortunately selected as one on which to try an issue of great importance; for so far as the chief witness—the informer Death, who pretended to have a sore throat—was concerned, it was a phantom case; and the Lord Chief Baron's ruling appears to have been on that ground. He held, apparently, that, as no disease and no symptoms really existed, there could not have been any real prescribing; and that the giving a little harmless medicine was merely a polite way of getting rid of the pretender. There can be no doubt that the jury were, in fact, influenced by the character of the case. But their verdict was, simply, that in that case the defendant had not acted as an apothecary, and it did not touch the real question at issue between medical practitioners and chemists and druggists. It is important, however, to notice that Mr. Baron Pollock's construction of Section 28 of the Act was adverse to the chemists and druggists. He said that the section did not mean that chemists and druggists were allowed to exercise and carry on the same trade or business as fully and amply to all intents and purposes as the same trade or business was used, exercised, or carried on before the passing of the Act. The true construction of the section was, that that was all limited; that exercising and carrying on the same trade meant an exercising and carrying on of the trade of a chemist and druggist in the buying, preparing, compounding, dispensing, and vending drugs. No explanation of the law could be more unfavourable to the contention of the chemists and druggists; and the learned Judge held his opinion so strongly and clearly that he stopped all evidence about the custom of the trade before the passing of the Act, and left it to the jury to say only whether or not, in that particular case, the defendant had acted as an apothecary.

The case of March *v.* Farrant, which was argued before Vice-Chancellor Sir Richard Malins on January 21, is of importance as showing that the law will enforce *bonâ fide* agreements between medical men as to limitations of fields of practice. An agreement had been entered into between Dr. March and Mr. Farrant that the latter would not practise as a surgeon and general practitioner within three miles of the former; and in September, 1877, Dr. March had obtained an injunction restraining Mr. Farrant in general terms from so practising. The defendant had, notwithstanding, continued to attend patients within the prescribed limits as an accoucheur; and application was made in January for an order to commit him to prison for contempt of court. The defence offered was that the business of an accoucheur did not come within the terms of the agreement. The Vice-Chancellor was, however, distinctly of opinion that the defence was bad, and that practising as an accoucheur was contrary to the terms of the agreement. The defendant offered to apologise, to pay the costs of the proceedings, and to undertake not to practise in any way within the fixed limits; and the Vice-Chancellor said on those conditions he would not commit the defendant, but that should he offend again, even in a single instance, no apology would be accepted.

The trial of M. Chantrelle for poisoning his wife, in Edinburgh, is worth remembering, as showing very clearly and forcibly the advantages of the manner in which medico-legal investigations are conducted in Scotland over that employed in England. The case was fully commented on in our pages at the time, in May, and should be carefully studied. The woman was first seen by a Dr. Carmichael, and he sent for Dr. Littlejohn, who is teacher of Medical Jurisprudence in the Extramural School of Medicine and Adviser on Medico-Legal Affairs to the Crown in Scotland. Their suspicions as

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to the nature of the ease being roused, the dying woman was placed in the Royal Infirmary under the eare of Dr. Maelagan, the Professor of Medical Jurisprudence in the University of Edinburgh. The post-mortem examination was made by Drs. Maclagan and Littlejohn; and the analysis by Dr. Crum-Brown, Professor of Chemistry, and Dr. Fraser, Professor of Materia Mediea, in the University; and the whole investigation and proseeution were eonducted by the Crown authorities: the result being a triumph of science and justice. And in every like ease in Scotland the same mode of proeedure would be followed, though of course it eould not in all eases be earried out by men of sueh eminenee. In England the preliminary proceedings would have been entrusted to a eoroner's eourt.

The aetion, "Hill and others *v.* the Managers of the Metropolitan Asylums Distriet," whieh lasted many days, and is eommonly known as the "Hampstead Hospital ease," is one of very great importanee. The plaintiffs, who are owners of houses and land in the immediate vieinity of the Hampstead Small-pox Hospital, eomplained that noxious vapours and matters dangerous to health escaped from the Hospital, and rendered their houses and land unhealthy; and that otherwise the Hospital interfered with the due use and enjoyment of their several properties. For this alleged nuisance they claimed damages; and they elaimed an injunction to restrain the defendants from using the building as a hospital for small-pox, scarlet fever, or typhus fever, or any infeetious or eontagious disease. The jury found that the Hospital is a nuisance, and a verdiet was entered for the plaintiffs. But as notiee was immediately given of the intention of the defendants to move for a new trial, we need not go further into the ease now.

The Select Committee of the House of Commons, first appointed early in 1877, "to inquire into the operation of the Lunacy Law, so far as regards the seeurity afforded by it against violations of personal liberty," reported in April this year. The eonelusion they arrived at, after taking a large amount of evidence, is, that "although the present system was not free from risks whieh might be lessened, though not wholly removed, by amendments in the existing law and practiee, yet, assuming that the strongest eases against the present system were brought before them, allegations of *mala fides* or of serious abuses were not substantiated." And the Committee report that "much of the evidenee, whieh extended to a great length, amounted to little more than differenees of opinion among medical men, questions of liberality or parsimony in the arrangements of asylums, suggestions with reference to the letters of patients and visits of friends, or eomplaints of hesitation among superintendents and relatives to believe in the perfeet recovery of patients." The Committee make several "suggestions," though not with mueh earnestness, mention some ehanges which they would regard with approval, and appear to "recommend" a few ehanges. One suggestion is, that certificates of insanity shall remain in foree for a limited period, not to exeeed three years; another, that the same proeedure shall apply to all patients, whether private or pauper, with or without property; and another is for facilitating the admission into licensed houses for persons, sueh as dipsomaniaes, who are not aetually under eertificate; and they give a negative approval to the praetice of the voluntary residenee, as boarders, of patients who had been previously eonfined as lunatics. The Home Seeretary stated, during the late short session of Parliament, that the report is "engaging the attention of the Lord Chancellor," and that the eourse whieh Government intends to adopt with regard to any reform of the Lunacy Laws will be stated to the House as soon as possible after the reeess.

A very important Parliamentary return, ealled for by Mr. Stansfeld, was published, giving the replies of the Rev. E. P. Grant, Viear of Portsmouth, to the questions addressed by Convoeation to the elergy as to the operation of the Contagious Diseases Acts. It shows that, in Mr. Grant's opinion, the result of the Aets has been "most beneficial" in diminishing prostitution, and in diminishing the amount of disease in women espeeially; for he states, "whereas in 1865 the ratio of disease per every 100 cases of examination was 70, it has been gradually reduced until in Deeember, 1876, it was only 4·84. In men he believes the ratio is rather less than half what it used to be; and these results he states to be entirely due to the general working of the Acts. The brothels have deereased in number by very nearly half, and the number of private houses is gradually diminishing." His opinion, and the experience of the effects of the Aets, is that they have been "most benefieial" upon men and upon women, and "good in every way" upon the population generally. He thinks that the examination tends to reelaim the fallen, and to deter some, especially young girls, from sin. He does not in the least believe that "men sin more beeause they think they can sin with impunity," or that they ever think of that. He testifies to "the marked improvement in the appearance and behaviour of the women of the town." Order and quiet, he says, have taken the place of disorder and noise; and there is an utter absence of any sueh licenee as was once too prevalent. There is less immorality and less disease generally; and he "most strongly, and on religious grounds most especially, advoeates the extension of the Aets."

The Professional Death-Roll of the year has been a heavy one, and we have had to reeord the deaths of an unusually large number of especially distinguished men. The venerable and honoured Dr. Stokes died, in the first week of the year, at the age of seventy-three; Dr. Jephson, of Leamington, who thirty years ago was one of the most prominent of English physieians, died aged seventy-nine; Dr. Blundell, another of the most widely known physicians of a former generation, at the age of eighty-seven; the Rev. Peyton Blakiston, M.D., in his seventy-eighth year; Mr. John Hilton, at seventy-three; Dr. Fleetwood Churchill, at sixty-nine; while Dr. Payne-Cotton was fifty-seven years old when death took him, and Mr. Carr-Jackson only fifty-three.

We eannot attempt to give anything approaehing to a full general death-roll, but we may mention in addition the names of a few of those whom we have lost, either in honoured old age, in the full tide of praetiee, or early in their professional eareer:—Mr. James Syme, of Alloa, died at the age of ninety-two; Mr. J. Pearson Shaw, of Rotherham, at eighty-eight; Mr. W. Bremmer, H.E.I.C.S., at eighty-nine; Mr. Holt, of Cheltenham, and Dr. J. J. Furnival, at eighty-five; Mr. Kelson, of Sevenoaks, at eighty-two; and Dr. Humble, of Ramsgate, at eighty-one; Dr. Shearman, of Rotherhithe, at eighty; Dr. Robert Willis, of Barnes, Mr. W. Hall, of Haekney, Dr. C. Ritehie, of Glasgow, and Mr. W. B. Stott, of Manchester, died at the age of seventy-nine; Mr. D. O. Edwards, of Notting-hill, and Dr. T. Stevenson, at seventy-seven; Dr. G. Roche-Smith, at seventy-five; Mr. C. Nairne, of Kennington, at seventy-three; Dr. J. B. Wilmot, of Tunbridge Wells, Dr. W. White, of Kelvin, Dr. De Vitré, of Laneaster, and Dr. Fraser, Deputy Inspeetor-General, at seventy-two; and Dr. J. F. Bernard, of Clifton, at seventy-one. Among those who were very early ealled on to lay down their arms, we ean only mention—Surgeon-Major Edward John Gayer, Professor of Anatomy in the Medieal College, Calcutta, died at the age of forty-four; Mr. Wittman Thompson, of Bognor, at forty-three; Mr. Marriott Hall, of Sheffield, at thirty-eight; Mr. R. W. Tibbits, of Bristol, at thirty-six; Dr. David Manson, of Foochow, at thirty; Mr. J. Job, of the Dowlais Iron Works, at twenty-seven; Dr. J. J.

Adams, of Kingston, and Mr. T. M. Pinnell, of Wolverhampton Hospital, at twenty-four. Among the older, but still active, workers were—Dr. A. B. Steele, of Liverpool, and Mr. Henry Johnson, who died at fifty-eight; Dr. H. E. Walker, of Chesterfield, at sixty-two; Dr. Eason Wilkinson, of Manchester, and Mr. T. S. Howard, at sixty-four; Dr. J. Kitchen, of York, at sixty-five; Mr. H. A. Bullock, of London, at sixty-six; Mr. Donald Fraser, of Hampstead, Dr. C. Lingen, of Hereford, and Mr. R. Gardiner-Hill, at sixty-seven.

The profession in England have also sympathised with their brethren on the Continent and in America in their sorrow for the loss of men of European fame. France has lost Foville, who died aged seventy-eight; and Claude Bernard, at the age of sixty-four. Germany has lost Hirtz, Rokitansky, Ernst H. Weber, C. H. Ehrmann, Bartels, and Hermann Lebert. And America, Dr. E. R. Peaslee and Dr. R. Atlee.

We now proceed to give, as has been our custom, some details of the contents of our two volumes during the year, mentioning first the lectures that we have been able to publish. The first among these was the very interesting clinical address on "Ovariotomy," given at the Samaritan Hospital by Mr. Spencer Wells, on concluding his work as Surgeon to that charity; and later on in the year we published the lectures "On the Diagnosis and Surgical Treatment of Abdominal Tumours," delivered by him as Professor of Surgery and Pathology at the Royal College of Surgeons. We have also published Dr. J. E. Pollock's lectures "On the Prognosis and Treatment of certain varieties of Consumption"; lectures by Mr. Jonathan Hutchinson on "Summer Prurigo," and other diseases of the skin, and "On the Nails and their Diseases"; Dr. David Ferrier's Goulstonian lectures "On Localisation of Cerebral Disease"; and Dr. Bucknill's Lumleian Lectures "On Insanity in its Legal Relations." We have also been enabled to give Clinical Lectures by Dr. T. Grainger Stewart on "Tendon Reflex"; by Dr. Moxon, on "Cases of Œdema of the Lower Extremities"; by Dr. H. G. Sutton, on "Ulcer of the Stomach"; by Dr. Handfield Jones, on "Two Cases of Impacted Biliary Calculi," and on "Sunstroke"; and by Dr. Stephen Mackenzie on "Diabetes Insipidus." Lectures also by Sir Joseph Fayrer, "On the Bael Fruit, and its Medicinal Properties and Uses"; by Dr. T. Whipham, on "The Influence of Habits of Life on the Production of Laryngitis"; by Dr. Milner Fothergill, on "The Causes and Course of Diseases of the Heart, with special reference to Prevention and Cure"; by Dr. Macneill Whistler, "On Syphilis of the Larynx"; and by Dr. Tilbury Fox, on "A Case of Elephantiasis Arabum," and on "A Case of Anæsthetic Leprosy." We have also published Dr. Matthew Duncan's very instructive and practical Clinical Lectures on "Vaginismus," "Abnormal Pelvis," "Aching Kidney," "Painful Sitting," and on "Irritable Bladder"; and this course of lectures we shall, we are glad to say, have the pleasure of continuing in the coming year. Our pages have contained, further, some important lectures by Professor Charcot on "Disturbances of Sight in Hysteria," on "Chorea in Old People," and on "The Influence of Traumatic Lesions (1) on the Development of Localised Hysterical Phenomena, (2) on the Development of Paralysis Agitans"; and a general *resumé* of his course of lectures on "Pulmonary Tuberculosis in Caseous Pneumonia"; a very full abstract of Professor Helmholtz's "Address on Thought in Medicine"; the annual Address delivered before the Obstetrical Society of London, by its President, Dr. West; the "Thurston Address in Commemoration of Dr. Caius," by Dr. Lewis Shapter; the Address to the Society of Medical Officers of Health, by the President, Dr. T. Stevenson, on "The Acquisition and Distribution of Sanitary Knowledge"; an Abstract of the Harveian Oration, given at the Royal College of Physicians, by Dr. Burdon-Sanderson; and all the principal Addresses delivered at the annual meeting of the British Medical Association.

Under the heading "Original Communications" many valuable and instructive papers have been published during the year. Among them we may especially mention Mr. J. Knowsley Thornton's papers on "A Second Case of Removal of Large Fibroid Outgrowth and Both Ovaries—Death," on "Unsuccessful Ovariotomy, with Cases," and on a case of "Removal of Hydatids of the Omentum from the Pelvis during the seventh month of Pregnancy"; Dr. John Sullivan's papers on "The Origin and Nature of Marsh Malaria," on "The Action of Malaria," and on "its Influence on the Spleen" and "on the Liver," on "The Roman Fever," and on "The Malarial Fever of Cyprus"; Dr. James Ross's papers on "The Structure and Functions of the Nervous System"; Dr. Thomas Barlow's paper on "Analgesia as a Diagnostic Test in Hysteria; Dr. James Russell's "Case of Hemichorea with Anæsthesia and Impairment of Special Sense," his note on a "Case of Chorea in an Aged Person—Recovery," and his "Two Cases of Phlebitis of the Cerebral Sinuses"; the papers by Dr. O. Sturges on "The Management of Chorea," and on "The Origin of some Motor Disorders"; Mr. C. J. Cullingworth's "Clinical Study of a Case of Progressive Muscular Atrophy"; Dr. B. Kelly's "Case of Unilateral Epileptic Paralysis"; and Dr. Handfield Jones's paper on "Two Cases of Cerebral Exhaustion from Pregnancy and Lactation." We have given papers from Mr. Gaskoin on "Harvey and the Spanish Anatomists," and on "Indigenous Leprosy"; from Mr. Russell Steele on "Psoriasis treated by Chrysophanic Acid and Phosphorus"; from Dr. Lauder Lindsay, on "Coloured Exudates in Eczema"; from Dr. Gavin Milroy, "On Yaws and some Allied Maladies"; and Dr. Balmanno Squire's "Cases of Rodent Ulcer of the Skin, treated simply by Erosion." Mr. George Lawson contributed a paper "On the Surgical Treatment of Neuralgia"; Dr. Wickham Legg one on "The Slow Pulse sometimes seen in Jaundice"; Dr. Pearson Irvine, one on "The Effects of Forced Inspiration on the Pulse in some forms of Heart Disease"; Dr. Thudichum one "On the Alleged Presence of Sulphocyanide in the Urine"; and Dr. T. Whipham one on "The Treatment of Acute Laryngitis." We have published contributions from Mr. Spencer Watson on "A Case of Obstruction to the Lachrymal Passages, with Ozæna—Syphilitic"; from "Mucor," on "Vegetation as a Cause of Plagues"; on "The Practice of Physic in Smyrna," from Dr. J. McCraith; from Dr. C. J. Egan, "On Practice in British Kaffraria"; and from Dr. S. K. Cotter, in the Transvaal; from Mr. F. W. Lowndes, on "Venereal Diseases among Merchant Seamen, and on the Extension of the Contagious Diseases Acts"; from Dr. Shingleton Smith, on "Exophthalmic Goître"; from Dr. C. Ogilvie Will, on "A Case of Urethral Calculus simulating Stricture," and "Clinical Remarks on a Case of Syme's Operation"; papers by Dr. Patrick Manson, of Amoy, on "Chinese Entozoa"; by Mr. H. Courtenay Fox, on "The Laws which regulate Mortality from Measles"; by Mr. H. A. Reeves, on "The Treatment of Rectal Fistulæ by Immediate Ligation"; by Mr. A. W. Robson Mayo, on "Skin Dropsy"; by Dr. Aust-Lawrence, on "A Case of Retroflexion of the Gravid Uterus"; by Mr. Alexander McAldowie, M.B., "On the Difference between the Axillary Temperatures on the two sides in Phthisis"; and Dr. A. E. Sansom, "On a Case of Localised Empyema, with Secondary Croup"; and Dr. A. Yule's "Remarks on the Origin of Fever." Also an able paper, "On the

Action of Alcohol in Health and Disease," by Sir Robert Christison, Bart., and Dr. John Beddoe; Mr. George Field's paper on "Abnormal Vascular Conditions affecting the Organ of Hearing"; "Notes on Pott's Fracture," by Mr. S. D. Chippendale, M.B.; and Mr. P. J. Hayes' paper on "Iodoform in Eye Disease." We have also had the pleasure of publishing instructive and practical papers from Dr. Perssé White, Surgeon-Major Staples, Dr. J. R. Rolfe, Mr. J. Forster of Adelaide, Dr. John Day of Geelong, Mr. R. Ballota Taylor, Mr. R. W. Parker, Mr. W. Fearnley, and many other valued contributors.

In our Editorial Articles we have dealt with many subjects affecting the profession, and the public through the profession, and many topics and occurrences concerning the public more directly than the profession. We had occasion to speak, at the beginning of the year, of "the Metropolitan Sewage and the Thames," and the subject still is a matter that loudly and urgently calls for some active and radical remedial measure. The question of "Water Supply," especially for London, Manchester, and Liverpool, was a very prominent one during the year, and remains unsolved. We have had also to write on "Compulsory Vaccination" and "Animal Vaccination"; on "Infected Milk," in connexion with Milk Epidemics, so-called; on the "Sale of Poisons"; on "Temperance and Abstinence"; on "Counter Practice"; on the pressing need of a thorough reform of the "Coroners' Inquests" system; on "The Money-Value of Man"; on "The Alleged Increase of Lunacy"; on "The Habitual Drunkards Bill"; on "Trade Diseases"; on "Paying Patients in Public Hospitals"; and on "Out-Patient Reform"; and on "The Dental Practitioners Bill." We have had to treat, on several occasions, of occurrences relating to the "higher education," and the medical education of women, as in our article on "The University of London and Women"; the "Medical Societies and Women"; the "Royal College of Physicians and Women"; "Medical Women and the Medical Bill"; and the "British Medical Association and Women." On matters connected with the training of the Profession, we have written on "The Teaching of Practical Medicine"; on "Medical Training in Scotland"; on "The Report of the Scottish Universities Commission"; on "The Future of Medical Education in England," and on "The Primary Examination at the Royal College of Surgeons." And we have dealt editorially with many practical and scientific professional subjects, such as "The Removal of Foreign Bodies from the Œsophagus"; the recording of "Unsuccessful Cases," "The Prevention of Puerperal Fever," "Stem Pessaries," "Total Extirpation of the Uterus," "Battey's Operation," and the "Latest Phase of Uterine Surgery"; "Two Criminal Trials," the "Detection of Opium," a "Scottish Medico-Legal Case," "Poisoning from Coal-Gas," and the "Pudding-Poisoning Case"; "The New Antiseptic Thymol," and "Septic and Aseptic Wound Fever"; "The Development of the Filaria Sanguinis Hominis"; the "Treatment of Erysipelas by Carbolic Acid Injections," the "Pathological Excretion of Carbolic Acid," and "Carbolic Acid Poisoning"; the "Medicinal Use of Iodoform"; "Metalloscopy"; "New Facts about Kidney Disease"; and "Quinine Rash."

We have of course had much to say about the "Medical Bill," about the "General Medical Council," about the state of the "Army Medical Department," and the "Report of the Committee on the Army Medical Service"; and something on the "Management of the British Medical Association"; and on "The Indian Famine of 1876-77."

Finally, we wish all our professional brethren, at home and abroad, a Prosperous and a Happy New Year; and while saying that we have every reason to feel confident that we shall be enabled to continue to make the journal worthy of and useful to the profession throughout the coming year, we invite their continued help towards that object. We thank them most heartily for all the aid they have given us in the closing year, but remind them that the value of the journal especially in its practical parts, must always depend very largely on their kindly and cordial co-operation.

THE WEEK.

TOPICS OF THE DAY.

An influential deputation, representing many English counties, last week waited upon Mr. Cross and the Duke of Richmond, at the Home Office, to urge that a general Act should be introduced by the Government, laying down the principles as to what should be done to prevent the damage caused by the overflowing of certain rivers in England. The deputation was introduced by the Marquis of Ripon, who explained the object sought to be attained, and who also pointed out that as they could not expect private individuals or local authorities to promote private Bills to secure advantages which were for the benefit of the whole country, the matter could only be taken up by Government itself. After some discussion Mr. Cross assured the deputation that he quite agreed with them in thinking that if the question were to be brought forward at all it must be under Government auspices, and the deputation, coming as it did from all parts of the country, had made out a very strong case. He could not at that moment make any definite statement, but they might feel quite certain that if the Government could possibly see their way to remedy evils of this nature, which undoubtedly did exist, steps should be taken; at any rate the matter would have their careful and serious consideration.

A general meeting of the members of the Sanitary Institute of Great Britain was recently held at the rooms of the Society of Arts, under the presidency of the Duke of Northumberland, for the purpose of considering the basis of the constitution of the Institute. This proposed that a charter of incorporation should be obtained; that fellows should be elected by ballot by the Council, and should include scientific men of eminence; that all persons who had passed the examination and received the certificate for local surveyor from the Institute, should, by virtue of having so passed, become members of the Institute upon the payment of £5 5s.; and that persons of either sex interested in the advancement of sanitary science should be entitled to be enrolled as subscribers on payment of one guinea. The objects of the Institute are to grant certificates of competence to local surveyors and inspectors of nuisances; a board of examination to be appointed by the Council; the examination for local surveyors to include a competent knowledge of the statutes relating to sanitary authorities, sanitary science, etc. Dr. Richardson proposed that the basis of the constitution be adopted, and after some discussion this was agreed to. It was also decided that the Council be requested to obtain as early as possible, on behalf of the Institute, a charter of incorporation.

The most patient of onlookers will begin to think that it is about time the Thames Valley Drainage Scheme was agreed upon and carried out; but it really seems that no sooner is something determined upon, than opposition steps in to paralyse action. A large meeting of the inhabitants of Kingston and the neighbourhood was held last week to consider the scheme promoted by the Joint Drainage Board. Mr. Gould, J.P., complained that the Board had proceeded with undue haste, and said competent persons assured him that if Colonel Haywood's scheme were carried out, instead of its costing £268,000, as estimated, it would be nearer half a million of money. He therefore proposed—"That, in the

opinion of this meeting, the application to Parliament for a Bill should be deferred until a full and careful consideration has been given to the details of the proposed scheme, and in no case until a full and proper estimate has been prepared and submitted to the Board of the expenditure proposed to be incurred." This motion was carried after some strong expressions of opinion both for and against Colonel Haywood's scheme.

At a meeting of the City Commissioners of Sewers, held last week, some discussion took place upon the subject of salting the public thoroughfares in frosty weather, and the practice was condemned by several members as being extremely prejudicial to the public health; besides which, it was urged it had the effect of reducing the temperature of frost and snow considerably below freezing-point. Mr. Rudkin explained that the salt was not thrown on the footways, and if it was not used on the roadways in weather like the present it would be utterly impossible for horses to travel. Moreover, the instant the ice and snow were thawed, the slush was swept away and gravel laid down. He did not see, under the circumstances, that there could be any practical inconvenience to the public. Much of the objection to this method of facilitating the street traffic is doubtless removed if the melting product is at once swept away, but if allowed to remain it is unquestionably hurtful to that portion of the population who are thinly or badly shod.

A case which requires further explanation is reported from Oxford. It appears that on the 16th inst. an inquest was held at the Radcliffe Infirmary in that town, to which Mr. Horatio Symonds, Surgeon of the Infirmary, who had attended the deceased, was summoned by written summons. He, however, did not appear, and the inquest was accordingly adjourned until the 16th inst., when he was brought up in custody on the coroner's warrant, and gave the necessary evidence. As it is further alleged that a short time since another medical officer of the town refused to appear to give evidence at an inquest, although formally summoned by the summoning officer, it may be surmised that there is something wrong with the medical profession in Oxford.

Just at the present time there will be much interest felt in the statement which appeared in the *Times* of last week, that diphtheria has for two years raged in some districts of Hungary. In one town 2135 persons out of a population of 20,000 have lately been attacked, and of these 927 have died. The malady is also said to be prevalent in Vienna.

It is stated that the Greenwich Board of Guardians have refused to allow any visitors into the Union Infirmary during the continuance of small-pox, which is prevalent in the district. One hundred and eighty pauper cases have been reported during the last few days, and the local Board of Works have ordered a circular to be sent to the undertakers, urging upon them the necessity, where death occurs in private cases, to get the body removed to the mortuary as soon as possible.

At a meeting of the Plumstead Vestry, held last week, Mr. Kimber, one of the members, urged upon the Vestry the necessity of pressing upon the Metropolitan Board to proceed with the working out of the scheme for utilising the metropolitan sewage. When, in the summer, the wind was in a northerly direction, the horrible effluvia, he said, came across the Thames, whilst an outbreak of diphtheria at present prevailing amongst children at Shooter's-hill was, he believed, the result of something wrong in the atmosphere. The Chairman concurred in the importance of the river being freed as far as possible from impurities, and a resolution urging the Metropolitan Board to give the subject immediate attention was ultimately carried.

Another very handsome coffee public-house, erected to forward the temperance movement in the metropolis, and situated near to the South-Western Railway Goods Station in the Wandsworth-road, was formally opened last week by the Earl of Aberdeen. The cost of the whole building has been between £4000 and £5000, and as the institution is started on a commercial basis, if freed from debt at the commencement, there seems little doubt that it will be made to pay its way. The Earl of Aberdeen, in his address, warmly congratulated the promoters of the work on this promising start, believing that it would have an important effect not only in the district, but by the encouragement of those who contemplated the foundation of similar temperance public-houses elsewhere.

A copy of the "circular letter from the Board of Trade to the railway companies with reference to the use of continuous footboards to the carriages, as recommended by the report of the Board on railway accidents in 1877," is issued with Parliamentary papers last week. It is dated August 6 last, and points out that during the past year the returns furnished by the companies show that fifty passengers were killed and eighty-seven were injured by falling between carriages and platforms; and thirteen passengers were killed and 413 injured by falling on the platforms, ballast, etc., in getting into or out of trains. The circular urges the companies to take the matter into their serious consideration.

The weekly return of the Sanitary Commissioner for the Punjaub for the period ended September 21 last shows a still further decrease in the mortality from small-pox, 276 deaths having been registered in the week from this disease, against 291 in the previous week, and 341 and 408 in the periods antecedent. From cholera only four deaths are reported to have occurred, but there were six deaths registered in the Gurjaon district from starvation. Two weeks previously 29 deaths were reported to have occurred in this district from the same cause. From fevers 11,536 deaths were registered, the number in the two previous weeks having been 8084 and 6135 respectively; the mortality from this cause continues to increase in almost all the districts of the province. The annual death-rate of the province from all causes, which in the two previous weeks had been equal to 27·8 and 32·9 per 1000, rose to 44·3 during the week under review; many of the large towns showing exceedingly high rates of mortality, particularly Jullundur and its suburbs, Palwal, Ferozepore, Delhi, and Ludhiana.

The Senate of the University of London has confirmed the appointment of Dr. Greenfield, as superintendent of the Brown Institution, Wandsworth-road, for physiological experiments upon animals, in succession to Dr. Burdon Sanderson, F.R.S., who has resigned the office.

The deaths are announced of Von Gorup Besanez, the well-known chemist, and of Dr. Robert von Welz, Professor of Ophthalmology at Würzburg.

THE STATE OF THE RIVER THAMES.

The Woolwich Local Board of Health having determined, at a meeting held on October 8 last, to have the state of the river Thames tested at various points and depths, their surveyor was instructed to take samples, to be submitted to Mr. Wigner, the Public Analyst, for analysis and report. This gentleman's report was accordingly presented to the Board on the 22nd of the same month, and ordered to be printed. The questions considered by Mr. Wigner were four, viz.: Is the river contaminated with sewage? If so, is the sewage contamination so great as to be injurious to Woolwich? Is it probable that the condition of the river on the night of the accident to the *Princess Alice* was so bad that some of the drowning people were poisoned by it? If this contamination exists, is it due to the sewage

from the metropolitan outfalls? In answer to the first of these, Mr. Wigner is of opinion that the river *is* contaminated with sewage, although the extent or degree of such contamination, and the amount of decomposition which has ensued, differs considerably at various points. All the samples taken were turbid and offensive, and all of them had a more or less offensive smell. Secondly, the effluvia given off from the sewage-contaminated water is sufficiently great to be injurious to health. Thirdly, it would not be right to say any of the passengers were absolutely poisoned by the water on the night of the accident, although some loss of life may be indirectly attributed to the foul condition of the river. And lastly, as the river is undoubtedly contaminated with sewage, it is beside the question whether such contamination arises from the North Woolwich sewage outfall or the Barking and Crossness outfalls. The report is, in fact, in direct opposition to the observations published as the result of the recent experimental voyages of the Metropolitan Board of Works for a similar purpose; and, without enunciating a decided opinion on the subject, it certainly would seem that Mr. Wigner's report more accurately described the real state of the river, since the Metropolitan Board's account endeavoured to show that the Thames is, if anything, purer after the drainage of the metropolis has been allowed to flow into it.

INSANITY IN NEW SOUTH WALES.

The alleged increase of insanity in this country in recent years, on which so much has been written, is not exceptional, so far as great Britain is concerned, since a perusal of the report of Mr. Norton Manning, the Medical Superintendent of the Hospital for the Insane, Gladesville, New South Wales, for the year 1877, shows that during the year under notice there was an unprecedented increase in the number of admissions. In 1870 the number of patients admitted to this Asylum was 197; in 1877 the number was 433. Mr. Manning goes on to say that the reception and treatment of such a number of cases in an old, overcrowded, and very imperfect hospital, is a task beyond the powers of the staff; and the congregation of such a number of patients in the acuter stages of their malady, in a very limited space, is productive of turmoil and excitement, and fatal to good management and successful treatment. It is in the male division of the Gladesville Hospital that the chief difficulty has been felt, the admissions there having largely outnumbered those in the female division. The admissions during the year are reported to have been, on the whole, of a more hopeful character than usual, but a large number were suffering from advanced and incurable disease. The discharges and recoveries compare favourably with the statistics of asylums in this country, and the deaths numbered 48, the percentage on the average number resident being 7·92. Of these latter 30 were due to cerebral disease, 5 to thoracic affections, 7 to diseases of the abdominal organs, 5 to general debility and old age, and 1 to suicide. Mr. Manning has again to repeat what he calls "the oft-told tale" of distressing overcrowding, and adds that the opening of a temporary asylum at Cooma gave only small and temporary relief, so that additional accommodation will evidently have to be provided even in this comparatively young colony.

HEALTH OF THE WANDSWORTH DISTRICT.

The Sanitary District of Wandsworth comprises several sub-districts, viz., Battersea, Wandsworth, Clapham, Streatham, and Putney; and the report on the health of these localities for the year 1877 is compiled by the several medical officers and published in one pamphlet. In the outset these gentlemen refer to the difficulty which exists in accurately estimating the population of the district, and they show that the general rule, of taking the numbers given by the last census and adding a corresponding increase for each year, is fallacious. They are of opinion that so widely does the estimated and the real population differ that it is a question if, for the next four years, it serves any good purpose to attempt founding any rates of death or birth upon such uncertain calculation. They state, however, that they find that the number of births bears an almost constant ratio to the population; thus, about thirty-four children are born for every 1000 of the population, so that, given the number of births, it is easy to estimate the population. According to the official estimate the population of the Wandsworth District in the middle of 1877 was 159,234; but as 6159 births were registered in the district during the year, giving a birth-rate of 38·6 per 1000, taking their view this number would require a population of 181,146, which number, they submit, is not very far from the correct estimate of the population of their district. The death-rate of the whole district shows a marked decrease during the year under notice, notwithstanding the increase in population: in 1875 there were 3096 deaths registered; in 1876, 3154; in 1877, 2991. The death-rate according to the official population is 18·7 per 1000, and is the lowest for the past ten years, with the exception of 1872 and 1873, during which the same rate of mortality occurred. No less than forty-seven deaths (twice the number recorded last year) were registered as uncertified, and to quote the report—"If the register of deaths were a mere chronicle of the causes of death, we would look upon this as highly unsatisfactory; but when we remember that that register forms one of the very strongest barriers to crime, we cannot but regard this as tending to diminish to an alarming extent its protective value." Over none of these forty-seven deaths was an inquest held, the Coroner, it is presumed, for reasons of his own, judging a public inquiry to be unnecessary.

THE RESPONSIBILITY FOR SURGICAL OPERATIONS.

At an inquest last week at the Radcliffe Infirmary at Oxford, upon a patient who died after amputation of the legs for an accident by machinery, the Coroner (Mr. Hussey), in charging the jury, said that, where it appears to a medical practitioner of ordinary skill and experience that a surgical operation is necessary to save life, or to prolong it, or to give greater hope of recovery, if the operation is performed with ordinary care and skill—although there may be a failure of the efforts which were meant for the preservation of life—the suggestion that the operation was the cause of death is a proposition which cannot be entertained. Therefore, if the medical officer of the house came and said that he had seen the patient, that in his opinion the injuries would have caused death, and that he performed the operation with a view of saving life although he had not saved life, the jury must not consider the operation as the cause of death. The injuries must be considered the cause of death. This is a matter of great importance to medical men.

THE "ARCHIV FÜR HEILKUNDE."

Some of our readers may regret to learn that this periodical expires with the current year. It was formerly edited by Wunderlich, Griesinger, and Roser, and lately by Professor Wagner of Leipsic, and it had reached the nineteenth year of its existence. The reason given by the publishers for the cessation of the *Archiv* is the "impossibility of securing a larger circle of subscribers." Considering the enormous number of year-books, archives, and reports published in Germany, and the modern fondness for superficiality, we are not surprised to learn that one of the most solid and trustworthy of the number has been the first to succumb.

REVIEWS.

Lectures on Surgical Anatomy. By JOHN CHIENE, M.D., F.R.C.S.E., F.R.S.E., Examiner in Anatomy at University of Edinburgh, Lecturer on Surgery, etc. Illustrated by thirty-one plates from original dissections. Edinburgh: David Douglas. Pp. 148.

A WORK on Surgical Anatomy by a leading surgeon and anatomist of the Edinburgh School of Medicine is a work that ought to carry great weight with it, and one which should be carefully thought out and considered by the profession at large. The author has bestowed much pains in attempting to render the details of the work as correct as possible, and he has laboured with wonderfully good effect in abolishing many of the inherited errors of surgical anatomical teaching.

On looking through the work one finds with regret that the author has followed the aggravating system of having his plates bound together at the end of the book. It is like a lecturer illustrating the lecture he has just given by a series of diagrams at the end of, instead of throughout, his lecture. Let one be ever so earnest, the mere fact of having to turn up such and such a plate or figure is, to say the least of it, a hindrance. The plates are, however, well executed, and will be found very useful for teaching purposes, though some scarcely bear out the text. This is markedly the case with Plate 29, representing a vertical section of the head, neck, and thorax through the middle line of the body. Here the Eustachian tube seems on a level with the hard palate, not the inferior turbinated bone, as the text correctly has it. Then, in the same diagram, the relative anatomy of the arch of the aorta and the innominate cannot have been normal in the body in which this section was made. The innominate may commence in the middle line, but this is the first time we have seen it represented as commencing on the left side of the body, as this diagram represents. Again, the aorta seems as though cut straight across, instead of having only a piece taken out of its right wall. The pulmonary artery seems flattened against the œsophagus; the left lung should not be seen; the opening into the left bronchus is represented as a sixth of its relative size. These misplacements render this plate useless for teaching purposes; but it is altogether exceptional, the others being for the most part correct and useful. The text is clearly and carefully written. Some operations, however, are dwelt upon unnecessarily, whilst others are perhaps too slightly touched upon. A work on surgical anatomy ought to touch upon operations as little as possible; but if some are described, important omissions ought not to be made. Whilst much space is devoted in this work to tying the innominate and anterior and posterior tibial arteries, the operations for hernia are passed over. The author's explanation of the anatomy of the perineum is hardly clear. The statement that the seminal ducts open into the floor of the membranous portion of the urethra on either side of the veru montanum, is an anatomical error; and the direction to carry the incision in lateral lithotomy through the lateral lobe of the prostate to the fibrous ring of the bladder, and at the same time to avoid wounding the reflection of pelvic fascia surrounding the prostate, is surgically unfeasible. The non-recognition by the author of a posterior layer to the triangular ligament, however it may be explained, is scarcely in accordance with the usual description.

Having considered it our duty to draw attention to these few doubtful points, we have little hesitation in pronouncing this the best work of the kind students can have. The surface-markings are especially good, the surgical anatomy of the joints is excellent. The book will be a great help to both teachers and taught, and students can depend upon the teaching as being sound.

Le Localizzioni Motrici nella Corteggia Cerebrale, studiate specialmente dal Lato Clinico. Dal Dottore DARIO MARAGLIANO, Medico presso il Manicomio do Reggio.

The Motor Localisations in the Cortical Part of the Brain, studied especially in their Clinical Aspect. By Dr. DARIO MARAGLIANO, Physician to the Lunatic Asylum of Reggio. Reggio-Emilia, 1878. Pp. 76.

IN this able treatise, Dr. Maragliano gives a history of the doctrine of the localisation of the motor functions in the cortical part of the brain, from the period (a very recent one) when the researches of Hitzig and Fritsch were first published, down to the present day; and the author dedicates his work to his teacher, Professor Tamburini, the most distinguished advocate in Italy of the localisation theory. So recently have the doctrines in question been promulgated in the world of science, that, as the author reminds us, so late as 1866, Vulpian, when speaking of cerebral localisations maintained that nothing could justify the assumption that the various regions of the grey cortical substance of the brain had more influence on one than on any other function. Dr. Maragliano refers to some observations of Gricsinger and Hughlings-Jackson, made from a pathological point of view, and pointing to the influence of the cortical grey matter over the motor functions. But he fixes the year 1870 as the epoch when the researches of Hitzig and Fritsch began to attract attention to the subject in a strictly scientific sense, and in connexion with experimental researches on the lower animals, especially those most nearly allied to man, such as monkeys. The researches of Dr. Ferrier, first made known in 1873, as it will be remembered, startled the scientific world in this country, and, while carrying out the views of Hitzig, gave rise to a controversy between the British and the German physiologists, although the conclusions at which they both arrived were not materially different, the discrepancies in the results having apparently to a certain extent been due to the relative powers of the galvanic currents which they each employed, Hitzig having made use of weak currents, and Ferrier of strong ones. The results of both experimentalists were to define and to figure certain portions of the cortical cerebral substance as the sources of motor power, although the exact points were not identical as indicated by the two physiologists.

The experiments of Hitzig and Fritsch and Ferrier were repeated and their conclusions were confirmed by other observers, and many clinical facts also were contributed in confirmation of the theory of localisation, the phenomena of epilepsy being especially adduced as giving support to the new doctrines. But Hitzig was the first who referred the last-named disease to specific lesions of the cortical brain-substance, and also proved his position by direct experiments.

The connexion of epilepsy with the existence of definite cerebral lesions in the cortical matter was further examined by Ferrier and Nothnagel, and by an Italian physician Albertoni, and the experimental fact was ascertained that there are parts of the cerebral surface the irritation of which causes movements localised in different muscular regions, and the destruction of which gives rise to more or less alterations, of more or less duration, of the movements in those regions.

In order to demonstrate with exactness the connexion between the cerebral lesions and the pathological phenomena to which they give rise, Dr. Maragliano gives an abstract of ninety-seven clinical cases divided into four groups, in the first of which there were lesions only of the frontal convolutions, in the second there were lesions only of the parietal convolutions, in the third there were lesions of the frontal and parietal convolutions, and in the fourth there were lesions of the frontal and parietal convolutions and of other regions of the cortical substance. From a consideration of all these cases, collected from numerous sources and from different countries, Dr. Maragliano thinks himself justified in drawing the conclusion that lesions of the cerebral cortical substance may give rise to alterations of motility; and, further, that the part of the cortical substance which has motor properties is exclusively that of the frontal and parietal regions.

After a detailed analysis of the cases quoted in the tables, and a notice of the researches of various physiologists who have advocated the doctrine of localised cerebral centres of motion, Dr. Maragliano refers to the views of Dr. Brown-Séquard, who, as is well known, now holds doctrines of a different character. The latter physician does not, indeed, deny to the cortical matter a motor influence, but he denies the possibility of localising any function whatever either in it or in any other part of the brain. In his opinion, every cellular element presides over a determinate function; but nevertheless all the cellules destined to the same purpose would not be found united in groups and forming so many centres, but would be, on the contrary, disseminated in every

part of the encephalon, whereby a lesion might destroy any one part of this great centre, as he calls it, without altering any of its functions in any notable manner. It will thus be seen that the views of Brown-Séquard are widely opposed to those which involve the doctrine of localised centres of movement, and Dr. Maragliano, who is strongly in favour of that doctrine, argues at length against the views of the French (or rather English, for Dr. Brown-Séquard was a British subject) physiologist. It is of course impossible, in a short review, to do justice to Dr. Maragliano's able arguments and statistics, and we conclude by giving a brief *résumé* of the conclusions which he draws from a study of the whole question. He believes—(*a.*) That the cortical matter of the brain is by its inherent power excitable, and that the movements produced by that excitement cannot be due to diffusion of the power to subjacent parts. (*b.*) He thinks that the hypothesis of Schiff, who considers the excitable points of the cortical matter as centres of tactile sense, and that of Hitzig and Nothnagel, who make the disturbances of motion consecutive on the destruction of the cortical centres to be dependent on an alteration of the muscular sense, are inadmissible, especially from the results of clinical observation. (*c.*) He maintains that the hypothesis of Dr. Brown-Séquard, who denies the possibility of localising any functions whatever, either in the cortical or any other part of the brain, is, besides being a negation of all scientific progress, contradicted by experimental and clinical facts; and he further alleges that the facts adduced by Dr. Brown-Séquard in support of his view are not such as to invalidate the doctrine of localisation. (*d.*) He argues that the points of the cerebral cortical matter, the irritation of which gives rise to motor phenomena, and the destruction of which gives rise to paralysis, must be regarded as "true voluntary motor centres," capable, even without the necessary intervention of any other motor centre, to call into action the various muscular structures.

Dr. Maragliano believes that in man the compensation of a cortical lesion, although extensive, is possible for part of the opposite hemisphere, especially when the left is the injured one; and this substitution is effected generally, if not exclusively, by means of those bundles of direct fibres which go from the sound hemisphere to the same side of the body.

Estirpacion Total de la Laringe. Por el Dr. D. Federico Rubio. Observacion Clinica presentada en la Real Academia de Medicina, sesion del 25 de Mayo ultimo.

Total Extirpation of the Larynx. By Dr. F. Rubio. Clinical Case presented to the Royal Academy of Medicine at their meeting on May 25 last. Madrid, 1878. Pp. 46.

At the present time, when the total extirpation of the larynx has been lately performed with success in Germany and in this country, and the operation has thus proved to be justifiable, it is gratifying to find that this formidable proceeding has been adopted by our Spanish *confrères*, and although the patient who was the subject of the present memoir did not eventually recover, yet the relief obtained was very considerable, and the surgical treatment appears to have been most skilful.

The patient was a man aged forty-one, who, in March, 1877, suffered from an abscess in the neck, and this abscess having burst into the larynx, gave rise to a fit of suffocation, succeeded by dysphagia, dyspnœa, and aphonia. He remained without treatment, however, till February, 1878, when an inflammation appeared in the laryngo-tracheal region, terminating in the formation of an abscess which opened externally by means of a fistulous aperture, and the laryngeal symptoms were so much increased, and the difficulties of respiration and nutrition became so great, as to induce a state of marasmus when the patient applied for advice on April 23, 1878. There was then a large swelling of the neck, and through the fistulous orifice just mentioned a stylet was introduced, and a state of caries of the thyroid cartilage was discovered. On May 11 the operation was performed with success, and without any loss of blood, and the extirpated larynx was found extensively diseased, the thyroid cartilage of the left side being entirely destroyed by caries in nearly its whole extent, and the cricoid and arytænoid cartilages being thickened and hypertrophied. The patient was watched with great care, and the particulars are all fully recorded, but he died on May 16, five days after the operation.

The memoir concludes with some remarks on the history of the operation for the extirpation of the larynx, and on some precautions which the operator ought to observe in its performance; and altogether this monograph is a valuable contribution to a department of surgery hitherto little investigated. Being written in the Spanish language, it will, unfortunately, be out of the reach of many readers.

Silverlock's Medical Practitioners' Visiting List for 1879. London: H. Silverlock, 92, Blackfriars-road, S.E.

The Visiting Lists published by Mr. Silverlock are especially adapted for the requirements of the general practitioner, and are arranged on a plan which cannot fail to give satisfaction to all who use them. They are issued in two sizes, the smaller giving space for the entry of thirty patients' names per week, and the larger sixty per week. The larger size, moreover, can be obtained in two forms—that is to say, either in ordinary book form or in the form of a reporter's note-book. The latter is designated the "oblong" edition. Ample space is given in each edition for entries relating to midwifery engagements and other memoranda. The Appendix contains a large amount of useful information, among which are tables comparing the metric weights and measures with those of the British standard, a table of doses of the more important drugs, both officinal and non-officinal, including those administered subcutaneously; a list of English and foreign mineral waters, with notes as to their uses and medicinal properties; memoranda as to treatment of poisoning, etc.

GENERAL CORRESPONDENCE.

THE BRITISH MEDICAL BENEVOLENT FUND.

Letter from Dr. Broadbent.

[To the Editor of the Medical Times and Gazette.]

Sir,—I have to thank you for inserting my letter on behalf of the British Medical Benevolent Fund, and to acknowledge—as I do most thankfully—the subscriptions and donations sent in response to my appeal. For the widow and family I have received from—

	£	s.	d.
Dr. G. C. Dale	0	10	0
Mr. Barron, Ryde	1	0	0
Anonymously	0	5	0

I have promised her £1 for Christmas, and again for New Year's-day, in addition to 30s. already given to her; and the Committee will, no doubt, make her as substantial a grant as the state of our funds and competing claims will admit. Her case is one which I could match by scores like it, or worse; and we are often able to do far more real good than is possible here, where we can only alleviate and not entirely remove distress. Sometimes by liberal aid we keep a struggling medical man, or the widow and family, on their feet through some crisis which would without it result in ruin, and thus prevent distress. On this ground I desire especially to thank those who, while expressing interest in the individual case, have sent their donations to the Fund—

	£	s.	d.
Dr. Bowles, Folkestone	3	3	0
Dr. Gibbings, Dalston (subs.)	2	2	0
Dr. Albert de Méric, Torquay	5	5	0
John Colebrook, Esq.	10	10	0
Dr. Bacon, Cambridgeshire Asylum	10	0	0
Dr. Spottiswoode Cameron, Huddersfield	5	0	0
Dr. Geo. Fletcher, Earl Soham (subs.)	2	2	0
Dr. Robinson, Scots Fusilier Guards	2	2	0
Dr. Edward Burd, Shrewsbury (subs.)	1	1	0
Ashley Gibbings, Esq.	2	2	0

Dr. Bowles and Mr. Colebrook are old supporters of the Fund.

I am, &c.,

W. H. Broadbent, M.D., Treasurer.

34, Seymour-street, Portman-square, W.

A Sure and Rapid Cure for Hiccough.—Under this title Dr. Grellet, of Vichy, states that he has never failed in immediately relieving simple hiccough—*i.e.*, not dependent upon any appreciable morbid condition—by administering a lump of sugar imbibed with vinegar.—*Révue Méd.*, Dec. 16.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, DECEMBER 13.

CHRISTOPHER HEATH, F.R.C.S., Vice-President, in the Chair.

WATERY DISCHARGE FROM ONE NOSTRIL.

A COMMUNICATION from Sir JAMES PAGET was read, in which he stated that he had been referred by Dr. Neale and Mr. C. Hawkins to a case, reported in the *Medical Times and Gazette* of September 19, 1857, in which fluid was discharged from one nostril in considerable quantity, resembling the case he brought forward at the last meeting of the Society. Sir B. Brodie had examined the patient, who had suffered twice from the same complaint, at an interval of fourteen years. The fluid was in large quantity, as much as two or three quarts per diem, and came only from the left nostril.

POPLITEAL ANEURISM TREATED BY ESMARCH'S BANDAGE.

Mr. J. HUTCHINSON related the particulars of two cases. The subject of the first was a robust gentleman, aged twenty-six, who had never had syphilis. The tumour filled the right politeal space, and pulsated strongly. There had been pain for three months, but the pulsation had been recognised only a month. He had been placed under Mr. Hutchinson's care by Mr. Drew. After three days' rest in bed, ether was given, and Esmarch's bandage was applied to the entire limb. It was put on tight below the knee, very lightly over the tumour, and tightly again on the thigh. The elastic strap was applied as tightly as possible in the upper third, and after a little time the bandage was removed. The tumour was left full of blood which was completely stagnated. Ether was kept up for an hour, and at the end of that time the strap was removed, and a horseshoe tourniquet substituted. No pulsation ever returned in the tumour, but as a matter of precaution the tourniquet was retained for a few hours. The subsequent recovery was rapid and complete. The second case was less speedily successful. Its subject was a gunnery instructor from Shoeburyness, who had been treated by pressure for an aneurism in the calf two years previously. On that occasion success had been obtained by thirteen days' compression. The aneurism on the second occasion filled the popliteal space, and was the size of a large orange. It pulsated strongly. Esmarch's bandage under ether was used for one hour in exactly the same way as in the previous case, but with no benefit. The tumour beat as before. Three days later another trial was made of the same plan; but on this occasion arrangements had been made, by relays of students, to keep up digital pressure after removal of the constricting strap. The man was kept under ether for two hours. At the end of that time the strap was removed, and during the change of hands it became evident that pulsation was still present, but it was more easily controlled than before. Manual compression was kept up for about seven hours, at the end of which time pulsation had quite ceased. The tumour remained solid, and rapidly diminished in size, and the man left the hospital a few weeks later quite well. It was thought that in this case, although the Esmarch bandage did not produce consolidation, yet that it conduced to the cure, and certainly on neither occasion did it do any harm. Mr. Hutchinson stated that he had brought forward these cases, in neither of which was there anything original in the treatment, in order to elicit from surgeons statements of their experience and opinions in reference to this novel and important method. He acknowledged his obligation to his colleague Mr. Waren Tay, also to Mr. Price, and Mr. Bennett for their assistance in carrying out the details.

Mr. THOMAS SMITH, by the use of Esmarch's bandage, applied as he had seen Mr. Croft apply it at St. Thomas's Hospital, had cured two cases, and had failed with two. In a recent case no chloroform was given, and the bandage was applied tightly below and above the tumour, and left in place. He considered this better than constricting the limb by the cord, a proceding which, on the Continent, had been followed by permanent paralysis from injury to nerves. The pressure was more diffused by the bandage. In the last case, which occurred to a member of the medical profession, the bandage was alternated with pressure by a tourniquet over the artery, and the treatment lasted from 9 a.m. to 6 p.m., at which time great pain was felt in the swelling, and coagulation probably took place. Pressure was kept on for an hour and a half after this, and the result was entirely successful.

Mr. MORRANT BAKER had had an unfavourable case in a man of forty or fifty, where some blood had escaped from the aneurism, which he had treated successfully. After a preliminary imperfect application, the bandage was kept on for three-quarters of an hour, followed by half an hour's compression with the finger, and was reapplied for twenty minutes, and compression again kept up for nearly two hours. No anæsthetic was employed, no pain was complained of; and at the end of that time the aneurism was consolidated.

Mr. MAUNDER thought that there was no single certainly successful method of dealing with these cases. He had tried Dr. Reid's plan twice; both times unsuccessfully. One was cured by digital compression, and the other by ligature. In his opinion, the objection to this bandage was that it was painful, and required an anæsthetic with its attendant risk.

Mr. BARWELL agreed that no single method could be relied upon, but said that the bandage was especially unsuitable in fusiform aneurisms. He had tried it in a bad case, where there was extensive arterial disease, with fusiform aneurisms in the axillary and brachial arteries; he made use of a sort of bridge to keep the bandage off the tumour, and applied it lightly above the swelling, allowing a small current of blood to pass. After an hour and a half there was no result; it was subsequently reapplied twice, but he was obliged finally to ligature the artery, tying it gently in consequence of its diseased state; the man was well in ten days.

Mr. T. SMITH objected that this method of applying the bandage, so as to allow the current of blood to continue, was essentially different from the plan under discussion.

Mr. BARWELL added that on one occasion the flow was arrested for about one hour.

Mr. HERBERT PAGE had tried the bandage without success in a case apparently well suited for it, and in the hospital at the same time a case of Mr. Lane's was treated in the same way with a like result. The plug in the distal arteries, which had been thought to precede clotting in the aneurism, was, in his opinion, a later event, and followed its cure. He alluded to a case of Mr. Pemberton's, where this method of treatment had been followed by gangrene.

Mr. BRYANT related a case where the bandage was used for one hour, under the influence of morphia, by which time there was much consolidation. In two or three days the aneurism grew worse; but the bandage under chloroform for three-quarters of an hour was followed by much improvement. It soon relapsed, and he then tied the artery. Gangrene followed in a few days, which required amputation below the knee. In his opinion, the bandage was responsible for the gangrene; and it constituted a serious, though perhaps not fatal, objection to its use.

Dr. MAHOMED considered the bandage was contraindicated in cases of extensive arterial disease. He had found that, when the bandage was placed on one arm, the volume of the other was much increased, showing that a considerably increased distension of the rest of the vascular system resulted. Where the cerebral arteries were diseased, this might be dangerous; but this objection did not apply to the ligature.

Mr. GOULD alluded to two cases of aneurism treated in this way which he had examined. In both, the clot in the aneurism was loose; that in the artery, above and below, firm and fibrous. He considered the coagulum in the aneurism was secondary, and he thought Mr. Bryant's case bore out this view. Here the clot, being soft, was broken up by the stream, which led to thrombosis and gangrene beyond. This difference in the clot he attributed to the imperfect nutrition of the walls of the sac. He still thought those cases would be successful where the opening was large and the vessel healthy.

Mr. NORTON had tried the bandage without success in one case. There was extensive vascular disease, with double aortic murmur and three aneurisms. The treatment, though it failed, had none of the disastrous results Dr. Mahomed predicted, though the case was just such an one as those referred to by Dr. Mahomed. He considered the risk due to distension of the vessels, as the result of compression, small indeed when compared with the risk of a ligature where general vascular disease existed.

Mr. HEATH agreed with Mr. Barwell that a fusiform aneurism was not amenable to this treatment, and with Mr. Gould

in his theory of the action of this bandage. In Mr. Smith's case, however, the general state of the vessels was very unfavourable; yet a rapid cure resulted. It was quite possible that in Mr. Bryant's the gangrene was a result of the ligature, and not of the bandage. In a patient of his, in whom the bandage had been twice applied, and in whom the artery had been ligatured, once in the usual way, and once with antiseptic precautions, the result was of interest. The patient was strongly in favour of the antiseptic plan, from which he had suffered much less pain.

Mr. Hutchinson, in reply to the various speakers, said he thought the plan of treatment under discussion a valuable addition to the means at our disposal. It seemed impossible to predicate as to the cases in which it was most likely to succeed; but it seemed to be a trial in nearly all. He could not admit that Mr. Bryant's case proved that any ill consequences were due to the bandage. It had simply not cured. The gangrene came on after the ligature, and should be attributed to it, and not to the Esmarch bandage. He believed that, in different individuals, very different degrees of aptitude for coagulation were displayed by the blood, and hence chiefly the explanation why some cases were cured easily, and others with difficulty. The tendency to coagulation might be helped by insisting on abstinence from fluids, as was done in both his cases, and by giving drugs, such as iodide of potassium, lead, and digitalis. Whilst fully admitting the great value of digital compression, he still thought that a trial should first be given to the bandage. He had had several very rapid cures by compression; but he did not recollect any case of aneurism of similar size in which the patient had suffered less during the treatment than the first of these which he had just related. If ether were used, not chloroform, he believed that no danger was encountered; and he felt sure that the anæsthetic made the treatment much less painful. He would strongly recommend that, in all cases in which the bandage was tried, arrangements to continue digital compression immediately afterwards should be made; and that great care should be taken to prevent the blood from passing into the tumour on release of the limb from the strap.

Perforation of the Appendix Cæci and Cæcum—Pyæmia—Empyema—Paracentesis—Contents of an Abscess lying Beneath the Liver evacuated.

Dr. Whipham read notes of this case. A lad, aged eighteen, after rowing one day in August, 1877, on the Thames, bathed in the river, and took cold. Two days afterwards he was attacked with severe pain in the right, and subsequently the left side, accompanied by diarrhœa. He sweated profusely at night, and soon became extremely weak. After a six weeks' illness he perfectly recovered. The illness for which he was admitted into St. George's Hospital commenced seven days previously, after exposure on a house-top for a whole day. In the evening he felt chilly, and was attacked with severe pain in the right side, and sweated profusely. Next day he resumed his work, and in the evening experienced pain in the right inguinal region. On the third day he discontinued work, as the pain had extended to the flank. From this time he became seriously ill; the bowels, hitherto regular, became much purged; he was troubled by cough and expectoration. On admission the patient was very ill, and had severe pain in the belly, more especially in the right inguinal and epigastric regions. About the mid-sternum was a rose-coloured-spot, not elevated, which disappeared on pressure. Diarrhœa was profuse, the motions being dark-coloured. There was distinct evidence of fluid in the right chest. During the first week of his residence in hospital the abdominal pain decreased; but no marked improvement in his condition occurred, and, therefore, on the ninth day a small aspirator-needle was introduced into the chest between the seventh and eighth ribs posteriorly, and some yellow pus withdrawn, and a tube introduced subsequently in the axillary line, through which offensive pus of a reddish-brown colour escaped. Three days later an abscess made its appearance externally at the back of the chest, which was eventually opened, but no communication discovered between it and the pleural cavity. The patient failed rapidly after this, and died on the fortieth day after admission into hospital. At the post-mortem examination it was found that the tube had been passed into an abscess which had formed beneath the liver, and that the right chest, save by the small exploratory puncture, had not been tapped. An abscess was found in the right iliac region, and free: in the cavity lay a pin, which had made its way through the cæcum and appendix cæci into the surrounding tissues. The interest of the case consisted in the difficulty of diagnosis—1. As to whether the boy was suffering from typhoid fever or tuberculosis. 2. As to the evacuation of an abdominal abscess in place of the contents of the pleural cavity.

Mr. Lawson remarked that the view he took of the pathology of this case was, that it was one of pyæmia, following the perforation by the pin.

Dr. Cayley asked if it were the experience of English practitioners that a herpetic patch on the lip at once excluded typhoid fever in the diagnosis of a doubtful case. This was the opinion prevalent in Germany.

Dr. Southey had had a case which illustrated the nature of this one; it was that of a man who had jaundice from suppurative hepatitis. On post-mortem examination, an abscess was found around the appendix cæci, and a thrombus extending from it up the portal vein. On the same table was another case, where perforation caused by a tin tack had led to abscess, with general pyæmia and empyema.

Mr. Hulke thought these cases of pyæmia following perforation of the intestine were not rare; he had seen one case where empyema and general pyæmia followed the ulceration caused by impaction of damson-stones.

Dr. Taylor thought that these cases were not always pyæmic; he had published a case where the abscess from perforation had itself perforated the diaphragm, and led to empyema and pneumonia, and there were other similar cases on record.

Dr. Whipham quite agreed that this case was one of pyæmia, and had intended to insist on this point. The interest of his case lay, he thought, in the results of the tapping.

Scleroderma.

Dr. Radcliffe Crocker showed a case of this disease which was under Dr. Eustace Smith, at the East London Hospital for Children. The patient was a girl aged thirteen, admitted into hospital on August 22. The mother died of phthisis. The patient had acute rheumatism four years previously. Two weeks before admission, she complained of rheumatic pains in her arms, which were rubbed with liniment, and the skin was then noticed to be hard. The induration spread over nearly the whole body, and, on admission, the whole face appeared swollen, especially beneath the lower jaw, where the glands were enlarged all round. There was a fixed expression, and the face was pale; on touching her, the skin was found as hard as frozen fat; did not pit on the firmest pressure, and felt thickened and fixed to subjacent tissues, so that it was impossible to pinch up a fold. Similar induration affected the whole skin of the body, except the palms, soles, and eyelids. In the mouth, the mucous membrane of the right cheek was affected, but not that of the left, nor the tongue: her mouth could be opened fairly without pain, but the tongue was protruded with difficulty. The induration was most marked on the flexor surfaces, the skin being shortened, so that the limbs were more or less bent, and on the forearms had the appearance and feel of cicatricial bands across the joints, preventing extension beyond a right angle, but permitting some flexion. Forcible attempts at straightening produced pain. The abdominal walls were as rigid as in permanent tetanic spasm. There was no pigmentation. The lungs were healthy, but there was a faint pericardiac friction and a mitral regurgitant murmur. The temperature was 101°; pulse 116; and respirations 20. On August 27 the signs of pericarditis were more marked; but there was some diminution in the induration on the legs, and the tongue could not be protruded. On September 11, pitting on pressure was noticed in the face; and on the 27th the face was a little smaller, and more expression observable; but the temperature went up to 105°, with renewal of pericarditis. On October 28 there was another attack of pericarditis, with a temperature of 104·5°, and it was not quite normal till November 27. At present there was distinct diminution of induration over the face; the skin could now be pinched up with some difficulty; the hardness was nearly gone over the upper part of the ears and back of the hands, and the fingers were quite restored. The feet and legs were also improved, except the front of the thighs. There was still pericardial friction and an open systolic murmur. Noticeable features in the case were the rapid onset, the process being complete in less than a fortnight; the almost universal diffusion of the induration; the association with acute rheumatism and cardiac disease; the repeated attacks

of pericarditis; the high temperature and œdema. The pyrexia was associated with the renewal of pericarditis, and possibly the caseous cervical glands were responsible for the œdema. Upwards of one hundred of these cases were now on record since Thirial wrote upon it in 1845, in all of which the diagnosis was undoubted. Marked symptoms were—insidious commencement; induration and immobility of the skin, widely diffused, and most marked on the flexor surfaces, crippling the movements of the joints; absence of fever, except from complications; chronic course; general thickening in early stage, but no elevation above the surrounding parts; non-fatality by itself, and tendency to improve or to undergo shrinking, and produce atrophy of the parts beneath from pressure, while treatment exercised slight influence over it. Other common but not invariable features were its tendency to attack the female sex, and begin either at the back of the neck or forearms; its occurrence in early or middle life; the frequent association of acute rheumatism either some time before or immediately preceding, or even accompanying, the scleroderma, as in this case, with valvular heart-disease sometimes dependent on the acute rheumatism, sometimes not. Pigmentation, especially near the sebaceous follicles, which might precede or follow the induration and the occurrence of ivory-like patches. The histology consisted mainly in the increase of the connective elastic and involuntary muscular tissue in the corium, disappearance of the fat with increase of fibrous stroma. Groups of cells were always found in the deeper layers of the cutis and fatty tissue, especially in the neighbourhood of the sweat-glands. The prognosis was good for life. The induration might entirely disappear, but more often some parts improved while others did not. Even when it had undergone considerable contraction, some increased mobility, under the diligent employment of friction with oil and honey, might sometimes be obtained.

Mr. Hutchinson considered the case one of great interest: the great distinction between this disease and Addison's cheloid was its universal character. He had never seen one before in such an early stage; but he had one under observation in which improvement was taking place after the stage of contraction had set in. He had nothing to add to Dr. Crocker's summary.

Apparatus for the Clinical Estimation of the Hæmoglobulin in Blood.

Dr. Gowers exhibited this apparatus, which he believed to be as exact, simpler, and more convenient than any yet made. The colour of blood diluted with distilled water was taken as the index to the amount of hæmoglobulin, and the fact that, for twelve or twenty-four hours, the dilution underwent no change, and that the deposit was colourless, showed that all the hæmoglobulin was rapidly dissolved out by the distilled water. As a standard, a dilution of one hundred times was taken twenty cubic millimetres of normal blood in two cubic centimetres of water. The same volume of the blood to be tested was then diluted until its tint was the same as the standard. The degree of dilution necessary for this indicated the relation the hæmoglobulin bore to that of normal blood taken as 100. Thus, if a dilution of fifty times gave the same tint as that of the normal blood diluted one hundred times, the amount of hæmoglobulin was just 50 per cent. of the normal. The apparatus consisted of (1) two tubes in a small stand, each tube of the same diameter. One contained the standard, which, for stability, was glycerine and gelatine tinted with carmine and protocarmine to the exact tint of the dilution of normal blood one in one hundred. The other tube was graduated, 100 divisions = 2 cubic centimetres; each degree, therefore = 20 cubic millimetres. A capillary tube holding twenty cubic millimetres, a bottle with pipette, stopper, and a guarded needle, completed the apparatus. In use, a drop or two of distilled water was placed at the bottom of the graduated tube; the twenty cubic millimetres of blood were then measured and mixed with the drop of water; more water was then added until the tint was the same as that of the standard. The amount of water added, indicated by the numbers on the divisions, showed the percentage of colour (*i.e.*, of hæmoglobulin) compared to the normal. A specimen of healthy blood was shown, in which the tint of the standard was only reached by 105 dilutions, and a specimen of blood from a case of anæmia, of which the same volume of blood gave the tint of the standard at twenty-two dilutions (22 per cent.); and at thirty dilutions the paler tint was distinct even by the gaslight. The apparatus was made by Hawksley.

MEDICAL NEWS.

VACANCIES.

Carlisle Dispensary.—Junior House-Surgeon. Applications, with copies of testimonials, stating age and qualifications, to Mr. J. H. W. Davidson, Hon. Sec., 8, Devonshire-street, Carlisle.

Central London Sick Asylum District.—Assistant Medical Officer and Dispenser. Applicants must be single men, with a good knowledge of dispensing, and must possess a double qualification according to the regulations of the Local Government Board. Applications on a printed form (which will be provided), with not more than four recent testimonials, to William Appleton, Clerk, on or before January 4, 1879.

Chorlton-on-Medlock Dispensary, Manchester.—Honorary Surgeon. Applications to the Secretary at the institution.

Great Northern Hospital, Caledonian-road, N.—Ophthalmic Surgeon. Candidates must be Fellows of the Royal College of Surgeons of England. Applications, with copies of testimonials, to the Secretary, on or before January 6, 1879.

Infirmary for Consumption and Diseases of the Throat and Chest, 26, Margaret-street, Cavendish-square, W.—Visiting Physician. Candidates must be Members of the Royal College of Physicians of London. Testimonials to the Secretary.

St. George's Union: E and F Relief Districts.—Outdoor Medical Officer. Candidates must be duly qualified medical practitioners. Applications, with testimonials, to Thomas Worlock, Clerk, on or before December 31, at the Clerk's Offices, Mount-street, W.

Salop and Montgomery Counties Lunatic Asylum, Bicton, near Shrewsbury.—Assistant Medical Officer. Applications, stating age and qualifications, with testimonials, to the Medical Superintendent, on or before January 4, 1879.

University of London.—Registrarship. Candidates are invited to send in their applications not later than February 1, 1879. Further information may be obtained on application to Thomas Douse, Clerk to the Senate, University of London, Burlington-gardens, W.

To Conceal the Taste of Quinia.—Dr. Ashurst says that if cinchona be mixed in the proportion of one grain of the alkaloid to four grains of the sugar of milk and one-tenth of a grain of bicarbonate of soda, it will leave no bitter taste in the mouth. The mixture may be taken dry or dissolved in water.—*Philad. Med. Times,* October 26.

Oil of Amber in Anginose Affections.—Under this title, Dr. Finck, of Philadelphia (*Phil. Med. Times,* October 26), furnishes an account of his success in the use of rectified oil of amber in cases having some resemblance to angina pectoris. In these he has found a few drops (from four to six, or, if necessary, even from eight to twelve) dropped on sugar, which is then dissolved in water, of great utility during the paroxysm, repeating the dose every thirty or forty minutes until relief has been obtained. "In hysterical angina also, but more frequently in that breast-pang which is the agony of deep grief, where the whole catalogue of antispasmodics proved inadequate, I have added eight or ten drops of oil of amber to an anti-hysteric dose, and repeated at twenty minutes' interval, with the happiest relief to the patient. It is my experience that there is rarely ever much progress towards health in painful affections until the pain is subdued; but as narcotics and medicines like nitrite of amyl are sometimes dangerous, and alcoholic stimulants are often equally bad in cardiac affections, a remedy as safe and effective as I believe oil of amber to be should be regarded as a welcome therapeutical acquisition."

Death of Dr. Bazin.—"French medicine has just sustained a highly regrettable loss in the person of Antoine Pierre Ernest Bazin, formerly Physician to the St. Louis Hospital, who attached a seal of originality to his investigations in dermatology, and created a generatiou of faithful disciples. His views on the syphilides, and still more his doctrine of the arthritides, are those which excited most attention, revealing as they did a talent both for observatiou and generalisation. But we are also indebted to him for remarkable writings on acne, the *teignes,* parasitic cutaneous affections, etc. In all these works, which are those of a clinician of the first order, his personal opinions were affirmed with authority, distinguishing him—which is a praise not often to bestowed—as the head of a school. The teachings which Bazin had delivered for more than thirty years in his books and at the hospital, may be said, to some extent, to have been contained in his articles in the *Dictionnaire Encyclopédique des Sciences Médicales.* Before his appointment to the St. Louis he had been Physician to the Lourvain and St. Antoine; and when the time for his retirement came, his pupils erected his bust by subscription. He was Officer of the Legion of Honour."—*Gaz. Hebd.,* December 20.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Reed, Clunes, Victoria.—Received with thanks.

Hippophagy in Ancient Times.—"Seven hundred years ago," says a writer in the *Basler Nachrichten*, "the act of hippophagy had become so widely regarded as a deliberate sin against Christian morality, that a French groom who confessed to having eaten horseflesh was actually put to death. This was in the first half of the seventeenth century. An attempt was made to find an extenuating plea in the scarcity and dearness of meat, but it was ruled that so horrible and pagan an example demanded swift and exemplary punishment. Denmark was the first State to legalise horseflesh eating, which it did in the year 1807; France followed in 1811; Hanover and Saxony, Austria, and Belgium in 1841; Prussia in 1850; and Norway and Sweden in 1856."

Sanitary Improvements in the Provinces.—The Rochdale Town Council have ordered the necessary plans to be prepared for intercepting and purifying the sewage of the borough, so as to prevent the further pollution of the Roach, and to comply with the provisions of the Rivers' Pollution Act. The Sunderland authorities have applied to the Local Government Board for power to borrow £26,000 for an extension of the drainage system of the borough. The Brighton Town Council having resolved to adopt the Artisans' Dwellings Act, eight streets, with the courts and alleys communicating, pointed out to them by Dr. Taaffe, the Medical Officer of Health, have been declared unfit for habitation, and the surveyor has been authorised to prepare an estimate of the cost of purchasing the areas and of erecting better accommodation. The proposal of the Sheffield Town Council to borrow £300,000 for street improvements has been sanctioned by the Local Government Board.

Steam-Rollers in the Streets.—An undertaker has obtained £30 compensation and costs, in the Marylebone County Court, from the Vestry of St. George's, Hanover-square, for damages to a hearse and injury to himself caused by a steam-roller. The plaintiff was sitting on a hearse, which, with four horses attached, was driven up Park-lane, when a steam-roller crossed over the road, without any notice, in front of the horses, one of which took fright and ran away. The hearse was damaged by coming into collision with a waggon; the horses galloped off, and the plaintiff and the driver were slightly injured. There were no men with flags, but only a board with the words, "Beware of the steam-roller." For the Vestry it was contended that it was not usual to have a man with a flag with the roller when at work. The judge, however, was regardless of the usual practices of vestries—they must comply with the Act of Parliament; and it was most improper for the driver of the roller to suddenly cross the road without notice.

APPOINTMENTS FOR THE WEEK.

December 28. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 1½ p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; London, 2 p.m.

ROYAL INSTITUTION, 3 p.m. Prof. Dewar, "On a Soap Bubble."

30. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

31. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

ROYAL INSTITUTION, 3 p.m. Prof. Dewar, "On a Soap Bubble."

January 1, 1879. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 1½ p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 1½ p.m.; St. Peter's Hospital for Stone, 2 p.m.

OBSTETRICAL SOCIETY, 8 p.m. Annual General Meeting Ballot for Officers for 1879. Amended By-laws will be submitted to the Fellows, and the President will deliver the Annual Address.

2. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.; Charing-cross, 2 p.m.; London, 2 p.m.

ROYAL INSTITUTION, 3 p.m. Prof. Dewar, "On a Soap Bubble."

3. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.; St. Thomas's (ophthalmic operations), 2 p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, December 21, 1878.

BIRTHS.

Births of Boys, 1323; Girls, 1255; Total, 2578.
Average of 10 corresponding years 1868-77, 2195·8.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	1041	1092	2133
Average of the ten years 1868-77	825·4	815·0	1640·4
Average corrected to increased population ...	...	...	1892
Deaths of people aged 80 and upwards ...	...	...	101

Note.—The births and deaths registered last week may be compared with the average numbers in the corresponding weeks of the ten years 1868-77 after raising the average by 7 per cent. for increase of population.

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	2	2	5	2	5	...	2	1	5
North ...	751729	...	4	12	4	11	...	3	...	...
Central ...	334369	...	4	3	1	2	...	4	...	...
East	639111	...	14	4	3	15	...	3	...	3
South	967692	12	19	31	8	17	2	8	...	6
Total	3254260	14	43	55	18	50	2	20	1	14

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·336 in.
Mean temperature	31·2°
Highest point of thermometer	40·6°
Lowest point of thermometer	21·3°
Mean dew-point temperature	29·0°
General direction of wind	Variable.
Whole amount of rain in the week	0·09 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, December 21, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1878.*	Persons to an Acre. (1878.)	Births Registered during the week ending Dec. 21.	Deaths Registered during the week ending Dec. 21.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3577304	47·5	2578	2133	40·6	21·3	31·2	−0·45	0·09	0·23
Brighton	103923	44·1	62	61	41·5	21·0	32·0	−0·00	1·50	1·27
Portsmouth ...	129461	28·9	79	60	...	...	...	...	...	...
Norwich	84620	11·3	58	57	36·5	17·0	27·5	−2·50	0·10	0·25
Plymouth	73599	52·8	41	50	42·0	19·0	32·0	−0·00	0·91	2·29
Bristol	206419	46·4	124	143	40·0	17·6	30·4	−0·90	0·29	0·74
Wolverhampton ...	74240	21·9	55	48	37·0	19·9	29·3	−1·50	0·10	0·25
Birmingham ...	383117	45·6	294	231	...	...	...	...	...	...
Leicester	121473	38·0	79	74	37·0	19·5	28·5	−1·95	0·21	0·53
Nottingham ...	165267	16·6	106	75	38·6	13·2	26·3	−3·17	0·19	0·48
Liverpool	532681	102·2	375	399	39·0	23·8	33·1	−0·62	0·62	1·57
Manchester ...	360514	84·0	223	261	...	...	...	...	...	...
Salford	170251	32·9	131	135	...	...	...	...	...	...
Oldham	107366	23·0	69	87	...	...	...	...	...	...
Bradford	185088	25·6	133	119	35·4	17·4	28·4	−2·01	0·17	0·42
Leeds	304948	14·1	216	183	38·0	21·0	30·6	−0·78	0·23	0·58
Sheffield	289537	14·7	178	187	39·8	21·0	31·9	−0·06	0·00	0·00
Hull	143139	39·4	116	72	36·0	18·0	25·9	−3·39	0·12	0·30
Sunderland ...	112459	40·6	94	48	37·0	18·0	29·7	−1·28	0·39	0·99
Newcastle-on-Tyne	144570	26·9	114	78	...	...	...	...	...	...
Edinburgh	222371	53·1	122	103	36·4	16·5	28·2	−2·12	...	...
Glasgow	566940	94·0	324	416	37·7	14·0	28·1	−2·17	...	...
Dublin	314666	31·3	184	248	37·8	11·3	27·2	−2·67	0·23	0·51
Total of 23 Towns in United Kingdom	8373953	38·0	5763	5266	42·0	11·3	29·4	−1·45	0·27	0·69

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·34 in. The lowest reading was 29·03 in. on Thursday, and the highest 29·68 in. at the end of the week.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1878 by the addition of seven years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. Nottingham, Salford, and Oldham, however, form exceptions to this rule, as the estimates for these three towns have been revised with the aid of local information as to the rate of increase of inhabited houses. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

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